

# ARCHITECTURES TO PROTECT THE COMMONS – COMMUNITY OF PRACTICE TO INSPIRE AGENCY AND HOPE

McIntyre-Mills, J<sup>1</sup> in conversation with Rudolf Wirawan, Dennis Finlayson and Tom Flanagan

*University of Adelaide ( research fellow) , University of South Africa*

## ABSTRACT

The paper gives an overview of some of the activities associated with balancing individualism and collectivism (2019-2021) in particular the engagement with colleagues from a range of disciplines to bootstrap change through inviting them to contribute to two edited collections, namely

1. **From polarisation to Multispecies Relationships : *Re-generation of the commons in the era of mass extinctions*** and

2. **Transformative Education for Regenerative Development: Pathways to Sustainable Environments** with a linked website to inspire engagement towards a circular green economy based on a one village, many enterprises approach. The paper discusses the potential and challenges of on line cross cultural engagement with peers, graduates and members of the community through capacity enhancement approaches to balance individualism and collectivism. The art of the impossible was inspired by the pandemic and zoom engagement became a matter of course in order to work on small pilots.

The paper makes the case that education, design and the ethical values that undermine positive feedback to support wellbeing stocks need to be supported and those interventions that undermine wellbeing and contribute to pathology or the undermining of ecosystems should be penalised and sanctioned in law .

Key words: education, re-enforcement, transformation, multispecies, relationships, re-generation

## INTRODUCTION : THE ART OF SYSTEMIC VISION

The annual Ramsay art exhibition “ Close Contact” awards prizes to a winning artist and the people’s choice. It provides food for free public education on systemic issues on invasion, displacement and risk and for those with eyes to see.

I was reminded as I scanned my Covid QR code for entry to the gallery , lodged my votes for the people’s choice, after having a coffee and logging into a news website (that no doubt also

<sup>1</sup> Hon Prof University of South Africa and Research Fellow, University of Adelaide, Associate Professor, Flinders University

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tracked my news preferences) that in postmodern society we are also *the product* ( Zubhoff and Schwandt , 2019)

Children were asked by the gallery guide to reflect on what the art gallery provides to South Australians.

The first child answered that he thought it provided a place for people to ‘sell paintings’. The guide explained that this did not happen directly through the gallery. The child persisted confidently that nevertheless the gallery’s main purpose is to enable artists to ‘make a name’ and to ‘sell their paintings’.

At this point the guide conceded that this was indeed correct.

A young girl said that the gallery ‘provides entertainment.’ “ Oh good point,” said the female guide warmly ....and anything else ?” she prompted, but the group were keen to be allowed to move through the gallery which is rich in colour, texture, movement and sound. Of course it *also* provides a context for critical thinking and education which no doubt was the reason for the guided tour.

The winner Kate Bohunnis created a sculpture “ Edge of Excess” of a pendulum swinging above a swathe of pink which could represent flesh as the scythe hovered just above, symbolic of ambivalence and risk , a subject on every one’s minds during a pandemic. My attention was drawn to the work by Juanelle McKenzie who wove a sun (Yurndu) out of emu feathers during the Covid epidemic. Surrounding the sun is a mandala of quandong seeds. The emu plays a role in regenerating the quandong fruit, thus closing the circle. The painting gives a lesson in systems thinking which to my mind is both elegant and profound.

A brave and profound installation by Hoda Ashar is in a gallery devoted to surveillance and violence. Hoda’s images of whistle-blowers summarise the importance of enabling people to *speak out* about the abuse of the frail, the disabled and asylum seekers . She draws attention to the price paid by the whistle-blowers who had been silenced and threatened with imprisonment for speaking out. Her exhibit is placed near to the installation of watch towers by Sam Cranstoun who according to the gallery notes had read Foucault’s 1977, *Discipline and Punish* which inspired the creation of the sculptures for the installation . The commodification of the powerless could have included not only the colonised, women, young people , the frail – but also animals who were spectacularly outside the frame except in their referencing by Aboriginal artist Juanelle McKenzie. This morning I checked the world news and noted that the whistle-blower journalist from Belarus had been captured ( hijacked mid-air) and that the EU had decided to block flights from Belarus and to avoid their air space<sup>2</sup>. In Hong Kong<sup>3</sup> those who have spoken out or protested are barred from participating in local government. Surveillance and power need to be balanced by global citizens who speak out as whistle blowers and who show alternative ways of engaging with the environment.

<sup>2</sup> Beake, N. 2021 26<sup>th</sup> May Belarus plane: 'Perfect storm' prompts EU to act fast - BBC News, Brussels <https://www.bbc.com/news/world-europe-57239522>

<sup>3</sup> From protests to 'patriots': Why China is crushing Hong Kong dissent <https://www.bbc.com/news/av/world-asia-57225142>

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In the next gallery a video ‘Rising Tide’ played softly in the background. Daniel McKewan made a video showing yachts floating amongst ruined city blocks, without providing any suggestions of an alternative future to the apocalypse.

The close sense of connection with the land is evident in the work of Kieren Karritpul called ‘Weaving Myself: the landscape and the land’. According to the gallery notes he chose to paint the woven connection he felt for country as he is not permitted to weave as he is male and this is *women’s business*. His painting represents weaving together the many strands of life. Each tiny strand represents the cyclical breathing that supports life as we know it. This spiritual painting is about breathing. It reminds me of Abram’s (2020) epiphany when he heard Macey explaining *interbeing* in terms of the way humans breathe in oxygen and breathe out carbon dioxide which plants breathe in and photosynthesise. They then ‘breathe out’ oxygen for us to breathe in. Plants also produce the food on which we depend. He explains that *spiritus* is Latin for breath which animates our being and stresses that consciousness is non local (Damery and Abram, 2013: 109) which Jung (1959) considers as a possibility as it also helps people to believe in continuity when they face the inevitability of death. It also helps people to think that they are part of nature and return to it.

The notion of learning from nature is perhaps the lesson that the school children could have taken away with them as the message of hope depicted in the regenerative cycle played by the emu, the quondong fruit and the sun as shown by McKenzie. To me her work illustrates our hybridity and interconnectedness with other species and with the forces of nature. We can indeed learn from a flightless emu, because, like Icarus human beings have flown too close to the sun. Hubris has prompted us to try to control people and nature.

A palimpsest is a document on which we write and re-write. Our history is written in the land and carried by the stories children tell their grandchildren.

Greta Thunberg<sup>4</sup> congratulated the group of eight young people in Australia who have successfully taken the federal environment minister to court in a bid to hold them accountable for the impact that extending a coal mine in New South Wales would have on climate change. The court supported a ruling that the minister had a :

‘duty of care to protect children from future personal injury caused by climate change

.’”

### Statement of the design problem : Balancing individualism and collectivism

We can no longer pretend that change is inadvertent in the Anthropocene – not only do we have agency, but we are able to observe ourselves from outer space and increasingly we are realising that human beings are one species within an interconnected web. We need to choose to redesign our way of life.

<sup>4</sup> Greta Thunberg hails ‘amazing’ Australian court ruling as ‘a huge win for the whole climate movement’ The climate activist hailed the Federal Court’s decision on Twitter and offered a “big congratulations” to the teenagers who achieved it. Read in SBS News: [https://apple.news/ACYjrnsz2QBGGja\\_u-YzA-w](https://apple.news/ACYjrnsz2QBGGja_u-YzA-w)

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If education means to lead out, the question which we need to consider is what sort of future do we want for future generations of living systems?<sup>5</sup> This is of central relevance to education, because it shapes the content, structure and process of education. A community of practice is a concept coined by Etienne Wenger (1999), a social anthropologist who worked in a large white collar bureaucracy that processed medical claims, in order to understand the nature of work. He found that the informal communications based on reciprocity helped to enable people to achieve their work related goals. People identifying with an area of concern were prepared to help one another to achieve a specific goal. Reciprocity and task orientation helped the community to self-organize. This concept can be applied to a range of contexts, particularly public education.

In the community of practice spanning disciplines and cultures developed around the need for transformation in education and economics included academics and members of the community who learned from one another and passed on what they had gleaned.

In *Transformative Education* some of the chapters propose a decentralized approach to education based on ecovillages, other chapters have stressed the importance of extending rights to the disabled and to recognize the sentience of living systems. This has profound implications for *ethics, governance and education*.

### Background

Wellbeing stocks (Stiglitz et al., 2010) need to be supported by *social, economic and environmental* indicators developed within a community context and supported locally, nationally and internationally in line with the UN (2030) Sustainability agenda. These arguments have been spelled out elsewhere in *Planetary Passport* (McIntyre-Mills, 2017), *From Wall Street to Wellbeing* (2014). We have 30 years before we face irreversible climate change. It is time to apply laws to support positive feedback.

What kinds of re-enforcement encourage people to move away from business as usual to support wellbeing?

- **Positive** re-enforcement may include rewards such as subsidies and access to resources.
- **Negative** re-enforcements may include barriers to subsidies and resources or penalties involving community service, fines or incarceration.

The prototype software to achieve this goal *could* be applied and scaled up as detailed in *Wall Street to Wellbeing*, *Planetary Passport* and the edited collection *From Polarisation to Multispecies Relationships* (McIntyre-Mills and Corcoran Nantes, 2021). It would provide a means for local social, economic and environmental accounting, accountability and transparency. The challenge is to create the will to protect the commons and to try out an alternative form of accounting and accountability.

<sup>5</sup> Systems thinking and practice needs to be “more than spaghetti and meatballs”, to cite the dismissive ‘putdown’ given to a draft policy document produced by a policy advisor to the Australian labour government.

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The contributions made by Ann Florini (2003) on scaling up the Aarhus Convention to ensure that local people with concerns about the environment have the right to information, the right to be heard locally within EU and to take their concerns to the European parliament or European court (if they are not satisfied). The Aarhus Convention (1998) provides three policy pillars to enable this everyday engagement to occur. The policy pillars include:

- The right of all residents in the EU to access information
- The right to be heard and the right to take the areas of concern to the European Parliament and then to the European Court if the issues are not satisfactorily addressed.

Florini (2003) stresses that the policy provides a valuable potential platform for extending democratic rights to residents within and beyond a nation state so that social and environmental justice concerns can be addressed at a post-national regional level. Geoffrey Robertson (2021, a human rights lawyer stresses that organisations, governments and individuals need to be held to account by blocking their assets and right to travel if they commit crimes against humanity, Polly Higgins (2013, a barrister who advocates for an Ecocide Law for crimes against the environment, Vandana Shiva (2012a,b, 2020 a, b) a nuclear scientist and ecofeminist who has advocated for seed and water security and taken Monsanto to court, won the Sydney Peace Prize) David Held (2003, Global Covenant) stress that local interventions to support social and environmental justice need to be buttressed in law. The policies, covenants and bills could be applied using a scaled up form of engagement. The challenge is to create the will to engage. One of the ways forward is to enable people to see the benefits of social, economic and environmental accounting and accountability by addressing food, energy and water security in relation to employment creation. These three aspects are common concerns that could be a basis for scaling up engagement and support for protecting the global commons.

- Giving positive feedback for those who support wellbeing stocks should be rewarded.
- Negative feedback should be given to those who undermine wellbeing stocks.

This can be supported through local engagement at the local government level where subsidies and supports provide incentives for those who support the common good.

It is arguable that democracy has lost its way. Rights need to be balanced by responsibility and policy decisions need to be informed by critical systemic engagement. Those who place their rights above the rights of current and future generations ought to be held to account (see McIntyre-Mills 2014, 2017, 2021). We need to be guided by axioms such as: We can be free and diverse to the extent that freedom and diversity does not undermine the rights of current and future generations.

A form of 'Magnitsky Law' (Robertson, 2021) could be used to bolster a planetary passport. Those who support wellbeing stocks are given positive sanctions and those who undermine wellbeing stocks and who commit crimes that undermine social or environmental justice could be sanctioned, using a form of law that freezes assets and halts the ability to travel (Robertson, 2021).

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**Table 1: Multi-level engagement architectures to protect living systems and to support the global commons**

	Structure	Process	Action
Micro-level individuals	UN local Agenda 21 (1992) and Aarhus convention (1998)	Questions raised and posed to local government by individuals	Local government, NGOS and individuals
Meso States and regions	Aarhus convention linked to global covenant	On line monitory democracy and governance to address state/market/civil society concern	Networking NGOs and INGOS to address representation and accountability
Macro Cosmopolitan governance	Legal structures to support the global covenant, Aarhus convention and Biospheres convention	International Criminal Court United Nations	Global action to pass laws to protect social and environmental justice in overlapping biospheres

Source: Adapted from Florini (2003) and Archibugi in Wallace Brown and Held ( 2010:322) cited in McIntyre-Mills et al 2014:92) and McIntyre-Mills, 2017:7) , ‘Reconsidering Boundaries table 3.1. McIntyre-Mills, 2017: 148, 313 to address nodes (people, organisations) and to connect them to areas of shared post regional concern (Habermas,2001) through an on-line Planetary Passport (PP)<sup>6</sup>.

The area of concern for a proposed Global Covenant (Held, 2004) and proposed *Planetary Passport to Protect People and the Planet* is to address poverty, climate change, displacement of people and destruction of habitat. The PP could strive to balance individual and collective needs in line with Held’s notion of a so-called ‘Global Covenant’ and sanctions could be applied to those who undermine wellbeing stocks . Stiglitz et al’s (2010) wellbeing stocks could be supported by enabling people to ‘be the change’ on a daily basis through the way they choose to live their lives and making social contracts through the on-line system to protect local resource systems. Their footprint can be monitored locally, and they can generate transformation locally by rewarding sustainable living through the provision of positive supports.

<sup>6</sup> The decisions are prompted by scenario guidelines. The daily living choices can be guided by means of an on-line engagement tool that helps decision making and enables the monitoring of social, economic and environmental choices. Positive and negative sanctions through monitoring could ensure that resources are fed forward to those in need and in the interests of future generations as detailed below

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### **Aims**

The aim of the community of practice is to inspire the marginalised, particularly women and young people to use their own talents and resources by adapting the Indonesian decree that every village should foster enterprise.

Indigenous and local knowledge is the basis for creating local green enterprises in line with the UN Sustainable Development Goals. Members of the community of practice<sup>7</sup> are engaging in zoom conversations with local facilitators to *train the trainers* and inspire their engagement. Our hope that the short three week engagements together with local leaders who have been nominated by local chiefs/local community will be able to form co-operatives with a green focus. We provide them with links to the appropriate organisation for registration in South Africa. Some of the small pilots are in the early stages of scoping, some are at ethics approval stage, whilst some have been completed.

### **KEY CONCEPTS : EDUCATION, INTERBEING AND TELEONOMY TO SUPPORT THE WELLBEING OF LIVING SYSTEMS**

Each generation of life writes their history on the landscape which in turn shapes the limits within which we live. We are interbeings shaped by many species and the environment on which we rely. Human beings are just one strand within a living system. *Interbeing* is explained by David Abram (2020) as human beings breathing in the oxygen that plants breathe out and vice versa. Abram explains that the concept was coined by the Vietnamese religious scholar Thich Nhat Hanh, who translated *pratityasamutpada* as ‘interbeing’. We (like other species) are reliant on many systems for our survival. This is understood by many religious faiths, particularly Buddhism<sup>8</sup> and Indigenous knowledge systems that see the land as our mother, for instance. It is time to re-write it and to re-generate hope. Politically, critical engagement informed by praxis needs to ensure that local people retain their rights and responsibilities to write their futures.

This is also the case in Australia where lessons were shared by mentors whilst undertaking research in the Northern Territory (McIntyre-Mills, 2003) and South Australia (McIntyre-Mills, 2008). Sundanese wisdom from West Java and South Africa (McIntyre-Mills et al 2018,2019 a,b) underline similar lessons on living in ways that support people and in nature.

### **Reframing ethical frameworks**

One of the most profound lessons I learned in 2020 was from watching the documentary “My octopus teacher” about re-generation and an ecological mindset. The documentary directed by Pippa Ehrlich and James Reed (released on Netflix) was filmed off the coast of South Africa where I spent three months from October to December, 2020<sup>9</sup>.

The documentary shows Craig Foster’s underwater journey to learn more about a kelp forest which he visits every day. He befriends an octopus who teaches him about transformation and resilience.

<sup>8</sup> Saka Dawu, the 26<sup>th</sup> of May is an auspicious day on a Buddhist calendar. A key precept for those who espouse the dharma is the equality of all sentient beings. This is a hopeful way forward to assist re-generation.

<sup>9</sup> <https://www.youtube.com/watch?v=3s0LTDhqe5A>

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The sense of connection and trust once the curious female learned to trust another species is poignant. As I watched I thought about the life chances of sea creatures on this coastline that are increasingly threatened by sewage and plastic, including nurdles that have washed up from container ships that have lost cargo destined for factories to produce molded plastic.

Currently ethical frameworks are inadequate (see McIntyre-Mills, 2014) as they are inherently anthropocentric and misplaced; humanity can only be protected by protecting the biodiversity in which we are embedded. This could be progressed through implementing this design *for education* curricula, structures and processes that extend the ‘Frontiers of Justice’<sup>10</sup> (Nussbaum, 2006) to enable capabilities (see Transformative Education, 2021, forthcoming).

### **Assumptions and values**

According to Rees (2019:240) who coined the concept of a global footprint, sustainability is the process for ensuring that we do not overstep the boundaries and it thus goes hand in hand with resilience, but as Wahl (2016) explains this requires a new emphasis on re-generative culture so that we design a better way to protect living systems. Daniel Wahl (2016) draws on his book on regenerative systems and with Alan Rayner about the nature of systems and Alan stressed that he had learned by observing nature and thinking about his own experiences which helped him to develop the theory of inclusionality which is not about whole systems, but instead about the way living systems relate to one another’s mutual needs. Dauvergne (2019) stresses in his chapter on the problems of consumption that this:

“requires going beyond the assumptions, pathways, and measurements of an ecological modernization approach. It will require a questioning of our economic order.”

But this is not a new narrative, it can draw on re-generative narratives from spirituality and first nations as underlined in Daoist philosophy of tai chi – the notion of infinity and the ability of the human spirit to move with the energy flows of nature, rather than opposing it. The philosophy of interbeing or as Alan Rayner calls it ‘inclusionality’ is also echoed in the work of the Mahayana Tradition of Buddhism.

By understanding the way in which living systems relate dynamically is the first step towards understanding mutual causation and the importance of dialogue in what Bohm (2002) describes as a ‘participatory universe’ which he explains in conversation with HH the Dalai Lama (2018). The competition between us and them, the commodification of nature and the notion that systems are linear and that knowledge is confined to specific disciplines have combined to limit our understanding that we are interbeings reliant on one another and that all living systems need water, food and energy. These are the common threads that bind us. As Alan Rayner (2010) has shown through his study of fungi, trees communicate and as Monica Gagliano (see Gagliano et al, 2018) has shown plants are capable of making decisions as do many other creatures. Meijer (2019) has

<sup>10</sup> In “Frontiers of Justice”, Nussbaum (2006) stresses the need for the right to a life worth living to be extended to all sentient beings. Nussbaum’s (2011) ten capabilities are directly concerned with wellbeing, a life worth living and the extent to which these can be addressed. These capabilities, include: (1) living a life that is not cut short prematurely (2) bodily health, (3) bodily integrity, (4) sense, imagination, and thoughts, (5) emotions, (6) practical reason, (7) affiliation, (8) links to other species, (9) play, (10) control over one’s environment. In Nussbaum’s version, the Capabilities approach focus on “the protection of areas of freedom so central that their removal makes a life not worthy of human dignity.” (p31)



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detailed how squid make movements and change in colour in response to risks and birds use language and culture with intelligence and pass on cultural tropes to kith and kin. Mammals have a sense of fairness as De Waal (2009) demonstrates and Nagel (1974) stressed that consciousness is experienced differently by other species, but it is nevertheless a form of consciousness.

Learning about ourselves and others requires two kinds of knowing. Perceptive knowing based on our perceived experience and knowing based on testing and measuring aspects of the external world. Unfortunately the former aspect based on thinking and careful analysis of the way we see the world is in need of more attention so that we become more mindful and aware of mutual causation that begins with our attitudes and values.

Rayner (2020) stressed that we have evolved with the binocular vision of a predator, rather than the more peripheral vision of a buck who needs panoramic vision.

The notion of us and them or self and others need to be replaced with the notion that we can indeed bridge the divides by realising that ‘we are the boundaries’ (Haraway, 1991) and that we can re-integrate our view of the world. Our values matter quite literally as policies shape our world. By finding ways to bridge the divided middle ground using dialogue, sharing knowledge, mapping it and using it to guide further decisions could help to ensure that people are able to see the bigger picture, realise that we are merely a strand within creation and hold in mind more variables. By expanding our vision we could make better decisions. Much has been written about the fact that human beings cannot manage more than about 7 variables (Miller, 1956) and arguably this is perhaps one of the reasons why human beings make such bad political decisions than jeopardize our futures. The other reason is probably narrow self-interest.

Intersectionality (Crenshaw, 1991, Dhamoon, 2011) is touted as the way forward, but we need to revise our approach to science if we are to grasp interbeing rather than compartmentalised ways of knowing and being.

A conversation in December with colleagues in the International Society of Systems Sciences including James Rose, Isabelle Sebastian, Shankar Sakaran and Terence Love reminded me of how important communication is for education and re-generation. I mentioned the Dalai Lama’s (2005) book on the convergence of science and spirituality and the important role that David Bohm had made in sharing the essence of how he saw the participatory potential of the universe and how he saw physics. We have the potential for positive or negative mutual causality. This applies to our relationships with others, but it also applies to the way we see ourselves and others.

At a time when anger and outrage has flared as a result of a lack of leadership to address social, economic and environmental challenges we need to think about how to achieve re-generative transformation.

The protests in the wake of social and environmental injustice need to be buttressed by a change in a priori laws, norms and narratives, along with indicators and measures to enhance representation and accountability to all species. Sentience is not the preserve of human animals; it is shared by all animals and perhaps some would argue that machines have a form of sentience. Once this is accepted, it raises questions about rights, responsibilities and where we draw the line

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of inclusion and exclusion. It has implications for ethics, law, governance and democracy and how we perceive the notion of rights and respect for the web of life.

Once we appreciate our hybridity and interconnectedness (McIntyre-Mills, 2017) we have to accept that current architectures of governance are obsolete. We need to accept that rights cannot be exerted at the expense of other generations or other species in order to maintain the current carbon economy.

What will the future of governance entail?

- Perhaps a Zoopolis (Donaldson and Kymlicka, 2011) managed by benevolent stewards to ensure that sentient users are protected within a suitable habitat?
- Perhaps a planetary passport (McIntyre-Mills, 2017) could be developed on the basis of balancing individual and collective needs governed by the axiom : we can be free and diverse to the extent that our freedom and diversity does not undermine the rights of others ( including all sentient beings)?

### **Systemic ethics underpinned by a transformation in values**

*The Uluru statement of the heart* suggests that as a nation we need to respect our dependency on the land and that Aboriginal voices have not yet been heard as the land and waters have not been placed at the heart of policy decisions :

“We, gathered at the 2017 National Constitutional Convention, coming from all points of the southern sky, make this statement from the heart: Our Aboriginal and Torres Strait Islander tribes were the first sovereign Nations of the Australian continent and its adjacent islands, and possessed it under our own laws and customs. This our ancestors did, according to the reckoning of our culture, from the Creation, according to the common law from ‘time immemorial’, and according to science more than 60,000 years ago. This sovereignty is a spiritual notion: the ancestral tie between the land, or ‘mother nature’, and the Aboriginal and Torres Strait Islander peoples who were born therefrom, remain attached thereto, and must one-day return thither to be united with our ancestors. This link is the basis of the ownership of the soil, or better, of sovereignty. It has never been ceded or extinguished, and co-exists with the sovereignty of the Crown.”

Ethical guidelines for human researchers, practitioners and members of the public need to recognise our biological kinship and interdependency which can be challenging given the lack of respect for the rights of the powerless which has been evident

The implications of interbeing have been made apparent by Covid. Abram ( 2020) uses *interbeing* and *inter-breathing* as synonyms that illustrate the notion of *dependent co-arising* or mutual causation within the web of life. Covid -19 can be seen as feedback in response to the anthropocentric social, economic and environmental decision making that disrespects other living systems (McIntyre-Mills, 2021). As stressed in ‘From Polarisation to Multispecies Relationships’

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and a related article : ‘Communication and culture: a multispecies endeavour within a shared habitat: throughout the history of colonisation (Strang, 2017) and imperialism. Respect for multiple species needs to be based on recognition of our hybridity and interconnectedness informed by a sense of awe and supported by norms rooted in a belief in our precarious interdependency and the implications of dispossession (see Butler,2011, Butler and Athanasiou,2013). A moral compass to protect diversity needs to be buttressed by a Global Covenant( Held,2004) and the Ecocide Law ( Higgins et al, 2013, Higgins, 2018) whilst mindful that stressing animal rights to Indigenous people who have themselves been denied rights by colonists who have dispossessed and displaced their ancestors can be hard to accept (Strang, 2017), particularly as the environmental legacy left by First Nations bears better scrutiny!

I would prefer the design of limits to be informed by ethics derived from structured dialogues (Christakis and Flanagan 2010, Christakis and Bausch,2006 , McIntyre-Mills et al 2008) , rather than a stack (Bratton, 2016) managed solely by algorithms spanning every layer , although I doubt that this is what Bratton intends. The process of making meaning together with people is a cornerstone of design according to Alexander Christakis , not only to test out ideas, but in order to enable people to have a stake in the decision making process. This sense of ‘stake’ is vital when addressing the big issues of the day that require value transformations. Christakis has explained that one of the problems with the approach of the Club of Rome was that it did not enable people to have a say in the modelling of climate change.

We live in a world where human beings are abused on a regular basis and in a world where we think it is our right to treat workers, animals , plants and nature as commodities or as a means of production and profit. It is time to revise the ways we see ourselves in relation to others whilst preserving the sacred human right to be creative. Top down approaches to “ One Village One Product” were deemed to be unsuccessful in Japan (Claymome, 2007) which provides instructive lessons for those wishing to emulate the idea in Indonesia. This means that the commons need to be protected in ways that do not universalize governance in ways that undermine local agency and leadership through top down approaches.

The scope for human beings to have a say and to overturn structures seems to me a basic human capability that *should not be lost*. Mindfulness and the choice to act and think in terms of chosen values is a basic notion linked with the human spirit or soul. The brave spirits who rise above internment in camps (such as Viktor Frankl<sup>11</sup>) based on their inner vision and whose hopes and beliefs sustain them would argue that this human soul is not the same as brain functioning or an algorithm. This is what Chalmers (1995) called the *hard question*, what are the qualities that make up the mind that experiences and chooses to perceive in a particular way? We ought to be free and diverse to the extent that freedom and diversity does not undermine the rights of this generation of living systems or the next. It thus behoves us to think in terms of stewardship for multiple species, but not to lose the ability to think critically and mindfully.

The notion that interventions to manage the commons – through a form of post national governance that could span users and their immediate environment— is problematic, if it is not guided by conscious, critical inter-subjective decision making which supports a new form of

<sup>11</sup> “Between stimulus and response there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom. *Viktor E. Frankl*

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democracy based on *'if then'* scenarios. Bratton (2016) suggests so-called stack sovereignty<sup>12</sup> (Bratton, 2016) which to my mind could lead to dehumanizing governance. In a post anthropocentric world, some may say this is acceptable, but the risk is that a worse option could be created.

Martha Nussbaum (2006) has stressed the need to extend the boundaries of rights and responsibilities as the social contract is too limited. Many indigenous first nations extend the boundary to protect the environment as do ecological humanists and feminists such as Donna Haraway or anthropologists such as Deborah Bird Rose and physicists turned eco-feminists such as Vandana Shiva, whilst the ecocide movement stresses that rights and responsibilities need to be buttressed by international law.

Protecting the global commons has been theorised by Ostrom who won a Nobel Peace Prize, but Shiva who stridently points out that local governance does not go far enough— did not! She won the Sydney Peace Prize (usually given to those who are less mainstream in their thinking). The work of Vandana Shiva or the hopeful views expressed by Litfin (2009,2014) are grounded in the hope that social movements from below will help to influence change by providing some of the balancing from below to offset the decisions from above. Whilst reading about Bratton's concept of 'The Stack' I asked some colleagues about some of my concerns about how liquid boundaries governed by algorithms could prevail without ongoing monitoring *from below* as well as *above*. Their responses are summarized in the following vignette extracted with their permission from a series of emails over a few days provided a basis for this edited exchange that helped crystalize some issues :

Janet : What do you think of the so-called "sovereignty of the stack"?

Dennis : "The key is in the title the .governance of address allocation is the key area to research and perhaps apply some ethical considerations too ....as in critical systems .....or stakeholder preference etc.. Eventually the whole of the governance might be a co-op of co-ops at every level of the stack.....i.e. governance by members and users etc...But I am not well informed in the field...but I will try to get a response from some people who might be...a co-op of co-ops could work ?

Janet : *Coop of Coop* versus *Co-op of Co-op* makes me think of chicken coops – a worry indeed if users are treated by a great designer no better than chickens cooped up.... actually you and Tom have the nub of it ...*the designer has to have a soul* , but there is no guarantee ....which is why systems must be open and critical ....But if we have *co-ops* of co-ops then perhaps we could illustrate another way of working? In a lovely meeting held by P.L in Venda last week she asked the women *what they think the chickens want* .... the women gave a very insightful responses to

<sup>12</sup> To cite the summary of Bratton's (2016) book:: "Bratton explores six layers of The Stack: Earth, Cloud, City, Address, Interface, User. Each is mapped on its own terms and understood as a component within the larger whole built from hard and soft systems intermingling -- ... This model, informed by the logic of the multi-layered structure of protocol "stacks," in which network technologies operate within a modular and vertical order, offers a comprehensive image of our emerging infrastructure and a platform for its ongoing reinvention. The Stack is an interdisciplinary design brief for a new geopolitics that works with and for planetary-scale computation. Interweaving the continental, urban, and perceptual scales, it shows how we can better build, dwell within, communicate with, and govern our worlds.thestack.org }

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the question: How can chicken farming be combined with bamboo farming? They are in favour of free range chickens in co-operatives, because the chickens like to ‘run around’, ‘scratch’, ‘perch’ and ‘sing’. A good metaphor, Because we need to avoid totalitarian top down approaches that limit our species specific capabilities...

PL in Venda indicated that there are many free range chicken in their community ... Almost all households do have these chicken but they never thought of ‘making business with those chickens’ and ‘how those chickens live lives that are worth living by having large spaces in which they can express the full range of their capabilities ( Nussbaum, 2006, 2011)

.... Actually, I thought you were being very profound by mentioning chicken coops, because it made me think of invisible boundaries by which we are governed. These not so ‘liquid boundaries’ are the future.

I did not know about clathrates , until T.F. mentioned them , so I looked up their meaning and I see that they can be an invisible cage like structure in liquids. This is a good analogy , because in the stack each space could be mapped in the same way as clathrate . I had to look this up ( thanks Tom) It is defined as follows:

“Clathrate is a structure in which water molecules under certain conditions bond to form complex networks of molecules forming cage-like structures that encapsulate a guest molecule, which is a gas” cited from: [\*Investigating Seafloors and Oceans, 2017\*](#) “

T.F: Janet, my take on Ben Bratton's often explicitly poetic notion of "the stack" is organic. By this I mean that he takes a view of the built and natural world as a thinking entity. He speaks of "platforms" as constructs of institutional thoughts, both enabling and constraining imagined possibilities much as does language(s) in human systems. Platforms can be concrete (much as cultures imprint their beliefs in the artifacts of human traditions) and also as abstract echoes of those artifacts. The abstract, cloud-carried echoes are, then, shadows of past experiences offered forward in combinations that represent new possibilities. He mentions roads as platforms that enable and constrain possible flows of traffic. Roads make us all drivers. In similar fashion, telecommunication makes all callers, and cities make us all inhabitants. I see this as defining us as agents of and for "the stack." As a self-designated "designer of possibilities," Bratton sees the crucible of creativity as the imagined overlay of "real?" Platforms. What can this mean, given that I haven't read his forthcoming book? He conflates the notion of a creatively sapient superorganism that is subconsciously testing computational combinations of platforms seeking acceptable felt new hybrid platforms with a notion of cultural evolution....This dynamic feels like language building, which can mean quite different things to those familiar only with the expressive ambivalence of romantic language, the encased precision of complex words in the Germanic tradition, or the deeply layered experience of poly tonal, Asian expression ... for possible examples ... all augmented to a digital platform of programmers lingua franca. But I digress. When Bretton speaks of "data that slides through the glass wires and ambient electric fields" I sense that he is making allusion to the slippery substance of meaning .... carried in "words" ... to which the Bee Gees sang "I have only words to steal your heart away." So, in responding to a needed change in global culture in the face of global climate change, I think that Bretton might be saying that only the spiritual power of poetry can save us ... saving us only when it touches, resonates with, and echoes beyond the platforms that sustain and constrain us in so many deeply individual ways.

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Is this a response to your question? The "stack" is the collective being. It rules with sovereignty.... but may rule well or poorly ... depending on our enculturated attitudes to our poets?

...I feel a great deal pivots on our concept of HOW sentient entities think. Is sentience computational or is it an analogy of the emotio-cognitive mind? Under what conditions can a sentient system see beyond what IS to select what MAY BE. Hasan wrote that a system's values locks a system into a vectoral projection of the present into a changing future (where the system may or may not survive). There can be no real change without a deep change in the configuration of value systems.

A subconscious awareness computationally chugging away seems too mechanical to accommodate creative adjustments in an envisioned need to change course. Is the stack more than this? Yes, system feedback loops can effect system changes, yet only within the organic boundaries of systemic capacities. If systems are to evolve new capacities, they must be less of themselves (that is less conscribed to homeostatic operation) in order to more than themselves [that is to be open to autopoietic dynamics with effectors that are beyond the dominating influence of an existing sovereign system). Systems must be both consistent yet also open to change .... imperfectly perfect, if you will. Like the imagined clathrate structures in fluid water<sup>13</sup>.

Because systems bend toward optimization in resource-constrained realities, their operations are pulled into a gravity well ... this is their core value of optimization .. driving the system into a pit centred always upon a foregone notion that what HAD been best for the system remains best for the system. Western culture offers scant praise for optimization. No?

Thus, only in a resource-free domain of imagination can a sapient system choose to reimagine itself, if and only if it were to consciously choose to do so. As a core value, a system must hold sacred its capacity to be capable of imagining itself in new ways ... of discovering new core values ... of being more than "aware" bumpy being reflectively "self-aware." To hold core values strongly yet gently.

Maybe?

Let me add a humorous note taken from a mind<sup>14</sup> far wiser than my own:

“A reasonable man seeks to fit into the reality that surrounds him. An unreasonable man seeks to alter the world that surrounds him. Therefore all progress is dependent upon unreasonable man.”

We may have given ourselves over to riding upon the shoulders of unreasonable men far too long. Perhaps our salvation now rests in the strength of unreasonable women ????

Janet : Thank you for taking the time to engage. Your emails are poetic and I like the quote ! (ha but women ( like all genders along the gender spectrum can be very human – more is the pity!) ... But yes, gender is a key factor in shaping life chances and agency ( McIntyre-Mills et al 2018,

<sup>13</sup> See Dillon (2002) “Clathrate is a structure in which water molecules under certain conditions bond to form complex networks of molecules forming cage-like structures that encapsulate a guest molecule, which is a gas” cited from: [Investigating Seafloors and Oceans, 2017 www.sciencedirect.com](https://www.sciencedirect.com)

<sup>14</sup> George Bernard Shaw <https://www.goodreads.com/quotes/536961-the-reasonable-man-adapts-himself-to-the-world-the-unreasonable> accessed 14/05/2021

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2019 a,b, 2020a,b forthcoming ). **Women** need to be designers ( Haraway, 1991) who address challenges or they risk being *disempowered* by the designs made by others. Women need to exert agency in the political design space to protect their rights and to speak out for the voiceless. The tragedy of the enlightenment (western and eastern style) is that human beings have overestimated our capabilities and now ( by concentrating on a market driven state that honours technical solutions to deep systemic failures ) we face the hubris of a military industrial state, a tiger of many stripes (no offense to the non-metaphorical tigers) .....

I am still working my way through “the stack”, it is worth a careful read as I fear for democracy and governance - it could take a step backwards towards totalitarianism and it shows every sign of doing just that as the drums of war bang on justifying the overreach by every stripe of the military complex..... Poetry is vital along with the values that support ‘wonder’ and ‘wilderness’ to draw on Gerald Manly Hopkins.

By the way, I had an interesting time listening to a city planner who was giving a master class on a ferry in Sydney to a group of year 12 students last Friday. As we went past Barangaroo ( on Sydney harbour) he explained that the tower blocks were completely sustainable and that they had a negative carbon footprint. They use sea water for air-conditioning which is commendable, but I could not help regard them as ugly and unwelcoming....some trees were planted around the new model precinct above which the infamous Packer Casino towers. The giant city scape to my eyes lacks the intimacy of the quaint small scale Historical Rocks section which was rescued from demolition by Green Bans and the action of Indigenous people who actually asked the builders association to support them. They said that this area should be retained. Luckily a small slice of Sydney remains - the tiny cottages and cobble streets where the ex-convicts plied their trade alongside the locals who got the worst deal from everyone.....Today the area is for tourists but it retains something of the past. A sense of community. Strangers talk to one another because of the human scale. I met a colleague of Jack Munday because we were both watching the same documentary in the local Rocks Museum. The local shop owner on the corner offered to let me buy an orange juice ( and pay later) as I went into the shop without my purse during an early morning evacuation as a result of a faulty fire alarm.

Can a sense of community and mateship be socialised in the cultural history of a small scale place? Small communities foster strong emotional attachments through face to face engagement and emotional connections. These connections can be lost when we demolish and re-invent places. These are not entirely idle musings, but based on my recollection of the sadness of the people who were re-located tragically from District 6 in Cape Town as part of the terrible apartheid 'gentrification' which was of course quite the opposite. The area remains a scar on the side of Table Mountain. Years ago ( not by chance as I was doing research on how people felt about the relocation ) I met some of the people in the relocated area of Bonteheuwel and they told me that the reason why the windswept areas of the bleak Flats were covered in papers , broken bottles was that no one felt 'at home' there.....

So how can the notion of sustainable habitats that balance rural and urban areas achieve a sense of being at home - not just for human beings but for other species?

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The notion of urban forests on rooftops and sides of buildings appeals, but we will need to have places that create small communities.....it also makes sense to limit the size of urban sprawl which has been said time and time again ....

D.F– I like the idea of poetry , but Janet - to get to your concern on critical engagement - the clue is in governance, users and the address ., it needs stakeholder involvement .....

Janet : T and D. , yes, indeed. I have not read terraforming , but have been listening to some of Bratton’s talks , sections of The Stack and I reading papers that are available. It seems that he has embraced a technocratic approach and that he follows the work of Srnicek and Williams (2015) ‘Inventing the Future: Post capitalism and a World Without Work’ in which they too embrace technology. I feel that the socialism at the expense of soul could be problematic. I much prefer the work of Deborah Bird Rose ( a social anthropologist) who worked in the area of ecological humanities in Australia. She introduced the notion of ethnography spanning species and the need to face up to the era of extinctions ; she posed the need fo an ethic of ‘love in a time of extinction’ and the need to care for others. This lack of care and commodification is the problem we face today. I believe *the human mind* is more than the brain and that consciousness is a continuum of living systems. Many species have consciousness, we need to tap into that and realise that human beings are the problem and the solution, paradoxically! We need to re-learn our place within living systems.

Janet to D. , yes interbeing teleonomy and living systems would be a good title for a special integration group for the International Systems Sciences. It is the area that needs to be addressed, in order to address living systems. I think that relationships across social, economic and environmental systems need to be discussed at ISSS – The issue is how relationships shape evolution - hence the importance of values through which we gendered human beings 'write' our evolutionary journey – which is heading for disaster.

I think that Alexander Christakis was right that dialogue is indeed vital for democracy and the process of drawing out key themes will be central for our designs. He understood the first principle of cybernetics, namely that diversity needs to inform all designs ( Ashy, 1956). We can add that biodiversity is equally important as Scott ( 1998) pointed out so profoundly in “ Seeing like a state” in which he illustrates a range of examples in which monocultures result in losses to the environment and to society. Vananda Shiva ( 2012 ) wrote a book with the title “ Monoculturs of the Mind” in which she made a similar argument.

Conversations in my opinion are the key to design. They are both a means and an end, because in the process of engaging in conversation we build friendship and trust. As these bonds grow , we extend our ‘tolerance’ and if we combine the conversations with ‘hospitable’ engagement then we are likely to make progress in maintaining and progressing the democratic project. Some of these ideas were discussed some years ago in “ Philosophy in a time of terror” by Jurgen Habermas and Jacques Derrida in conversation with Borrodori ( 2003)

It is interesting that the human brain has evolved in such a way that the talents needed for design are not carried by one person, but by groups of people with *different experiences and values*. Finding a way to work together across the divides remains the challenge. Perhaps focusing on shared needs, namely water, food, energy and habitat security could make the difference.



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Some of the pathways to addressing complexity have been shown by the paths walked by Stafford Beer, Alexander Christakis, Ken Bausch, Tom Flanagan and others who focus on dialogue and engagement. I think that Sue Gabriel's round table approach is another, whilst my take on mixed methods is to weave narratives based on listening, observing and trying to understand views, in order to try to find contextual patterns....

Tom F to Janet: The topics that you raised are critically important to talk about and yet also equally difficult to write about, as should be the case for all things which are written. We write about things and talk about things so that we might then think about things. Often we think it's the other way around. But if we don't talk about something we don't focus on it sufficiently to really think about it at all.

I have been thinking about the sacred quite a bit recently, largely because Craig and I have been involved in a writing effort on the topic of a secular Church in a sacred world. Neither Craig nor I are deists. However we are both deeply spiritual in our experience of life. I see no inconsistency with this. And I feel the tragic loss a religious practices which do not genuinely cultivate a sense of spiritual presence. This brings me to a few comments on the front piece of the article.

Interbeing, as a state of mind, was conceptually introduced to me by Daniel Christian Wahl, author of the *Regenerative Economy*. In this sense interbeing is a state of mind that parallels interdependency as a state of body. Interbeing is a state of spiritual presence where interdependency is a state of physical presence. Being present is never as simple as we might think it is. In my simple, frequently three-part philosophy, *Sentience* as a form a Feeling is secondary to *sapience* as a form of thinking, and presents as a form of interbeing. Presencing, as a verb, is, for me, living to the highest capacity. None of this contradicts your thoughts as expressed in the paper, and I sincerely hope that they do weave together well with your themes. I like to feel that my understanding of ethics and morals follows the writing of Hasan Ozbekhan. I also like to feel that my understanding of ethics flows from an appreciation of the centrality and the frontiers of identities. And my appreciation of identity reflects the unavoidably subjective understandings of individuals as they seek to become the negotiated objective understandings of groups. A truly voiced subjective individual understanding, whether accurate as a measure of a "reality" or not, is an objective data point in any inclusive social understanding. First-phase science as an objective practice recognizes its "objectivity" as a reflection of an observation that, while subjectively experienced in multiple potential ways, remains unchanged by observers. The science, as a community, negotiates the aggregation and balance among the objective events of reported understanding in the form of some unitive, if not universally coherent, "objective social truth." Second-phase and third-phase scientific observations, harvesting subjective and intersubjective observations, likewise are resolved into objective social truths through negotiated understandings. Any participant's sense of identity is defined by their feeling of centrality with respect to the negotiating process .... if they are not part of that process, then the objective social truths from the negotiation is not their truth. My point is that truth value is only relevant to the means within which individuals are included in the truth negotiation. There is no way that an outcome of any Community thinking can be imposed upon another community without forcefully colonizing that Community with its tyranny. So then, from my perspective, the path towards broad inclusion must include an invitation to deeper thinking. This thinking must be driven by inquiry, and must be preceded by a passionate **desire** to inquire. *Because answers are the endpoint of thought*, presenting an answer as a catalyst for thinking is like presenting a tombstone as a catalyst for life!

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Hence my passion for poets ... artists who can paint familiarly mysterious visions with their broadly felt words.

Janet to Tom: So the process of *engaging* is actually one of the most important aspects . It is a means to an end and an end in itself .....

Tom to Janet: : We cannot interconnect our minds without first finding an experiential way of interconnecting our hearts ... we cannot find a way of interconnecting our hearts without sharing a hope for such interconnection ... and, perhaps most essentially, we cannot share a hope to connect our hopes without a belief that such inclusive sharing is actually possible. It is not so much that we must speak for the earth as, I think, it is that we *must feel the presence of the earth when we speak*. In this necessity it is a tragic consequence that religions that draw our spirits beyond the world carry our spirits away from the world. A new sensation, a new experience of religion is emerging, though. It will run in parallel with older traditions if allowed, but will cultivate a renewed sense of a unitive oneness that now will include the presence of all "creations" on earth. This new experience will weave it's way into culture as a secular church in a spiritual world. Maybe. Social contract, regardless of how well rights and responsibilities are designed to balance, *cannot endure outside of a social covenant*. We, the people, must come to terms with a *hope, promise, and belief* that we will become *one people* ... infinitely complex along the fractal of our frontiers yet also immutable – secure in the essence of our imperfect and evolving humanity. In this sense, a breach in social *contract* is dwarfed by a breach in our social *covenant*.

What pending force of planetary reality will shatter our comforts and allow us to feel the presence of the possibility of a new covenant within which our humanity once again finds itself to be inclusive and interdependent? I think that as the old ways converge upon their event horizon, we will be left with little else than to imagine the unimaginable, make peace with the mysteries, and find safety in the otherness that we each carry as both our flag and our cross. But I digress...

Janet to Tom : So, perhaps humanity will realise that we are all members of one ( threatened) species and that we need to respect our place within the web of life . Humility supported by beliefs that support this view , whether they are ecological , religious or based on an *expanded form* of pragmatism will help to support this goal. Narrow idealism or pragmatism could be our downfall. This is why we need a non anthropocentric approach to design informed by systemic ethics ( McIntyre-Mills, 2014).

Interestingly Alan Rayner – whose work on inclusionality grew out of his work on fungus and communication -- introduced me to the work of Daniel Christian Wahl who has engaged in dialogues with Alan as detailed in Transformative Education ( 2021 forthcoming).

## TRANSFORMATIVE RESEARCH FOR BETTER ETHICS, EDUCATION AND ENGAGEMENT

The research on the potential of eco-villages **explores** *a-priori* norms and *a-posteriori* measures to support re-generation based on working with ( rather than against nature).

Two principles underpin evolution, namely competition and co-operation— unfortunately Darwinian theory has been oversimplified to emphasise the so-called inevitability of competition. Another misunderstanding is assuming that current designs for democracy, governance, law,

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economics, education or technology are inevitable. They are all constructs of the human mind. Unfortunately competitiveness has overridden co-operation to the extent that we have created a human imbalance. Human inventions from the simple machine to the printing press, the computer and internet have resulted in rapid transformation driven by competition with others (including all sentient beings) including nature, rather than co-operation with others and nature.

The taxonomic categories that divide human beings from the rest of nature are obsolete and that many species are able to communicate, make decisions, share resources and to reciprocate based on a sense of balancing individual and collective needs harmoniously for the common good

The research conceptualizes new architectures for democracy and better governance through user centric design. Service users and providers need to work with stakeholders to draw on local wisdom and combine it with some of the new digital potential. Salience, trust and engagement to protect living systems need to underpin the decision-making process as core axioms.

Yuval Noah Harari ( 2021, YouTube interview) stressed that co-operation across nation states is needed, not global government. I agree, post nationalist global co-operation is needed along with some very carefully managed post nationalist controls along the lines of the proposed Ecocide Law and Court, if we are to have a hope of addressing issues such as climate change and pandemics.

In the interview posted on YouTube (2020) Harari was asked if capitalism would endure? He responded by saying that economics is a construct or a story about how the world should work. He stressed , quite rightly that capitalism is not a law of nature. Instead we need to *learn more from nature*.

### **MISSION AND VISION FOR TRANSFORMATIVE EDUCATION AND PRACTICE: EXPANDING PRAGMATISM TO CONSIDER THE DESIGN CONSEQUENCES OF POWER FOR ALL SPECIES**

The approach to re-framing draws on a range of theorists ranging from Wangari Maathai, Elinor Ostrom, Vandana Shiva, Joseph Stiglitz, Gunther Pauli, Debra Bird Rose and legacy of critical systemic thinkers such as Hannah Arendt, West Churchman, Werner Ulrich, Gerald Midgley, Mike Jackson and Robert Flood, Martha Nussbaum and Amartya Sen on capabilities and Peter Senge on learning organizations /communities. These theorists provide the basis for informing a woven tapestry of ideas that informed past pilots and practical theorizing that have addressed:

- Systemic praxis for social and environmental justice ( McIntyre-Mills, 2003, Springer ) based on three year study funded as part of a quality of life study in Alice Springs
- User-centric Policy Design to address complex needs ( McIntyre-Mills, 2008 , Nova Science) based on an ARC Linkage grant with Neporendi and South Australian Dept of Health.
- Mitigation and adaptation to climate change through social, economic and environmental indicators of wellbeing ( McIntyre-Mills , De Vries and Binchai, 2014, Springer ) based on a Local Gov Grant) .

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- Demonstrating ways to de-couple economics, accounting and accountability from business as usual (based on NRF funding and in kind from UNISA, Universitas Padjadjaran, Indonesian Diaspora and support of Uni of Adelaide) .
- Systemic ethics for non-anthropocentrism ( McIntyre-Mills , 2014) based on considering the consequences for all species. The big picture approach addresses the need to reframe democracy and governance to protect multiple species through engaging from above and below to address the management of resources locally, nationally and at a post national regional level in line with the federalist architecture suggested by Florini ( 2003 and further developed to include new architectures for balancing individual and collective needs, McIntyre-Mills, 2017, McIntyre-Mills et al 2018, 2019a,b). It addresses
- Advocacy for ecocide law<sup>15</sup> (Higgins et al , 2013) to ensure that individuals, organisations and nation states are held to account for the extensive damage or destruction of an ecosystem that “prevents the peaceful life of the inhabitants of a region “Published on 13 Mar 2018 ecocide, the 5th Crime Against Peace- Polly Higgins <https://www.youtube.com/watch?v=Qg9eWtmBMIQ>.

### **COMMUNITY OF PRACTICE APPROACH TO EXPLORE *WHAT MOTIVATES* TRANSFORMATION**

This requires exploring *feelings* and these of course cannot be explored by means of AI so the study combines exploring qualitative insights by means of zoom interviews and in depth case studies. As Solms (2021) stresses drawing on the work of Chalmers (1995) and Oliver Sacks ( see Draaisma, D. ( 2015) , consciousness is that part of human function which refers to feelings about personal experiences. Consciousness is therefore more than brain function.

#### **Humanity can only be protected by protecting *biodiversity***

The big issues of the day: poverty, climate change and pandemics – root causes due to a lack of domestic, agricultural, liminal and wild habitats will be impacted (Donaldson and Kymlicka, 2011). The Covid-19 pandemic has provided Goodall (2020) the platform to speak out about how cross-species infections are caused by the way human beings are encroaching on the habitat of wild animals , containing them in inappropriate spaces, trafficking and transporting them in ways that are cruel that undermine their health and result in cross species infections. Representation of multiple species depends on improving social, economic and environmental accountability , sustainability and re-generation.

Rapid growth in human populations , rapid development of sprawling urban environments that are not designed to create balance across species impact food, water and energy insecurity. In ‘From

<sup>15</sup> A few nation states have recognized ecocide and since the Vietnam War. Arthur Galston and other academics from Harvard campaigned in 1970 for a new bioethics and ending the use of the exfoliant agent orange which they said constituted a war related crime (Yale News, 2008). The Human Rights Consortium at the University of London has focused on ‘ecocide’ (Gauger et al, 2013) as the fifth (as yet, unacknowledged) crime against peace by individuals, organisations or nation states. A few nation states have recognized ecocide since the Vietnam War. Arthur Galston and other scientists from Harvard campaigned in 1970 for a new bioethics and ending the use of the exfoliant agent orange which they said constituted a war related crime (Yale News, 2008). Ecocide National Criminal Codes (2012) have introduced ecocide to include non-war related crimes against the environment and humanity:

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Polarisation to Multispecies Relationships’ explains that living systems are defined as a continuum from organic to inorganic life. In some cultures, rocks and plants, as well as a range of creatures are seen as kin that need to be protected. The case for a new form of eco-systemic governance to protect sentient beings and their habitat is developed. ‘Ecocide Law’ is needed to protect the capabilities of all sentient beings, in order to address the systemic challenges that can together be called a ‘Risk Society. Diverse species (that are normally not in contact with one another) are thrust together when they are displaced, farmed, transported, contained and marketed without considering their rights or our responsibility as stewards to balance and protect diverse species rights. Viruses have the potential to jump across species, because of the way in which many host species have lost both their freedom and their habitat.

Better design is the way to address the big issues of the day – this requires positive feedback or reinforcement to prompt current generations to think about their everyday decisions. Once we lose the agora and critical engagement we are ruled by the market ( Baumann, 2000, 2011).

Given my limited computing skills I have been inspired by John P Van Gigch’s notion of meta-design( 1991) and was introduced to West Churchman’s *Design of Inquiring systems*. This set of questions for inquiry prompts us to think in terms of 12 questions ( critical heuristics) to consider the implications of what is the case and what ought to be the case.

*Vignette: On receiving an YouTube link to a video on how artificial intelligence is inevitable a dialogue developed*

Janet : The question that comes to mind is why do people want new technology that is designed to support competition and the old neo-liberal economy?

Rudolf : No, we do not want all this technology, the same as we do not want to become slaves for the 1% Elite, Therefore, we also need to master the technology, so we can counterbalance it.

Janet : Perhaps the way technology is designed needs to be considered, this is why Donna Haraway has stressed the need for women and the marginalised to become designers , rather than objects of other people’s designs. These designs must ensure that we balance individual and collective needs. Designs that stress only competition could be very dangerous, because Bots could create designs where human beings are superfluous . This may be good for some species and the environment ( for a while) but perhaps the bots will consider the environment and other species superfluous too, because they do not need food or water, but they will need an energy supply of some sort, not that that is much comfort!

Rudolf : Nothing is useless or useful , it all depends on how you use it. Horse power is replaced with mechanic power. Human power by mechanical mind power. The only think we need to do is be prepared for change.

Janet : Seriously, the notion that people will be without jobs will mean they will need to create their own jobs by ecofacturiing ( Gunter Pauli, 2010) and marketing their own goods. Power is a central concern, who decides and why is central to design ( see Flood, 1999, Flood and Romm, 2018)

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Rudolf : I believe, when we apply all this technology appropriately, it will help us in implementing ecofacturing and make the world a better place for all.

Janet : Shiva argues that technology is never value free, so designs need to be very carefully considered (Swier, ,2020):. I like the idea of designing algorithms to work *for people and nature* to support “wellbeing stocks”. These seem to be a secular version of what many Sundanese or Balinese believed to be important in Indonesia .

Rudolf : The algorithm is already working in nature, with or without human knowledge or understanding. Unfortunately human like to change the nature to satisfy their ego. That is the reason for pollution, war, human made disaster.

Janet : Technological change is not inevitable it is driven by design and design is driven by choice and choices are in turn driven by values that are driven by either *collaboration* or *conflict* (these are the two evolutionary principles)

What form of reinforcement is supportive of social and environmental justice? Policy and law that rewards re-generation and sustainability . But how ? We need local government support and post national governance as per the architectures mentioned in my slide on the need for biodiversity to be protected at multiple levels of governance from below and above. My concern is Big brother doing the wrong thing! How does the open source lever help to hold big brother algorithms to account so that local and post national wellbeing stocks are protected?

This is the focus of the effort to inspire alternative forms of technology to enable people to earn, while they learn and grow a future together.

Rudolf : drawing on Taoist wisdom , we do the opposite to balance the imbalance. This is Wu Wei.

Janet : How does a farmer use wu wei ?

Rudolf: The farmer works co-operatively with nature.

Janet: I have shared with you a paper that appeared some years ago on wuli, shili renli which could be helpful? How will we apply the wuli ( rules) , shili ( sensing) renli ( relational) approach (WSR, Gu and Zhu, 200) that addresses areas of concern in a practical manner?

Perhaps the shili ( sensing) will be promoted by renli ( relations) and wuli ( rules) generated by the score card and the tracking system you propose for organic products?

By focusing on the basic ingredients for life , water, nutrients, energy and a viable niche/habitat/home we could move a step closer to fostering *a will* to protect the commons. If participants in the dialogue realise that survival is a joint endeavour, perhaps they will understand?

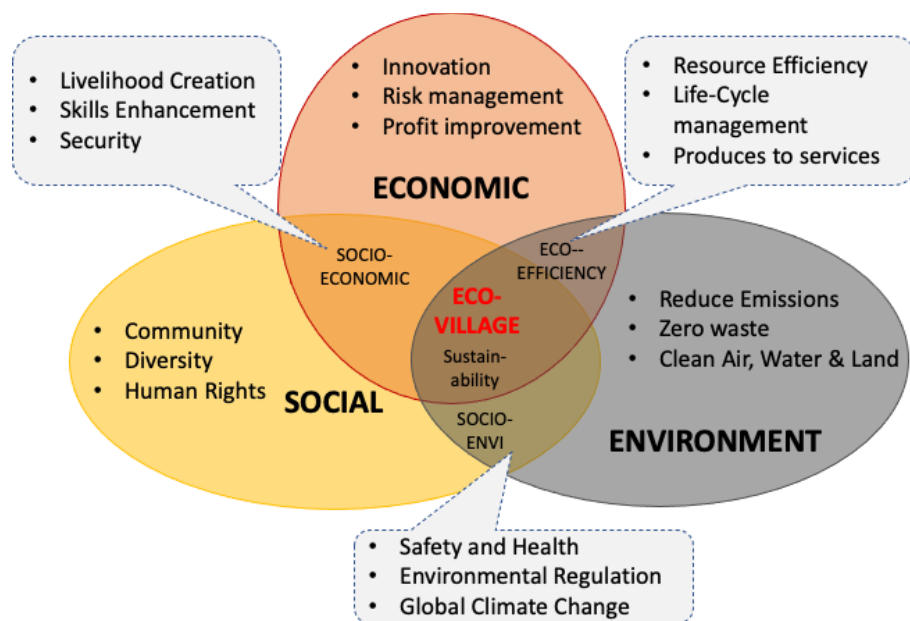
Rudolf : By building in measures associated with social enterprise we could guide decisions that make sense to people .

Janet, yes, the design is based on working with people to create relationships that are meaningful so that the decisions are informed by their perceptions and values. Indicators of wellbeing need to

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be *meaningful* so the design needs to reflect the *diversity* of the participants and their *diverse* life experiences, I also think that striving for harmony should not prevent people *also* engaging critically ( thus testing out ideas) when they talk about what matters to them?

Rudolf : The system can be demonstrated diagrammatically :



Source : Chapter 7: Earn while they learn and grow a future together : exploring the potential of Eco-villages –to support a web based economy by McIntyre-Mills, J Wirawan, R. and Widianingsih, I in Transformative Education for Re-generation ( 2021)

Janet : So, by asking people to tell stories about living well we can learn from one another and share what matters to us? We could explore how our opinions also differ from one another. Participants could be encouraged to explore the social , economic and environmental factors that shape their lives through prompts to the conversation. For example, In the pathways to wellbeing prototype (McIntyre-Mills et al 2014) people were asked to explore what they have, what they need, what they are willing to add or discard in order to move away from *Business as Usual* and to take small ( regular and progressive steps) towards supporting what Joseph Stiglitz et al ( 2010) call *Wellbeing Stocks*<sup>16</sup>

Re-enforcement or positive feedback could help people to move towards more re-generative approaches. The challenge will be to get provincial governments to reward regions that are

<sup>16</sup> The definition is as follows: ‘1. Material living standards (income, consumption and wealth), 2. Health, 3. Education, 4. Personal activities including work, 5. Political voice and governance, 6. Social connections and relationships, 7. Environment (present and future conditions), 8. Insecurity, of an economy as well as a physical nature’. This definition of wellbeing stocks fits well with the way in which both Indigenous and Non-Indigenous Australians connect with Country in Australia and elsewhere and the way in which critical systems thinkers and complexity theorists understand .

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showing progress and to discuss what ‘so-called ‘progress entails, namely protection of biodiversity as inherently linked with social, economic and environmental wellbeing .



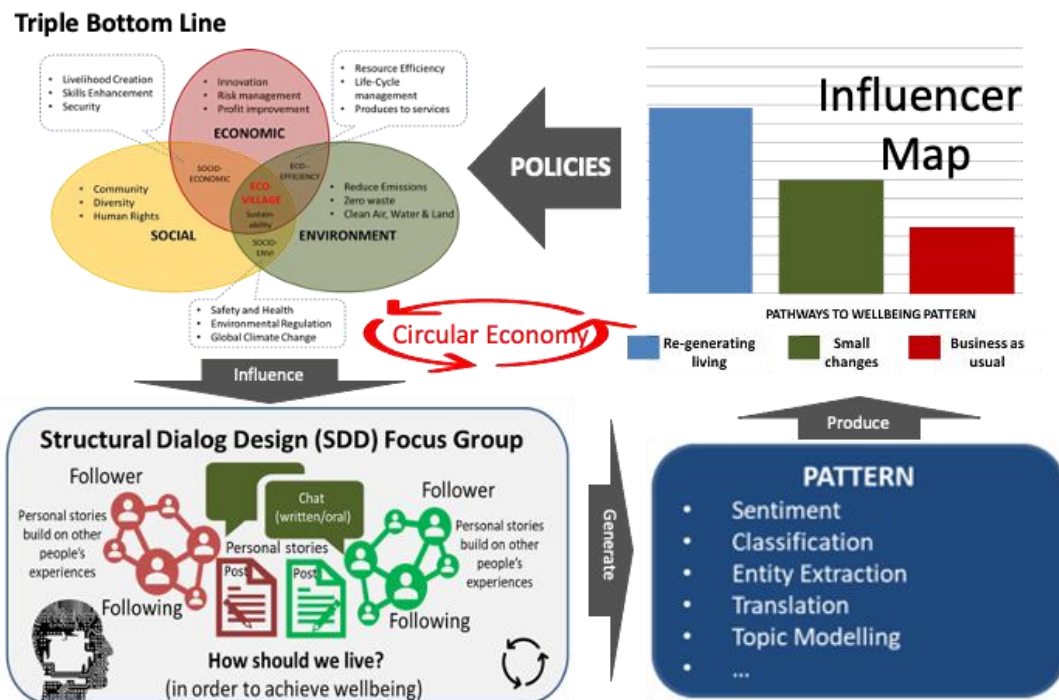
Source : Chapter 7: Earn while they learn and grow a future together : exploring the potential of Eco-villages –to support a web based economy by McIntyre-Mills, J Wirawan, R. and Widianingsih, I in Transformative Education for Re-generation ( 2021)

Rudolf : Through engaging in on line discussions and telling stories about what wellbeing means to them in everyday life, they will generate a lot of data, which can be used to measure what they value in terms of wellbeing indicators. All data generated could be recorded in a blockchain system to ensure that the recorded data is immutable.

Janet : How could block chain assist in supporting the circular economy?



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Source : Chapter 7: Earn while they learn and grow a future together : exploring the potential of Eco-villages –to support a web based economy by McIntyre-Mills, J Wirawan, R. and Widianingsih, I. in Transformative Education for Re-generation ( 2021)

The above diagram depicts the design for Pathways to Regenerate Living systems using Natural Language Processing (NLP) and Machine Learning (ML) to classify the data from stories to produce the Influencer Map, which contains the following three bar charts: Business as Usual, Small Changes and Re-generating Living.

Janet : I am worried about *over reliance* on machine learning, because people need to make the final decisions, but a form of engagement which shows how well ( or badly) a local community is doing – -as individuals and as a collective --could help to inform **better critical decisions** and it could also be helpful to ensure that *subsidies and incentives* along with *status and recognition* are given to those who are supporting the common good.

This could help to introduce a cultural shift supported by incentives to engage in activities that *support regeneration measured by wellbeing indicators..*

Rudolf : Yes , the *Influencer Map* could be used to demonstrate to what extent a Circular Economy is being achieved. Members of social enterprises could also use smart contracts to support marketing green organic products that can be tracked and traced using the system.

Janet: I like the idea of being able to market products by demonstrating their organic origins. The design could also support Gunther Pauli's ( 2010) notion of no waste.

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So perhaps the challenge that we will face is HOW to motivate people to engage with this system in a way that balances the needs of multiple species -- without being top down AND to ensure that the process is not hijacked for authoritarian purposes! In Indonesia, there is a chance that this initiative could be scaled up, because it is a presidential decree<sup>17</sup> that all villages subscribe to the “One Village One Product approach”. This decree could be adapted to foster engagement to support the needs of the marginalised—but in order to encourage local governments internationally to engage in mapping and modelling their carbon footprint would require a combination of *both* positive and negative sanctions managed by international law.

**FOOD, ENERGY AND WATER : A WAY TO RESOURCE THE COMMONS AND ADDRESS EXISTENTIAL RISKS?**

What potential pathways can promote opportunities and redress the food and water insecurity associated with a growing population and environmental destruction? ( see McIntyre-Mills et al 2019b)

What motivates people to transform their thinking and practice at a personal and political level? This is a central concern informed by a critical systemic approach ( Midgely, 2000, 2021, Churchman,1972 ) :

<b>Table 2 : Transformative research for multispecies relationships – implications for rights across human beings and other species</b>	
<p><b>Boundaries</b></p> <ul style="list-style-type: none"> <li>• The links across loss of habitat and pandemics and implications for multispecies relationships stressed by Jane Goodall, Donaldson and Kymlicka</li> </ul>	<ul style="list-style-type: none"> <li>• Where do we draw the line of inclusion and exclusion when we make policy? In what contexts should global control be permissible to balance individual and collective needs?</li> <li>• The line needs to be drawn where excessive misuse of resources by one species places other living systems at risk.</li> </ul>
<p><b>Perspectives</b></p> <ul style="list-style-type: none"> <li>• Need for re-framing what constitutes ethical thinking and practice .</li> </ul>	<ul style="list-style-type: none"> <li>• Why are some species and people are prioritized? This has implications for our perspectives on rights to commodify others and this in turn has implications for property (ownership) and food ( what constitutes food)</li> <li>• Power imbalances needs to be addressed to ensure that resources are not captured , stockpiled</li> </ul>

<sup>17</sup> One village, one product’ (OVAP, Morihiko Hiramatsu – Governor of Oita prefecture, 1979, Yogyakarta , 2014) was applied by President Jokowi in 2008-2009.

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	and misused at the expense of the majority of living systems in this generation and the next.
<p><b>Relationships</b></p> <ul style="list-style-type: none"> <li>• Frans De Waal - animals have a sense of empathy, fairness and ability to reciprocate</li> <li>• Eva Meier – animals communicate</li> <li>• Susanne Simard, Monica Gagliano, Peter Wohlleben and Allen Rayner – plants communicate</li> </ul>	<ul style="list-style-type: none"> <li>• What are our relationships with others ( human, animal, environment)?</li> <li>• What can we learn from the teleonomy of Covid-19 about climate change, habitat loss, trafficking and containment of sentient beings?</li> <li>• How can sentient beings be assured that they can express their capabilities so that they live a life worth living( Nussbaum, 2006, 2011)</li> </ul>
<p><b>Systems</b></p> <ul style="list-style-type: none"> <li>• Social and environmental justice needs to underpin designs non -anthropocentric designs</li> </ul>	<ul style="list-style-type: none"> <li>• How can we design our systems, our infrastructure and technology in ways that ensure we do not exceed our boundaries?</li> </ul>

### The banality of evil

Reconsidering boundaries for social and environmental justice has implications for our understanding of what Hannah Arendt (1962) called “ the banality of evil” with reference to the everyday decisions by ordinary people that led to the holocaust in Germany. The need to extend the social contract to protect human rights ( not only the rights of citizens) , requires a rethinking of governance and global citizenship. Social justice in turn needs to be buttressed by supporting environmental justice through supporting an international law of Ecocide (Higgins et al 2013) that stresses the need to protect the wellbeing of an ecosystem and *all the inhabitants* of a region. It is couched in deliberately non- anthropocentric language and goes on to stress that organisations and companies need to be held to account. We need to stop ecocide.

New forms of governance and democracy could be based on protecting habitat for a range of species. Education and governance systems need to foster an ecology of mind ( Bateson , 1972) drawing on a respect for multiple species and Indigenous Knowledge Systems ( Odessa Hoppers, 2013) and an eco facturing approach( Pauli, 2010). This has implications for the production, distribution and consumption chain and how we view our rights and responsibilities . Aspects of our life such as the nature of food, the nature of work and the nature of governance are all constructs. We need to ensure that economic systems support diverse species and the habitats on which they rely.

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Social economic and environmental transformation at the local, national and post national regional level is required to support human security.

Human security is in turn dependent upon protecting vulnerable multispecies relationships spanning organic and inorganic life.



Source : Chapter 7: Earn while they learn and grow a future together : exploring the potential of Eco-villages –to support a web based economy by McIntyre-Mills, J Wirawan, R. and Widianingsih, I in Transformative Education for Re-generation ( 2021)

### GAP IN THE LITERATURE

Elinor Ostrom highlights principles for governing the commons and shows that local people can do good governance and discusses *a priori norms*:

Ostrom summarised design principles ( based on empirical research) to protect the commonly held resource, such as grazing land or a shared water resource. Forsyth and Johnson (2014) explain that:

“Ostrom’s main point was that individuals will be more likely to create and conserve the commons when they have credible and reliable information about the costs and benefits of resource decisions and (crucially) when they have an opportunity to decide the rules of the game.”

They explain that she drew on her research to identify eight design principles:

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“...that would improve the effectiveness and sustainability of common property regimes: clear resource boundaries (i.e. knowing physical and ecological properties of the resource); clear rules of membership (knowing who is entitled to use the resource); congruence between rules of provision/appropriation and local conditions; arenas for ‘collective choice’; mutual monitoring; ‘graduated’ sanctions; mechanisms for conflict resolution (i.e. ensuring that resource users are able to monitor and sanction other resource users); and finally, a state that is willing to recognize (or at least not challenge) local rights of organization (ibid.: 90).”

Vandana Shiva (2020a,b) highlights that protecting water and seeds, for example requires not only good local practice but national and international action<sup>18</sup> whilst Polly Higgins et al (2013) propose the ecocide law as a way to protect the commons. So we are looking at the dynamics of alternative forms of engagement that can help to protect the commons .

- What reinforcing dynamics in social enterprises could help to protect the triple bottom line?
- What social, economic and environmental indicators are meaningful to local people, i.e. what are the perceived pathways to wellbeing? These provide the basis for measures or indicators of wellbeing
- What works, why and how in learning organisations/communities to support social enterprise, because people are able to earn, learn and grow a future together.
- What are participants perceptions of an engagement process to track, trace and hold markets to account?

### **EARN WHILST WE LEARN AND GROW A FUTURE TOGETHER**

In order to address the problem of social exclusion, unemployment and habitat degradation and the place based research focuses on empowering local people. Education and governance systems need to :

- **Address** the production, consumption and redistribution cycle and the potential to adapt and scale up the ‘One village, one /many enterprises ’ to support resilience.
- **Explore** behaviour and value transformation in co-operatives and social enterprise groups to ascertain what works why and how to inform, adapt and map regenerative business opportunities. The research will address the regional fault lines of food, energy and water insecurity.

Currently unemployment and lack of access to tertiary or vocational training are major human security challenges in a degraded environment. Highly urbanised, environmentally affected regions face the cascading social, economic and environmental challenges that impact on the habitat across the continuum from domestic, liminal , agricultural and wild animal life ( to draw on Donaldson and Kymlicka (2011).

<sup>18</sup> It is worth noting that Elinor Ostrom who won a Nobel Peace Prize in 2009 and Vandana Shiva won the Sydney Peace Prize in 2010.

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Transformation from business as usual requires taking steps towards protecting “well-being stocks” ( Stiglitz et al, 2010) by exploring <sup>19</sup> the extent to which :

- a) salience, trust and engagement , the key underlying principles of participatory democracy (McIntyre-Mills and Christakis, 2021) and intersubjectivity (Christakis and Kakoulaki, 2021) are indeed supported by a community of practice to support agricultural activities.
- b) social, economic and environmental accounting and accountability can be supported by means of the community of practice teaching the implications of decisions by means of scenarios.

The symposium in 2017 addressed the production, consumption and redistribution cycle and the potential to adapt and scale up the ‘One village, one /many enterprises ’ to support resilience. The Africa-Indonesia Bandung Conference in 1955 on development stressed the importance of de-colonisation and local voices, but indigenous people and many of the rural and urban poor feel left behind in South Africa and West Java. In line with these principles we explored behaviour and value transformation in co-operatives and social enterprise groups to ascertain what works why and how to inform, adapt and map regenerative business opportunities.

<ul style="list-style-type: none"> <li>• Alam Endah – women’s group – of 20 active plus network of approx. 100 associated women agricultural productivity threatened by de-forestation, job losses and risks of trafficking as eco-tourism expands</li> <li>• Cibodas – 1500 Young Reggae Farmers in the area – Re-generation</li> <li>• Kediri City – Computer Training Co-op – 130</li> </ul>	<ul style="list-style-type: none"> <li>• Manyaledi Border of Botswana NE Province) community study</li> <li>• Tiger Kloof Educational Institute , Vryberg set up an Organic Co-op with the Disabled – 40 participants and community outreach team</li> <li>• Ocean View Organic Farm (Fish Hoek)linked with Ocean View High School and the Co-op board with 5 active women and a network of men and women who volunteer</li> <li>• Invited to work with Thabazimbi Tourism Board (Limpopo) Board and Vhembe Municipality</li> </ul>
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<sup>19</sup> This volume builds on previous work (McIntyre-Mills et al 2019a,b, McIntyre-Mills and Corcoran Nantes, 2020 ) in which we expressed our concerns that highly urbanised regions face food and water insecurity and are at risk of becoming food deserts unless everyday strategies are explored with service users and providers to find better pathways to resilience and wellbeing for the most vulnerable members of the population. Most of the global urban population *will be located in Asia (52 per cent) and Africa (21 per cent)*, according to the UN (2014: 11). This has implications for food, water and energy security. High rate of urbanization by 2050 the majority of the world’s population will be living in cities in Africa and Asia. Hence the selection of the case study areas:

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### Gender sensitive youth agency in the green economy – capacity enhancement approaches

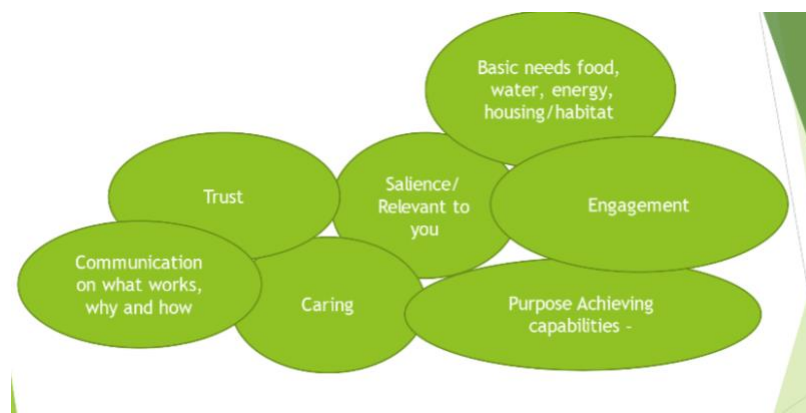
According to South Africa's implementation of the 2030 agenda for sustainable development 'Solving Complex Challenges Together', SDG 10 addressing inequality will need more attention to give opportunities to young people.

In line with The Indigenous Knowledge Systems (IKS) Policy (November 2004) the project aims to create a community of practice to enable IKS and to enhance institutional capacity building in line with Odessa Hopper's (2013) vision for the positive protection and development of IKS. The approach draws on Sen and in particular Nussbaum's (2011) capabilities approach for human development. It draws inspiration from Indonesia's "One village, one /many product(s) approach" to development. This Participatory Action Research aims to foster a demonstration pilot as a first step towards scaling up regional development hubs to create local employment opportunities and thus reduce rural to urban migration and the associated risks.

Studying co-operative social engagement on what works, why and how in Indonesia to provide insights for South Africa using a community of practice ( Etienne Wenger)

Extend and deepen an understanding of democratic and governance opportunities , whilst recognizing that Ostrom's research has revealed principles and patterns amongst co-operative groups but the place-based research on what works, why and how also reveals the limitations of local engagement and the **need for advocacy for post national , post regionalist governance.**

Each of the case studies to date reveal limitations and to address the social, economic and environmental challenges at the local level , but this is not enough, we also need to address challenges by achieving post national solidarity.



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### Hypothesis

The greater the level of participation in social, economic and environmental decision making based on ‘if then scenarios’ linked to green social enterprise and supported by a community of practice - the better the outcomes in line with UN Sustainable Development Goals.

The research<sup>20</sup> explores whether groups can manage shared resources in such a way that the commons (habitat) for multiple diverse species can be maintained whilst simultaneously setting up a viable circular economy that enables those –who are currently marginalised and at risk of displacement—to establish their own income streams within the co-operatively run social enterprises that are supported as learning organisations/communities.

New forms of education, economics, democracy and governance are needed. The potential of eco-villages needs to be explored.

Imagine if we could have rural-urban campuses based on an eco-village model?

Ecovillages could link products, markets and de-centralised systems of learning through caring and growing a future together.

The pilots on eco villages propose an alternative cyclical economy based on eco-villages supporting urban hubs to re-generate rural-urban balance based on ecofacturing, to use Gunter Pauli’s concept. The development of eco-facturing using local products such as cassava for bioplastics, bamboo for biochar, fair trade coffee, mushroom production using the coffee grains and honey are discussed as examples of ecofacturing that are currently being developed in Indonesia as well as pilot projects in South Africa. Core design principles are suggested, namely salience, trust and engagement to protect living systems and the people who are affected.

These principles need to underpin the decision-making process. These principles are discussed in the paper together with the importance of ‘being the change’ and ‘interbeing’ through expanding pragmatism to consider the social, economic and environmental implications of choices. Systemic Ethical decisions honour ‘freedom and diversity’ to the extent that freedom and diversity are not undermined by power imbalances and find a way to counterbalance:

- *Education as usual* or neo-liberal *factory education* that *does not* address the convergent social, economic and environmental challenges
- *Steps towards alternative forms of education* at the primary, secondary, tertiary level linked at each level with Vocational Education and training that addresses the social, economic and environmental challenges to support
- *Transformative education nodes and networks* that balances individual and collective social, economic and environmental protection across rural and urban areas. This could be a wonderful

<sup>20</sup> The research draws on interdisciplinary contributions, in particular the work of Elinor Ostrom on managing the commons, Vandana Shiva on sustainable agriculture, Gunter Pauli on circular green economies, Polly Higgins and colleagues who founded the movement to introduce an Ecocide Law and Peter Senge’s work on organisational learning.



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opportunity to do some transformative work on the way to combine face to face learning in the community that draws on the local tacit knowledge and is supported by local e learning hubs where people could meet, greet, learn new skills in a multi-generational way with paid facilitators who work to support on line learning that could support education and vocational training through a range of alternative options:

We need a large dose of humility and an equally large dose of courage to take a practical leap towards living differently every day. Please help us to scale up the eco village: *Community of practice to inspire agency and hope to address wellbeing stocks*:

[Janet.mcintyre@adelaide.edu.au](mailto:Janet.mcintyre@adelaide.edu.au)

Rudolf.wirawan @adelaide.edu.au

The Web site on Eco Village is located at [http://wirasoftfoundation.org/en\\_GB/web/bic-sig](http://wirasoftfoundation.org/en_GB/web/bic-sig)<sup>21</sup>

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It would be good to develop further project that address :

- Training to address UN Sustainable Dev Goals
- Training on Gender Mainstreaming
- Training on Critical Systemic thinking
- Indigenous knowledge systems
- Develop webinars on
- What is an Eco Village?
- Training on setting up a co-op
- Engagement to empower the marginalised
- Pathways to Wellbeing portal
- Circular economy

Material has already been developed , it can be extended and co-developed with local content to suit local users

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