

Contemporary Systems Thinking

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# Democracy and Governance for Resourcing the Commons

Theory and Practice on  
Rural-Urban Balance

 Springer

# Contemporary Systems Thinking

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Editors

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# **Foreword: Problem-Centered Hybrid Methodologies—Deploying Mixed Methods to Enhance Environmental Social Justice**

Sharlene Hesse-Biber  
Boston College, Boston, MA, USA

MMIRA Regional Meeting,  
West Java, Indonesia  
Keynote Presentation  
December, 2017

Greetings everyone. I'm Sharlene Hesse-Biber and it's my pleasure today to speak at this symposium. I regret that I cannot be there in person to fully participate in the discussion today, but I consider it an honor that you allowed me to speak to you today in this podcast.

What are hybrid methodologies? They are epistemological plural perspectives that ask different questions. Crucially, the goal of this epistemological pluralism is not to form better perceptions of social reality but to really think more creatively about how to imagine a range of new knowledge through new research questions and, in this case, to understand complex environmental issues.

When we use mixed methods, we don't start with a method, we start with a question. Mixed methods is usually defined as using one qualitative approach and one quantitative approach; it has always meant to use just two different methods. However, I want to flip this idea around. I want to suggest that using mixed methods is really asking several different kinds of questions that are routed in different ways of thinking about the environment. For example, a qualitatively driven question asks about an individual's experience in using, for example, the forest and an individual's perspectives on the environment. Using a quantitative question though, asks such things as how much, or how many; it may ask about rates of forest usage. So when we're using a hybrid methodology approach, we're really asking both qualitatively and quantitatively driven questions. I believe that thinking about mixed methods as using hybrid methodologies will provide us with a much more complex way to understand the environmental issues that we face today. The nature of hybrid methodologies is that they cross disciplinary boundaries. They come from different disciplines like geography, sociology, and environmental studies. And, each of these questions together provides multiple ways to conceptualize an environmental issue

because they ask very different questions. Furthermore, these questions often stem from very different standpoints on the social world.

In using hybrid methodologies in a mixed methods project, I want to center the set of research problems. I don't want to rush to research design. And I don't want to talk about methods designs, one qualitative and one quantitative in a sequential or in a concurrent way. I want to start with the methodological issues and problems that we are facing, especially with regard to environmental degradation.

So, hybrid methodologies are asking questions. These questions help us understand how we can answer them using a set of different methods, designs. Some of these designs may in fact be mixed methods; others may be more multi-methods.

Hybridity also means that we are cognizant as researchers of our own situated knowledge. Every question comes from someone's situated perspective. This perspective is always partial. And it provides a given alternative for thinking about research problems. For example, feminist geographer Andrea Nightingale notes hybrid methodologies aim for "a kind of kaleidoscope wherein plural epistemologies help to reveal new, albeit, partial and situated, patterns." So what we're trying to get at is a range of perspectives on environmental concerns. We're asking a set of different questions.

Hybridity designs start from different entry points onto the research issue. Different starting points bring into view many different dimensions and allow the researcher to interrogate often the gaps and silences that can exist between data sets. They also get at subjugated knowledge. In using hybrid methodologies, my aim in particular is to get at the subjugated voices of research participants that are impacted by environmental issues, whose voices often go silent. If we can get at these subjugated voices, they can contribute to our understanding of these complex environmental issues that we're facing today.

I want us to first think about our own research standpoint, to interrogate our own values, attitudes, and biases that we hold regarding the environment, because these attitudes, biases, and values which are situated in our role as researchers often determine the kinds of questions we ask or don't ask—what type of data we tend to collect or don't collect. You know, how we were trained as researchers, say in quantitative data versus qualitative data. So I want us to think about the very questions that we're asking; that they're rooted in our own situatedness, our world views, and our theoretical paradigms; and that these things are often conscious or unconscious.

So we really need to recognize, as we begin to think about the questions about the environment that we're bringing to the table today, that our awareness is always situated. One way to understand our own set of issues and biases that we bring to the questions we ask is to use reflexivity. That is, reflexivity is the methodology of self-awareness and communal awareness. Reflexivity practice means the extent to which researchers are attentive to their own biases with regard to their favorite methods, analysis, and interpretation and how those factors that they bring to the research table shape their understanding of the research problem. There are also power dynamics in this research problem among researchers raising different questions. We need to listen to the range of questions out there, we need to be attentive to

different types of questions, and we really need to interrogate our own positionality. I want to argue that if we do this, we can benefit from methodological hybridity. Hopefully, it will give us the promise of a fuller understanding of the process by going after knowledge gaps. Hybridity can allow for the uncovering of equity and social justice issues often ignored or dismissed by some conventional methods only using quantitative methods that give us certain kinds of results but then subjugate other kinds of results. Hybridity can also provide for a research process that is much more transparent, reflexive, accountable, and directed toward—I believe—social justice.

So what I want to do right now is to show you how one researcher has used hybrid methodologies to really get at examining climate change adaptation. And this is a case study from Andrea Nightingale, who is a famous geographer, and the title of this case study is called *Uncovering Subjugated Knowledge: A Case Study of Forest Land Usage in Nepal*. Now, Nightingale's work places women's concerns at the center of her research project via the use of a community forest in Nepal. She employs mixed methods research designs to explore the silent voices of women and other oppressed groups based on their class and caste whose work and family lives comprise an integral part of land forest usage.

Nightingale's famous methodological perspective is based in Donna Haraway's concept that all knowledge is situationally based. Now, Donna Haraway is a feminist theorist who has a particular approach to knowledge building so unlike those researchers who embraced, for example, a positivist paradigm that assumes there's a universal truth out there waiting to be found. Haraway would say, as a feminist epistemologist, that her conception of reality is that all reality is partial and context-bound.

So using this notion of partially situated knowledge, Nightingale then employs her own feminist standpoint situated knowledge to research perspective places that women's concerns in understanding this issue of climate change adaptation are prevalent. The specific research question she seeks to explore is how the forest is used by those whose voices have been left out of traditional quantitative geographic methods and how in turn those voices also shape the landscape of the forest and the meanings of how the environment is understood and used by these groups. For Nightingale, the use of hybrid methodologies in her mixed methods project and understanding climate change adaptation was an important way for her to comprehend the diversity of ecological change that leads to what she terms "co-productive ecological conditions." Using a mixed methods approach allows her to get at a variety of voices that make up climate change adaptation and that make up our understanding of the complexity of how individuals impact climate change.

From the beginning, Nightingale's specific research questions addressed an understanding of how the forest is used by those whose voices have been left out of traditional quantitative geographical methods and how, in turn, those voices also shape the landscape of the forest, is understood and used it on the ground. Nightingale ensues that utilizing a mixed methods approach was done with some trepidation as this was her dissertation project and most of her dissertation committee was quantitative. That produced some tension between her concerns of wanting to understand

the subjective use of the forest and her dissertation committee's concern about counting vegetation usage, counting the presence of this type of vegetation or that type of vegetation—which was quite a quantitative way to account forest usage.

So let's go behind the scenes to an interview with Nightingale as she looked at the tensions between her qualitative interest that includes using aerial photos as an element to capture quantitative change in forest usage over time and others' subjective observations of forest usage on the ground:

Nightingale:

I think, I thought that working across the social and natural sciences entailed using mixed methods. One of the people on my dissertation committee had said to me, 'Oh, that would be really interesting because you could use aerial interpretations to validate your interviews.' But I said 'No, I don't want to do that because I think that both these forms of knowledge are valid and I don't want to uphold one over the other.' And so it was more interesting to me, to kind of think about why you know they were the same or why they weren't the same and what it meant if they weren't. Not to sort of say 'Oh, well people must have been lying to me.' Or something like that when the two types of data don't agree.

SHB:

So what you actually want to do, is known as mixed methods for the purpose of triangulation? You want to see if both methods would come up with one answer?

Nightingale:

Exactly.

SHB:

It seems to me that this member of your committee was coming from more of a positivist perspective of reality where there is the truth out there waiting to be found, right?

Nightingale:

Yes... and certainly triangulation was part of the agenda in the kinds of work I was doing. It makes a lot of sense to try to triangulate different kinds of data whether it's participant observation or in-depth interviews or some of the ambulatory interviews that I use. But I really felt very strongly that there were different ways of understanding what was happening with forest change and I didn't want to privilege one of those hybrid methodologies to those understanding over the other. But I would rather put them side by side and see what they said to one another.

SHB:

Right. So it seems to me that underlying this uneasiness of your dissertation advisor in particular was in a sense a different theoretical perspective on knowledge building that you were going after. And I would add, a different hybrid methodology.

Nightingale:

My approach to knowledge would sort of suggest that knowledge is partial and situated. And the work of Donna Haraway has, as you know influenced me. But even some of Judith Butler's work and the way she conceptualized how we come to know about the world, through bodily performances and repetitive interactions.

So Nightingale's dissertation was taking the research question and the importance of centering the context of discovery by asking different sets of questions. It's



not that she was negative about asking quantitatively driven questions that required asking questions such as how much vegetation and how many of these things or those things are observed about the forest usage. But in fact wanted to bring several different types of questions—more subjugated questions—to the table and have them interact with one another.

Nightingale notes, “In my own work on community forestry in Nepal, I used qualitative ethnographic techniques, such as oral histories, participant-observation and in-depth interviewing as well as aerial photo interpretation and quantitative vegetation inventory”.

In addition to highlighting the situatedness and partiality of knowledge, the Nepali case study also helps to show the importance of challenging “dominant” representations of forest change—in this case, aerial photo interpretation—not by rejecting them outright but by demonstrating explicitly how they provide only one part of the story of forest change.

This is a particularly important project in Nepal where they are using remote sense data only to determine changes in forest cover, land usage, and environmental degradation. By using a mixed methods hybrid methodology design combining qualitative and quantitative strategies, she’s able to analyze inconsistencies between these two types of dating instead of trying to triangulate to find a given truth about forest land usage. And from Nightingale’s insights from the qualitative and quantitative data—those oral histories that she took from those individuals on the ground and the aerial photo interpretations—she’s able to see nature in the aerial photos in an unexpected way. She sees it in the context of the nature-society boundary.

She argues that nature is also socially and physically constructed by society through the basic interactions of the individual with the natural landscape. The insights that she gained from asking hybrid methodological questions provided new conceptual space for her to rethink this nature-society interface. What appears hidden in the aerial photos, she found by asking a different set of subjugated questions. In these aerial photos of the forest, she found something different. She found a set of societal relationships imbedded in caste, class, race, and gendered relationships, as well as cultural beliefs about the natural environment. Nightingale found that all of these elements affected land forest usage. There is such richness in Nightingale’s mixed methods hybrid ethological approach. And what she found hidden in these aerial photos were all of these vibrant relationships that help us understand the basic issues of forest usage. She compares inconsistencies among both types of data, and rather than trying to triangulate these data in order to fit one truth, she uses both data sets, the aerial photos, and oral history of forest usage on equal terms to answer questions as she notes, “at roughly the same scale.” Her data sets are equally important to her research; one does not preempt the other.

So what have we learned by using a hybrid methodological approach in this case study? I think we learned some important things in how this kind of approach can really expand our understanding and really make for a more robust research process. The hybrid approach can help reconcile a range of differences in our understandings of land forest usage. It provides a wider, more complete perspective. It allows more researchers to use their reflexivity and understand their own biases in the research

process. And all of these issues together acknowledge that in using these kinds of hybrid methodologies, we as researchers gain a richer understanding of the social world. Thank you so much. I just want to say thank you again for giving me the opportunity to speak today. I hope all of you enjoy the rest of this symposium.

# **Prologue: Transformative Mixed Methods and Getting Lost in the City**

Donna M. Mertens  
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‘Getting lost in the city’ conjures up a multitude of images that range from the loss of connections for Aboriginal people in Australia with their cultural traditions and land, to people living in urban poverty unable to find employment that allows for a dignified lifestyle. The destruction of the family structure through systemic policies that keep people in poverty and drive them to live in cities is associated with problems of human trafficking, under- or unemployment, substance abuse, and a sense of disenfranchisement that is often associated with anti-social behaviours. These conditions prompt me to ask: What is the potential contribution of transformative mixed methods towards the development and implementation of interventions that address social, economic, and environmental justice? This chapter explores possible answers to this question by first explaining the meaning of transformative mixed methods and then examining potential contributions in the Indonesian context.

## **Transformative Mixed Methods**

The transformative approach to research emerged as a response to the voices of members of diverse marginalised communities who said that research was at best taking information from them with nothing in return to, at worst, being used as a tool to sustain an oppressive status quo (Mertens 2017; Cram et al. 2013). Building on the early work of Guba and Lincoln (1989) on paradigms in social science research, the transformative approach is defined by four philosophical assumptions: axiology (the nature of values and ethics), ontology (the nature of reality), epistemology (the nature of knowledge and the relationship between the researcher and participants), and methodology (the nature of systematic inquiry).

The transformative axiological assumption is characterised by valuing and placing priority on specifically addressing inequities and issues of human rights and social, economic, and environmental justice (Mertens 2020; Mertens and Wilson 2019). Building on the voices of Indigenous scholars, the values of interconnectedness of past, present, and future and of all living and nonliving beings are also of

importance (Chilisa 2012). In order to act upon these values, the researcher needs to understand the heterogeneity of the cultures operating in the research context and act with respect towards the various cultural groups, recognising the resilience within groups and providing for reciprocity in a form that is recognised as valuable by the research participants.

The transformative ontological assumption holds that reality is multi-faceted and that there are various versions of reality that come from different social positionalities, such as gender, country of origin, Indigenous status, disability, deafness, poverty, or religion. According to the transformative paradigm, some versions of reality have the potential to sustain an oppressive status quo, and others have the potential to lead to the pathway of increased social, economic, and environmental justice.

The researcher's responsibility is to make visible the different versions of reality and the consequences associated with accepting one version of reality over another. For example, if a land that belongs to Indigenous people is taken over by the government and leased to foreign corporations for the purpose of mining, is that a good thing because it creates jobs and boosts the economy, or is it a bad thing because it violates the Indigenous people's land rights and their cultural belief in the life force of the land and causes increased pollution?

The transformative epistemological assumption is logically connected to the axiological and ontological assumptions in that the researcher needs to establish respectful relationships with everyone who has a stake in the outcomes of the study (henceforth known as stakeholders). This means that the researcher needs to interact with stakeholders in culturally appropriate ways and take the time to build the necessary relationships so that trust can be built in the research context. The call to address social, economic, and environmental justice means that the research needs to be action oriented; hence, researchers should be aware of the need to build coalitions of the more and less powerful in order to provide a structure to facilitate transformative change.

The transformative methodological assumption holds that a transformative lens that reflects the axiological, ontological, and epistemological assumptions should be used throughout the research process. Typically, a transformative mixed methods design for a study is multistage and cyclical, with the data collected at each stage informing subsequent actions in the study (Mertens 2018). This means that the research needs to begin with dialogic methods that allow for the identification of appropriate stakeholders, ways to engage with the stakeholders, and strategies that address power differentials. The early stages of a transformative study should focus on building relationships and setting the stage for a more in-depth contextual analysis. The contextual analysis can include the collection of both quantitative and qualitative data (hence making it a mixed methods study) to reveal the historical context as well as the current status in terms of the phenomenon under study. Figure 1 illustrates a generic transformative mixed methods design that incorporates the transformative assumptions into the study design.

The focus of the research is to identify appropriate interventions that support movement towards increased social, economic, and environmental justice, thus facilitating transformative change. The early stages of the study provide the

# Transformative Mixed Methods

Build relationships	Contextual analysis	Pilot intervention	Implement intervention	Determine effectiveness	Use findings for transformative purposes
Review literature	Focus groups, surveys, extant data, literature, GIS mapping	Observations, interviews, photo voice, focus groups, surveys, pre/post data collection, team meetings	Similar data collection as for pilot	Post data collection (indicators, art work, poetry, photos, mapping)	Use for policy change
Individual and group consultation	Identify value positions		Add process evaluation of implementation	Examine relationship quality	Use to refine intervention
Develop working strategies	Develop intervention		Collect data on unexpected outcomes		Use to improve and expand relationships

Fig. 1 Transformative mixed methods design

grounding for the development of an intervention (or interventions) that can be pilot tested and revised as necessary. This cycle can be completed as many times as needed until the stakeholders and researchers agree that it is appropriate to test the interventions in a larger group. In Fig. 1, fourth and fifth stages comprise the research activities needed to test the effectiveness of an intervention and the success of its implementation. The final stage is designed to include the use of the findings from the entire research study for transformative purposes, policy development, refinement of the intervention, and use to improve and expand relationships. In the next section, I examine a complex problem in Indonesia that encapsulates the need for improved social, economic, and environmental justice. I use this context to examine the potential application of a transformative mixed methods approach.

## The Complexity of the Indonesian Context

Sudarmo (2008); Sudarmo (2018, in this volume), provides an example of economic development involving street vendors and sex that illustrates a complex context that is ripe for increased attention to the experiences of members of marginalised communities by addressing social, economic, and environmental justice. He describes the economic and historical context of Surakarta, also called Solo, a city on the island of Java in Indonesia with a population of approximately a half a million people. Indonesia suffered from an economic crisis from 1998 to 2002 that resulted in the influx of many rural people into the urban centre. Informal street vending provided opportunities for people without formal employment to earn a living and provide low-cost goods and services to the citizens of Surakarta. As the number of residents and migrants from outside the city engaged in street vending increased over the years, the vendors occupied public spaces and built permanent and temporary structures from which they conducted their businesses. Sudarmo

conducted an ethnographic study that examined the experiences of the street vendors and sex workers during the time that a government policy was implemented to move these workers to locations outside of the city centre and public spaces. In this section, I combine the earlier work with a proposal to apply the principles of transformative research to this context as a way of illustrating the potential of such an approach.

In the first stage of a transformative study, the researcher wants to identify relevant stakeholders and develop methods for working together that are culturally respectful and that address power differentials. The development of such relationships is crucial in order to understand the differences in perspectives that exist, as well as to engender ownership of the study amongst the stakeholder groups, with an eye to making use of the findings throughout the study. Sudarmo (2018) identified the relevant stakeholders as street vendors, informal sector workers, and officials of city government. He also included Mr. Sarjoko, his family, and officials at the Ar-Ridho Foundation, a religious-based nonprofit organisation. This foundation lobbied for the rights of prostitutes and madams/pimps to be given land so that they could start an education centre for their children and offer training to the prostitutes and madams/pimps free of charge so they could be prepared to undertake work in alternative legal sectors.

Sudarmo followed this initial phase with contextual analysis of the historical context through content analyses of secondary research and local newspapers. He studied the current context through participant observation and interviews. Unfortunately, he began his research after the street vendors and prostitutes were already relocated. The full impact of a transformative approach would be better realised if the research could have been initiated before the relocation intervention was implemented. Therefore, let us take a hypothetical journey along the path of implementing a transformative approach to research at the moment that the city government decided that the street vendors were breaking the law by operating in the city centre. If this were the case, the researcher would want to strengthen the first phase of the research by identifying those in city government who were charged with enforcing the law and making decisions about the alternative location for the vendors. In addition, stronger relationships would need to be formed with street vendors and organisations that represent their interests. Additional stakeholder groups of relevance include the Surakarta residents, neighbourhood and citizen associations, schools, city transportation workers, and the military. Inclusion of these groups in early discussions might have resulted in the identification of more feasible alternatives.

The meetings that did occur between the government and vendors revealed the stark differences in their versions of reality. The city government had a legislative mandate to relocate the vendors; they also framed the relocation as empowerment of the disadvantaged by supporting their access to kiosks from which to sell their goods and services and providing them with loans. The vendors rejected these arguments on the basis that the new location was remote and that they would have insufficient customers to sustain their businesses. If the transformative lens had been used for evidence-based cyclical collection of data to inform decision-making, then

the differing viewpoints could have been tested to see their implications before full-scale implementation. In addition, on-going data collection could have revealed the political machinations that were occurring in terms of who had control of the kiosks and the loan programme.

Under a transformative approach, a pilot phase for relocation would have been implemented instead of full-scale relocation of all vendors at the same time. Thus, data about accessibility to kiosks at the new location, provision and payment for utilities, and access to loans could have been tested. This would most likely have revealed that the remoteness of the location did result in a lack of customers and the likelihood that many of the smaller vendors would go out of business. It might also have revealed that the government did not keep its promises for free ownership of the kiosks and that the costs of utilities were out of reach for small vendors. It might also have revealed that large vendors were given kiosks in the front on the ground floor and that small vendors were placed on the top floors that did not give them enough foot traffic to sustain their businesses. This resulted in small vendors losing their kiosks, sometimes selling them to larger vendors, but then being unable to earn a living. These are the conditions that others have noted are conducive to human trafficking and engagement in other illegal activities.

Assuming that the pilot test of the relocation strategy had revealed these weaknesses in the proposed plan, the transformative research in the next phase could have been used to identify another set of alternatives. This might require additional pilot testing, given the serious failure of the original plan. The alternative intervention might have included doing marketing surveys to determine where a sufficient customer base might be found or looking at multiple locations for the new kiosks rather than concentrating them all in one place. It might include literacy training and training for alternative types of work as was proposed by the Ar-Ridho Foundation. Such interventions could have been pilot tested and then researched in additional phases to study the quality of implementation, deviations from the plans, political machinations, and effectiveness on multiple criteria. The data from such a study could then have been used to improve government-citizen relationships, develop new policies, improve future economic development initiatives, and protect the rights of the marginalised members of the communities.

## Conclusions

Hindsight is usually better than foresight, especially when we are willing to learn from our failures. There is no guarantee that use of a transformative mixed methods approach to research will result in better respect for the rights of members of marginalised communities nor to the increase in social, economic, and environmental justice. However, my hypothesis is that if we consciously frame our research to address these issues, then we have a better chance of addressing them than if we do not do so. Indonesia faces many challenges in the future, not least of which is the effect of climate change. As an island nation, the realities of these effects are

ominous. This represents fertile ground for consideration of social and economic interventions that would improve the environmental future for Indonesia. Perhaps a transformative cyclical mixed methods approach could be part of the efforts to reveal effective options in this regard.

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# Acknowledgments

We would like to begin by acknowledging that the volumes emerged largely from a symposium that was co-located at the Sturt Campus of Flinders University in Adelaide and the University of Padjadjaran in Bandung, West Java, in December, 2017. The symposium addressed gendered, cross-cultural perspectives on what it means or could mean to be an ecological citizen who respects multiple species and multiple forms of intelligence (Gardiner 2008), and we aimed to propose aspirational policies grounded in the necessity to protect current and future generations of life through the fair distribution or redistribution of resources.

Volume 1, “Mixed Methods and Cross Disciplinary Research: Towards Cultivating Eco-systemic Living,” and the companion Volume 2, “Democracy and Governance for Resourcing the Commons: Theory and Practice on Rural-Urban Balance” of the series comprise papers<sup>1</sup> that were presented at the symposium or that resulted from joint research that provided the basis for the cooperation. Thus, many of the papers are written together with the editors.

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<sup>1</sup>This volume builds on Boulding’s (1956) notion of the skeleton of science that stresses that complexity increases as we move from inorganic to organic life to plant and animal life and to human beings and the designs they create for living. Large city populations become unstable when living costs are unaffordable. It is not surprising that the so-called Arab Spring started as a result of rising food costs. In, for example, Solo, Indonesia, riots took place when living costs and cooking oil become too expensive for the small street traders to survive. The demographic (dividend), namely, high population growth and rising number of young people could become the trigger for political unrest in rapidly urbanizing cities such as in Africa and Indonesia where the rising levels of unemployment and poverty result in the vulnerability of women and children to crime and trafficking.

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Her recent research addresses non-anthropocentric policy for living systems. In 2017, her volumes for the Springer Contemporary Systems Thinking Series address the challenge to regenerate living systems. The sole-authored volume is entitled “Planetary Passport for Representation, Accountability and Re-generation,”<sup>1</sup> and the edited volume together with Professors Romm and Corcoran Nantes is entitled

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<sup>1</sup>The innovation for democracy and governance suggests a way to document the careful use of resources, to provide safe passage to those in need of safe habitat. The book argues that nation states need to find ways to control the super-rich through the governance process and to enhance a sense of shared ecological citizenship and responsibility for biodiversity. The fundamental approach is collaborative research, but it has implications for an alternative form of democracy and governance.

“Balancing Individualism and Collectivism: Social and Environmental Justice.” The latter comprises collected papers from the Special Integration Group for International Society for the Systems Sciences, which McIntyre chairs together with 16 international contributors, including early career researchers. The research seeks a better balance across social, cultural, political, economic, and environmental interspecies concerns to ensure a sustainable future for current and future generations. The ecological citizen uses a “planetary passport” to track the distribution and redistribution of resources in the interests of social and environmental justice. Engagement links high-level challenges with individual perspectives, facilitating nuanced investigation of the complex ethical challenge of closing the gap in life chances. The central argument looks for ways to hold the powerful to account so as to enable virtuous living by the majority in a “planetary passport” that demonstrates a careful use of resources and a way to protect habitat for living systems.

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# Part I

## Research for Transformation: Some Overview Comments

Janet McIntyre-Mills

General systems theory is based on an elaboration of the so-called skeleton of science by Kenneth Boulding (1956). It explains the way in which the world of science is structured and how it functions. According to Boulding's analysis, the relationship within and across the levels becomes increasingly complex from the inorganic to organic plant and animal life and then social and cultural systems.

Although he uses an organic analogy, he divides the science into categorical levels—as if they are rungs of an Aristotelian hierarchy—without explicitly stressing that human beings are indeed animals and that we are hybrid hosts to organic life in the form of a range of micro-organisms. We produce waste materials that in turn provide the organic basis for plant life, and we are unable to survive unless we maintain a chemical and mechanical balance. The potential for augmenting our intelligence (or not) by using digital technology connects human beings directly with artificially designed forms that could become post-human (for better or worse). Thus, designs and the design choices of human beings are very important for the future of living systems. Whilst general systems theory has the potential to inform our understanding of the world and to alert us to the way in which organic life and intelligence builds as a continuum across inorganic and organic life, it needs to be open to critical revision.

Ariel Salleh (2016) and Donna Haraway (1991) analyse the way in which science, politics and ethics are interrelated and gendered. However, knowledge discourses as Foucault and Gordon (1980) has cautioned are also shaped by power imbalances. An intersectional analysis reveals how much worse off a woman can be if she is also working class, destitute, a member of a marginal political group, a refugee or disabled.

Nussbaum's (2006) discussion of the last frontiers of injustice to those who are outside the protection of the social contract, namely, women (in some nation states), young people and sentient beings who are voiceless, is later developed into a plea for rights for all sentient beings (based on an idealist categorical type argument). Without supporting the essentialism of categorical politics, a right-based argument is vital if we are to extend the ethics of care and solidarity with others beyond the boundaries of our family, friends and nation state and care about others by virtue of their right to a life worth living.

Identity politics can be problematic if we are striving to build solidarity globally so that we address poverty and climate change. The era of the Anthropocene needs to be seen as the result of unequal power dynamics that are class based, gendered and rooted in a colonial past and a global economy that remains alive and well and persistent in striving for profit at the expense of those who cannot resist dispossession or wage slavery.

Ariel Salleh (2016) stresses that Aristotle developed hierarchical categories that ranked God, man, woman, slaves, animals and the natural world. She stresses that the disassociation of the women's movement from the natural world as a form of resistance is problematic and that ecological feminism is a response to this. By saying god is a woman also falls into the same trap, albeit a satisfactory thought (unless of course she is a femocrat!). Whilst Salleh's analysis demonstrates a deep understanding of the politics of the women's movement and the analysis is sound, her conclusion that all problems can be rooted in masculinity and gendered identity politics is problematic, as it results in her falling into her own trap. Whilst she makes a sound case for fluidity and interconnection, her conclusion reverts to identity politics and categorical thinking.

Dualistic thinking is indeed problematic, and the division of us/them/culture/nature and mind/body is a result of the Cartesian legacy, but woman merely change places with men in a hierarchy. Whilst most of the criticisms made by Vandana's critics are easily refuted and clearly rooted in support of the status quo—namely, neoliberal economics and the globalization of agriculture—the point made by some that her work tends to privilege nationalism and Hinduism is perhaps a little unfair but worth stressing that a postcolonial approach needs to acknowledge the past, namely, that people, women and indigenous women globally, were and are oppressed and dispossessed of habitat. The level of oppression increases with the degree of power imbalance.

However, the potential of CSP is that the 'molar' rooted category is seen instead as 'molecular' potential state capable of transformation. This is where the work of Deleuze and Guattari (Bogue 1989) and Haraway (1992, 2010) inform my understanding and where I see the potential of praxis.

Critical analysis needs to be rooted in agency and learned from lived experience. But it must not be limited by personal (past) experience. Hope for the future rests in the capacity to appreciate potential opportunities (without naivete) and informed by a critical reading of the social, cultural, political and economic context.

Boulding is also correct about the importance of values in shaping transformation for the better or worse. Unlike Inglehart's notion of a 'cultural shift', my understanding of the potential for cultural change is rooted in an organic appreciation of cross-cutting power dynamics and the potential for bringing about change.

Unlike Boulding's approach, a critical systemic approach to thinking and practice (CSP) appreciates that the continuum across organic and inorganic systems can be better understood as hybrid and interconnected. In this sense the insights of Haraway (1991) and Deleuz and Guattari (Bogue 1989) are key to this understanding of webs and flows which recognize the potential for change. The identity politics of 'us versus them' can be used across all political persuasions (including the

neoliberal state) to divide and rule. Thus although I accept the argument by Ariel Salleh (2016) that gender is necessary for understanding poverty and climate change, it is insufficient and emotionally bleak to polarize half of humanity when transformation requires a cultural shift of the currently powerful to recognized their shared vulnerability with the (currently) powerless. The role of social movements to create solidarity in cross-cutting intersectional networks without abandoning principles requires balancing individual and collective needs in the interests of living systems.

Socio-economic paradigms as we know them today are merely a reflection of current politics and have the potential for change through drawing on the potential of a new form of ecology and economics.

**The critical systemic approach** relates to the way in which people perceive the world and the purposive way in which human beings try to address areas of concern. The complexity of the system increases as the number of variables increases, the relationships across variables increase and these variables and relationships are perceived differently by different stakeholders.

**Transformation requires transcendence** based on an appreciation of our interconnectedness with all living systems and our responsibility for all life: ecological governance informed by a sense of cosmopolitan values and rooted in an appreciation of nature may provide the seeds for regeneration (Bignall et al. 2016).

This purposive aspect needs to be addressed through systemic intervention informed by thinking through options. *The Design of Inquiring Systems* developed by West Churchman (1971) is extended to explicitly appreciate many ways of knowing that take into account the rights of sentient beings and the living systems on which they depend, so that a non-anthropocentric approach to governance and public policy can be achieved (McIntyre-Mills 2014, 2017). These ways of knowing include:

- Logic
- Idealism to protect all sentient beings
- Empiricism based on qualitative and quantitative data to protect living systems
- Dialectic based on exploration of thesis and antithesis and then striving for a synthesis
- Expanded pragmatism based on considering consequences of our decisions in the short, medium and long term *for all life*

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# Chapter 1

## Summary of the Papers and Relevance of Mixed Methods for Resourcing the Commons



Janet McIntyre-Mills and Norma R. A. Romm

**Abstract** The aim of the research underpinning the two companion volumes, subtitled ‘We are the land and the waters’ and ‘Getting lost in the city’, is to develop a new paradigm for reconstructing a sense of political community within and beyond the nation state. The focus will be on democratic and governance theory and practice to protect the commons.

**Keywords** Commons · Process norms · Interconnected survival

‘There is no such thing as a (social) closed system’, according to C. West Churchman (1979).

We are part of the social system, and our experiences shape our values which in turn shape our economies and the environment for better or worse. I have added social to Churchman’s famous quotation, because I believe this was the intent. We are indeed ‘living beyond our limits’ (Meadows and Randers 1992), and the rate at which we are using the resources on the planet is unsustainable (UN 2030 Agenda).

Current rates of consumption by some at the expense of others are the result of values that in turn shape the social, economic and environmental policy decisions. For example, the Australian Foreign Policy White Paper (2017) stresses that ‘Opportunity, Security and Strength’ will depend on transforming the region through creative engagement to address climate change in line with the Sustainable Development 2030 Agenda and that opportunities for women and young people are a priority in a context where the vulnerable are at risk.

The White Paper (2017: 32) stresses:

According to United Nations estimates, globally there could be 41 mega-cities (cities with more than ten million inhabitants) by 2030. Increased flows of displaced people and

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irregular migration will continue to present challenges. Unprecedented numbers of people displaced by conflict and natural disasters are moving within countries and across borders. Currently, there are an estimated 65 million displaced people in the world, the highest number since the Second World War...

The need to prevent the displacement of people from their home in rural areas is a key concern although not explicitly highlighted. The White Paper (2017: 32) stresses: ‘Societies that protect human rights and gender equality are much more likely to be productive and stable...’. Thus the focus of the Mixed Methods Symposium was to address areas of concern using a hybrid approach. Policy decisions systemically shape the life chances of current and future generations of living systems. If we can influence values through realising that ‘A is better off when B is better off’ (Von Foerster 1995), then we can maximise transformation for the better within the Asia-Pacific Region and beyond. As Boulding (1966) summed it up, we are part of one spaceship, not in competing lifeboats. The research contributes to a new area, namely, the commons as a process and a sense of connection to living systems, rather than as a resource ‘held in common’, to cite Bollier (Bollier and Helfrich 2012)<sup>1</sup>:

*The commons is not a resource.* It is a resource *plus* a defined community *and* the protocols, values and norms devised by the community to manage its resources. Many resources urgently need to be managed as commons, such as the atmosphere, oceans, genetic knowledge and biodiversity.

*There is no commons without commoning*—the social practices and norms for managing a resource for collective benefit.

In order to manage the commons, mutual agreements need to be negotiated, and records need to be kept, in order to protect the interests of stakeholders. The commons needs to be theorised as a legal concept (Marella 2017), a transformative governance concept (*Planetary Passport* McIntyre-Mills 2017) and a basis for systemic ethics (McIntyre-Mills 2014). The engagement processes (see *Balancing Individualism and Collectivism*, McIntyre-Mills et al. 2017) that enable protecting the commons are explored in the companion volumes, *Mixed Methods and Cross Disciplinary Research: Towards Cultivating Ecosystemic Living* and *Democracy and Governance for Resourcing the Commons*, in which the rationale for a new way of living is developed with participants in Africa and Indonesia, where risks associated with displacement and loss are explored in more depth. For example, in Alam Endah, a case study demonstrates low rates of out-migration because of community engagement in sustainable living and re-generative activities—the potential for women to be further empowered through enhancing their representation and accountability is explored—whereas in Cianjur, a contrasting case study demonstrates low levels of sustainable businesses and high rates of out-migration resulting in higher risks of trafficking of women and young people.

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<sup>1</sup> 07/15/2011 ‘I am always trying to figure out how to explain the idea of the commons to newcomers who find it hard to grasp. In preparation for a talk that I gave at the Caux Forum for Human Security, near Montreux, Switzerland, I came up with a fairly short overview, which I have copied below...:<http://www.bollier.org/commons-short-and-sweet>’.

Instead of seeing the world through the lens of property, the social democratic argument makes a case for enabling all members of the community to live sustainably and well through re-generation of the environment on which they depend.

## Relevance of Mixed Methods and Cross-Disciplinary Research for Human Security

In Vol. 1 Janet McIntyre-Mills addresses metaphors and praxis for weaving together strands of experience. It extends the concept of ‘wellbeing stocks’, developed by Stiglitz et al. (2010: 15) to refer to dynamic ways of working with others.<sup>2</sup> In Vol. 2 the focus is on exploring together with a range of stakeholders, including leaders in the field and established and early career professionals, ways to re-generate and invigorate employment opportunities.

Both volumes were in part the product of a symposium held in 2019 across two universities (Flinders and University of Padjadjaran) where the topic was ‘Addressing unemployment with particular reference to those left behind in the current economy (particularly women and young people) to explore the potential of new alternatives such as the so-called Cascade, Blue Economy Approach by Gunter Pauli’ (known as Sustainability version 2).

There are many definitions of blue economy. We envisaged two small gatherings of no more than 45 participants comprising international delegates, delegates from the University of Padjadjaran (UNPAD, our host institution, comprising graduate students and staff) and delegates from Indonesia (comprising staff and their graduate students) to discuss examples of by enabling people through creative thinking and practice.

The blue economy approach of Gunter Pauli (2010) outlines more than 100 ways to create opportunities through environmental thinking that does not privilege the environment at the expense of people. Instead his approach is to find ways to enable the unemployed to benefit through working on environmental challenges to *protect the blue marble*, our planet.

His motto is: ‘There is no unemployment in eco-systems’ (Gunter Pauli 2010, 2016). He stresses the need to provide integrated opportunities through design that taps into the abundant talent and environmental opportunities that can be found and to ensure that the designs protect both people and habitat. This is a systemic approach to address the relationships across people, other species and the environment. It is unnecessary to argue that for people to flourish, the environment must suffer:

Like ‘green economy’, which is not limited to the green ecosystem, this ‘blue economy’ is not limited to the marine ecosystem. It is the economy that responds to the basic needs of

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<sup>2</sup>The paper by *McIntyre-Mills* focuses on mixed methods at the intersection of demographics and ecological humanities for enhancing social and environmental justice. In Vol. 1, ‘We are the land’, Janet McIntyre-Mills addresses metaphors and praxis for weaving together strands of experience. It extends the concept of ‘wellbeing stocks’, developed by Stiglitz et al. (2010: 15) to refer to dynamic ways of working with others.

all with what we have. As such, it stands for a new way of designing business: using the resources available in cascading systems, where the waste of one product becomes the input to create a new cash flow. (Jan Steffen, International Union for Conservation of Nature).

Dr. Catia Bastioli, Chief Executive Officer at Novamont S.p.a, European Inventor of the Year 2007, sums it up this way: ‘... Natural systems cascade nutrients, matter and energy—waste does not exist. Any by-product is the source for a new product. Sustainable business evolves with respect, not only for local resources, but also for culture and tradition’.<sup>3</sup>

We extended the meaning as outlined by Gunter Pauli to emphasise opportunities to enhance social and environmental justice. It is possible develop the green economy or the blue economy without emphasising both social and environmental justice.

The systemic approach emphasised in these *Contemporary Systems Series volumes* takes into account many diverse ways of seeing and tries to find common themes that could underpin ‘lives worth living’, based on testing out ideas with those who are to be affected by the decisions and mindful of future generations of life (including sentient beings). This is a form of expanded pragmatism based on mindful decision-making in the interests of living systems of which we are a strand (McIntyre-Mills 2017).

The chapters emphasise ways to promote social and environmental justice through fostering job creation. A way forward is, for example, to add value to the products from rural areas and to find ways to engage young people in designing regional areas that are re-generated as places where they wish to remain. The papers also address gendered, cross-cultural perspectives on what it means or could mean to be an ecological citizen who respects multiple species.

The collection explores wellbeing in terms of the relationship between functioning and capabilities (Sen 2000, 2005; Nussbaum 2011) by enhancing space for social inclusion and recognition of *both diverse standpoints on wellbeing as well as shared meanings*. The twofold aim is to:

- (a) **Protect diversity** and areas of common ground in the interests of current and future generations by focusing on rights and responsibilities to protect sustainable employment that ensures food, energy and water security.
- (b) **Explore ways to protect ‘wellbeing stocks’** (Stiglitz et al. 2010) for current and future generations. One of the ways is to introduce approaches to support full-time employment so that unemployment becomes a relic of the past. Thus the research addresses perceptions on what it means to live well in ways that protect people and the planet, what constitutes representation of diverse voices (Hesse-Biber 2010) and the re-generation of social, environmental and economic fabric (McIntyre-Mills 2017) across different age cohorts.

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<sup>3</sup> See <http://business.inquirer.net/128587/from-green-to-blue-economy>.



The engagement approaches include forms of so-called systemic intervention defined as addressing specific areas of concern in specific contexts. Midgley (2000) defines it as:

Purposeful action by an agent to create change in relation to reflection upon boundaries (2000: 129).

Bela Banathy made a plea that we should learn ‘not to make caterpillars go faster, when what we need are butterflies by examining and challenging, how people think, what they believe and how they see the world’ (Banathy 1991 in Norum 2001: 330). Through research and leadership received from Xhosa, Swazi, Arrernte and Ngarrindjeri mentors, I learned that we exist through our relationships and interdependency.

Capitalist, urban cultures forget people and country. When I experienced and listened to the story of caterpillar dreaming, butterfly being, it resonated and I began to understand the importance of re-generation and protection of people and habitat. The resonance of re-generation and continuity is one that is lost when we use the resources of this generation and leave nothing for the next generation of life.

Since the *Stern Review on the Economics of Climate Change* (2006), little has been achieved in addressing the warnings concerning low-lying regions globally. Global and regional risks associated with climate change could lead to destitution of many in high-risk regions (Stern 2006). Recently (ABC, 7/9/2017) nations in the South Pacific have voiced their concerns about the way in which climate change is impacting their life chances and the extent to which regional mitigation and adaptation choices matter to Pacific Islanders facing inundation. Within Southeast Asia Bangladesh currently faces widespread flooding, whilst on its borders the Rohingya refugees from Myanmar (Burma) who flee persecution wait safe passage.

Both a priori norms to guide development and a posteriori considerations are needed to measure the performance of the UN Sustainable Development Goals to protect sentient beings and their habitat. The notion of virtuous living needs to be explored in terms of:

- A priori norms are guided by accepted rules of behaviour.
- A posteriori indicators and measures of performance. Both are needed in order to guide practices and to hold people and their elected government representatives to account.

The United Nations Declaration on the Rights of Indigenous Peoples (2007) provides a vital pathway for engagement. Representation, accountability and sustainability challenges need to be met through addressing very unequal life chances (Dobson 2009; Dryzek 2010). The 2030 Agenda<sup>4</sup> is:

The new global framework to help eradicate poverty and achieve sustainable development by 2030. It includes an ambitious set of 17 Sustainable Development Goals... The 2030 Agenda for Sustainable Development sets out the global framework to eradicate poverty and achieve sustainable development by 2030.

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<sup>4</sup>[http://europa.eu/rapid/press-release\\_MEMO-15-5709\\_en.htm](http://europa.eu/rapid/press-release_MEMO-15-5709_en.htm).

Both volumes can be considered as sources of ideas for policy-makers and those engaged in strategic thinking to protect living systems of which we are a part and to begin with re-generation not merely sustaining so-called wellbeing stocks a concept adapted from Stiglitz et al. (2010: 15) to refer to a multidimensional measure of wellbeing.<sup>5</sup> The aim of the wellbeing stocks concept is to enable people to re-evaluate economics and to become more aware of the way in which we neglect social and environmental aspects of life. The pursuit of profit at the expense of people and the environment is a central problem for democracy and governance. The vulnerability of cities is a symptom of the lack of balance between individual and collective needs.

The election of Trump by the Rust Belt towns and dispirited inner city residents illustrates a trend internationally, namely, that democracy is not meeting the needs of working people who struggle to make ends meet. The poignancy of the poverty of people in cities and on the land is illustrated by the video published by *The Wall Street Journal* that discusses the concept of ‘pay day poverty’<sup>6</sup> in Holmes County, Mississippi. Many Americans do not have bank accounts. They work from hand to mouth and rely on moneylenders to enable them to make ends meet. One informant, a soy and cotton farmer who also worked as a bus driver and as a school janitor, explained that he was unsure just how much debt he was in, because he spent all his time doing small jobs so as to be able to pay the bills and to pay back the predatory loans they have taken out to make ends meet. The mobile home and money lender is the way of life of many as they have an annual income of around US 20,000 dollars. In this precarious economy, employees who are trying to make ends meet are unable to take time out, even when ill, according to a recent report from the Brookings Institute in 2018.<sup>7</sup>

The research detailed in this volume explores the potential for cities to become more productive as sites for food and water security rather than food and water deserts through more creative use of technology together with creative partners that

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<sup>5</sup>We spend research efforts on narrowly defined areas that are defined by gatekeepers who represent short termism and the 1%. The terms of reference need to be widened. Fighting over whether to fund submarine development in Adelaide is one example of the challenge for defence. The focus needs to be on human security and prevention of cascading social, economic and environmental challenges. In July 2017 I attended a European Commission workshop in Adelaide attended by senior public sector researchers and military strategists. The event was opened by the Danish Ambassador to Australia with the statement that he stressed to his grandchildren that they should not have children as by 2050 life could be too stressful. Adelaide and Copenhagen are friendly rivals to become carbon neutral by 2020. More cities need to take up this challenge. The aim of my research is to explore ways to narrow the gap between the life chances across the diverse stakeholders within nation states, respective of whether they are citizens of a nation state or not. Most of my work to date has made a case for giving a voice to the voiceless and addressing the social, economic and environmental life changes of all generations by understanding our interdependency as part of an overall living system.

<sup>6</sup><http://www.wsj.com/video/a-portrait-of-poverty-in-america-job-insecurity-and-payday-lending/B5CF9324-E20F-463D-A306-44726B2B0695.html>.

<sup>7</sup>[https://www.brookings.edu/opinions/the-flu-is-awful-a-lack-of-sick-leave-is-worse/?utm\\_campaign=Brookings%20Brief&utm\\_source=hs\\_email&utm\\_medium=email&utm\\_content=60463699](https://www.brookings.edu/opinions/the-flu-is-awful-a-lack-of-sick-leave-is-worse/?utm_campaign=Brookings%20Brief&utm_source=hs_email&utm_medium=email&utm_content=60463699).

see food and security as feasible at the household level if supports are provided at the community, national and international level.

How can the vulnerable become more resilient by addressing the systemic underpinnings of disadvantage (Usamah 2014)? Clearly, this has implications for the way we address public policy and human service governance and delivery and the way in which the Paris Climate Change Agreement (2015), UN Sustainable Development Goals (2014) and the UN Sendai Framework (2015–2030) for Disaster Risk Reduction are addressed through reducing the gap in life chances and enhancing social inclusion. Thus Goal 1 (end poverty) with specific implications for food, energy and water security, Goal 5 (gender inequality) and Goal 17 (creating partnerships) are particularly relevant to protecting the most vulnerable, whilst the United Nations Declaration on the Rights of Indigenous Peoples (2007) provides a vital pathway for socially inclusive decision-making on habitat protection. In light of this, the aims of the proposed research are to explore:

1. What are the socio-economic and environmental resilience challenges for the vulnerable and voiceless? What projects contribute to extending multispecies rights to a 'life worth living' in line with Nussbaum (2006, 2011)? Representation, accountability and sustainability and re-generation challenges need to be met through addressing very unequal life chances (Dobson 2007) for the voiceless and (almost) complete silence for other sentient beings and the environment.
2. How does engagement in education for social, economic and environmental resilience contribute to sustainable livelihood options across vulnerable stakeholders?
3. What forms of social, economic and environmental regional support best contribute to improved resilience amongst vulnerable groups (Ford et al. 2015; Raikhel 2010)?
4. With a specific focus on food, energy and water security, how can households and local communities be engaged to overcome disadvantage and enhance resilience and balance to address the size of carbon footprints (Rees and Wakernagel 2008)?
5. What can be done to redress the rural-urban balance?

The we/they thinking between citizens who have the security of a home and an income and non-citizens without a home and destitute deserves attention, given that more people are currently displaced as a result of social and natural disasters than after the Second World War.

According to the previous United Nations High Commissioner for Refugees, Guterres (UNHCR 2014), for the first time since the Second World War, the global figure for displaced persons has now passed 50 million, and, by 2050, this figure could be as high as 150 million (Rusbridger 2015: 13). The social and environment challenges have been exploited by people traffickers in Africa, for example, where slavery has become more visible than ever in Libya as desperate people fall into the hands of traffickers who sell them, 'like goats' in the market place.<sup>8</sup> The notion that sentient beings have rights is not even on the horizon in some socio-political contexts.

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<sup>8</sup><http://www.aljazeera.com/news/2017/12/outrageous-reality-libya-171201085605212.html>.

In line with the Paris Declaration (1997), public administration needs to be framed together with co-researchers with local lived experience. The workshop at Flinders University and the Symposium at UNPAD in West Java<sup>9</sup> will explore the challenge of increased urbanisation and movement towards cities<sup>10</sup> and the implications it has for the life chances of unemployed women who become increasingly vulnerable to trafficking.

The UN 2030 Agenda<sup>11</sup> is:

the new global framework to help eradicate poverty and achieve sustainable development by 2030. It includes an ambitious set of 17 Sustainable Development Goals.... The 2030 Agenda for Sustainable Development sets out the global framework to eradicate poverty and achieve sustainable development by 2030.

The papers presented at the symposia (Flinders University and UNPAD, December 2017) on which much of this volume is based addressed the research aims and focused on considering practical responses to address complex problems that comprise many interrelated variables and are perceived differently by stakeholders with different values, different life experiences and different life expectancies. Moreover, our aim was to identify pathways towards ethical vocational education to enable lifelong engagement by active citizens that requires action learning to address areas of perceived policy concern. In line with this, the papers focus on practical responses to address complex problems that comprise many interrelated variables and are perceived differently by stakeholders with different values.

In line with this, *Donna Mertens in this volume* discusses transformative research with stakeholders, explaining how a mixed methods transformative approach can develop community-based interventions. Sharlene Hesse-Biber develops a discussion on representation and its implications for thinking and practice.

*Janet McIntyre-Mills'* chapter on vocational educational pathways addresses the flow of people from North Africa, less developed and more populated, down to Southern Africa, more developed and with a lower population growth rate (Harper 2016). The push factors from the North are population growth affecting human food security (Harper 2016). These push factors are linked with the political dynamics of social exclusion, crop failure, land grabbing and land loss, food and water insecurity that make people vulnerable to migration or trafficking and the pull of urban life, the so-called Dick Whittington syndrome where life in the city is hoped to hold more opportunities. The challenge is to balance the complex individual and collective needs in significant urban centres and the regional heart on which they depend for their survival. If we consider life chances and experiences across cohorts, then we

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<sup>9</sup>This workshop is linked with partnership development in Indonesia. UNPAD (University of Padjadjaran) is co-hosting the symposium that follows.

<sup>10</sup>In Indonesia the rate of urbanisation is faster than other Asian countries: According to the World Bank: 'Indonesia is undergoing a historic transformation from a rural to an urban economy. The country's cities are growing faster than in other Asian countries at a rate of 4.1% per year. By 2025—in less than 10 years—Indonesia can expect to have 68% of its population living in cities'. <http://www.worldbank.org/en/news/feature/2016/06/14/indonesia-urban-story>.

<sup>11</sup>[http://europa.eu/rapid/press-release\\_MEMO-15-5709\\_en.htm](http://europa.eu/rapid/press-release_MEMO-15-5709_en.htm).

are likely to understand that the social determinants of wellbeing such as access to safe habitat, housing, home ownership and full-time, permanent employment will have an impact on resilience to disaster. In the second case, namely, West Java, similar trends are prevalent (if current rates continue). These push factors are linked with the political dynamics of social exclusion, land loss and food insecurity that make people vulnerable to disaster and in its aftermath to trafficking. Janet explores displacement and loss through asking questions about the implications of displacement of people, plants and animals in Cape Town and Bandung, two major cities with a shared colonial history, namely, the Dutch East India Company. A more in-depth study could provide lessons for food, energy and water security. Bandung is usefully compared with Cape Town and Tshwane, Pretoria, because these cities face increased challenges of urbanisation. However, Indonesia has a policy that fosters recycling of waste and water as well as a policy on rural development. It is called the 'Jokowi one village one entrepreneurial project' to support poverty reduction. This could provide lessons for sustainability. This approach could inform vocational education and training in South Africa to learn from the experience in Indonesia.

Increasing levels of urbanisation as defined by the UN Report (2014) could be a solution to loss of territory and habitat if the design of cities is changed from horizontal sprawl with a heavy carbon footprint to vertical, green re-generative buildings that recycle and reuse waste to support a cascade economy.

However, displacement of people, plants and animals needs to be addressed through innovative new approaches to democracy and governance. The research aims to address innovative policy to support re-generative living in Indonesia and South Africa by drawing on the past Indigenous practices, interaction with Dutch colonisers and current lessons for re-generative practice. For example, in Africa mud brick buildings emulate termite mounds and have natural air conditioning; this is a traditional design drawing on nature.

In Bandung, Indonesia, biodigestors were built by the Dutch. A current failed biodigester in Bandung is built behind a fish and vegetable market and is badly designed and maintained, and yet the historical record shows how this was successfully achieved in the past. In Cianjur a successful, simple biodigester suggests how local wisdom can be preserved and applied with better results at a fraction of the cost.

In Cape Town, drought has resulted in the need to rethink water usage. Recycling and reusing water is a matter of survival, and the new phenomenon of water theft and water smuggling has become part of the struggle. Using water in unregulated ways from boreholes and springs became illegal from February 2018, although regulation will remain a challenge for the province. Theft of water from a local government reservoir was identified when a water truck was seen at an unusual time departing from the reservoir in Mogale. Apparently, this illegal smuggling had been operating for a few weeks until it was discovered by a councillor who noticed the irregularity and stopped the driver.<sup>12</sup>

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<sup>12</sup> <https://m.news24.com/SouthAfrica/News/tanker-company-says-it-was-duped-in-water-smuggling-scam-20180202>.

The donation of water to the city by fruit farmers has enabled Cape Town to push out the date when water would cease to flow from taps. The historical lessons of how to survive sustainably in the Cape need to be revisited along with the latest research on integrated sustainable living approaches (Pauli 2010) and supporting the commons (Bollier and Helfrich 2012) and by learning from Indigenous first nations.

Further research is needed to provide a valuable lens for understanding the intersection of ecological humanities and ethics (Romm 2015, 2017; Bird Rose 2015; McIntyre-Mills 2017), demographics and multispecies ethnography informed by a critical reading of sociology and anthropology of development (Gibson-Graham and Miller 2015) and capabilities studies (Nussbaum 2011; Sen 2003). We need to integrate data on wellbeing stocks spanning the health of multiple species, habitat, housing and social inclusion based on mixed methods (Hesse-Biber 2010; Mertens 2010, 2016).

The following chapters in this volume address our research aim, namely, to consider practical responses to address complex problems that comprise many interrelated variables and are perceived differently by stakeholders with different values, different life experiences and different life expectancies. Moreover, we aim to identify pathways towards ethical vocational education to enable lifelong engagement by active citizens that requires action learning to address areas of perceived policy concern.

*Widiansigh, McIntyre and Wirawan* write jointly about social inclusion work with the University of Padjadjaran's design hub to promote entrepreneurial opportunities. Many opportunities include adding value to milk products, such as yoghurt production, to providing a range of *alternative* forms of protein. Other options include ethical luwak (civet cat) coffee production with free-ranging civet cats. This approach differs from the usual approach to caging the animals and could enable socially inclusive development opportunities as detailed in this volume. The need to protect environmental approaches that protect living systems<sup>13</sup> is explored in this chapter.

The case is made for fostering non-anthropocentric approaches to ethical development. The fertilisation of the land by free-ranging civet cats (known as luwaks) is a synecdoche for the need to protect environmental approaches that protect living systems. To sum up, this transformational approach (Mertens 2009, 2010; Mertens et al. 2013; Romm and Ngulube 2015) is extended to social and environmental justice research that applies critical systems thinking and practice. This is a meta-level approach to consciously thinking about ways to protect living systems by working with co-researchers in a participatory design project that applies 12 boundary

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<sup>13</sup>This is explored in the paper *McIntyre-Mills, J with Wirawan, R, Widiansigh, I and members of the Indonesian Diaspora - Escaping the iron cage: Joining up the social, economic and environmental policy dots in West Java by applying critical systemic thinking: freeing the Luwaks*. The case is made for fostering non-anthropocentric approaches to ethical development. The fertilisation of the land by free-ranging civet cats (known as luwaks) is a synecdoche for the need to protect environmental approaches that protect living systems.

questions to explore an area of concern in ways that support living systems. This has implications for personal and public ethics, education, democracy and governance. The systemic focus of the chapter builds on the body of work developed in the *Contemporary Systems Series* (McIntyre-Mills et al. 2017; McIntyre-Mills 2017). It is based on being mindful of the need to design policy that supports living systems (Wadsworth 2010). Ecological citizenship needs to ensure that the requisite variety (Ashby's Rule, 1956) is extended beyond consideration of anthropocentric systems to non-anthropocentric living systems, to ensure that stewards protect habitat. The research seeks a better balance across social, cultural, political, economic and environmental interspecies concerns to ensure a sustainable future for current and future generations. In line with the Paris Declaration (1997), public administration needs to be framed together with co-researchers with local lived experience.

Another possibility is the production of mushrooms in collaboration with the coffee growers, as mushrooms grow quite well in the waste from coffee. The vignette on the Odong-Odong by *Inez Sapento* provides an insight into everyday life and everyday survival in Jakarta. People from the villages bring with them the stories and village culture of their youth and create a living by singing songs from childhood and depicting characters from modern popular culture as well as traditional village culture. Informal sector work is facilitated by the role of the bicycle in connecting neighbourhoods within a megacity like Jakarta where car culture introduces a different sense of space and time.

The study locates the migration from village to town as part of the urbanisation process that will lead to the majority of Indonesians being located in cities by 2050 if current urbanisation rates continue (UN 2014). Even though Jakarta is not a 'food desert' in the sense that some cities in Africa are becoming food deserts (Battersby 2012), nevertheless the vulnerability of the small traders needs to be witnessed along with their creative entrepreneurship to make a living from peddling songs on their bicycles and drawing a little of village life to Jakarta suburbs.

*Sudarmo and Siti Zunariyah, Akhmad Romdhon and Yuyun Sunesti* discuss the life chances of marginalised women and children, and *Natacha Tracey* discusses the impact of current social-economics on young people.

*Jackwin Simbolan* discusses governance challenges associated with water management and applies a mixed methods approach.

*Saad Algraini* discusses the capabilities approach and how agency for transformative education could make a difference in Saudi Arabia. The need to enhance the agency of women in Saudi Arabia is the focus of the research. This is apt, given the need to protect women workers in Saudi Arabia as well as guest workers. It is relevant that Indonesia has passed a regulation in 2015 to prevent women from working in Indonesia in the aftermath of several cases of abuse, one of which resulted in a guest worker being executed in Saudi Arabia.<sup>14</sup> Now the ban has been extended to 21 countries. However, some stress that the ban merely enhances the risk of illegal

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<sup>14</sup> <http://www.reuters.com/article/us-indonesia-labour-trafficking/trafficked-and-abused-indonesias-middle-east-maid-ban-backfires-idUSKBN16D1F6>.

trafficking. The area of Cianjur in West Java (discussed in Vol. 2) has been a target of trafficking.

*McKay and Romm* discuss ways of working with community via ‘literacy plus’ efforts so that they begin an ecological journey towards living sustainably and regenerating opportunities for employment in post-apartheid South Africa. Their paper can be considered as a source of ideas for policy-makers and those engaged in strategic thinking to protect living systems of which we are a strand.

## Summing Up the Two Volumes

The papers address the micro, meso and macro considerations for development (Table 1.1).

The collection aims to increase an understanding of life chances and dynamics of vulnerable population groups in areas most affected by climate change-related areas. Significantly, the collection responds to complex ethical policy challenges posed by the Paris Agreement and the UN Sustainable Development Goals, in order to narrow the gap in living standards between the rich and poor. Policy choices made by this generation shape the wellbeing of both current and future generations. The outcome will be a better understanding of socio-cultural discourses, life chances and behaviour to inform policy and to improve public administration by learning what does and does not work and why from the most vulnerable populations.

**Table 1.1** Ways forward social inclusion, agency and re-generation of shared habitat

	Capabilities through monitoring from below to operationalise an engagement space and enhance public education	Functioning
Micro	Household productivity and resilience supported by agency through a community of practice to enhance agency through tasks and relationships characterised by ‘being, doing, having and interacting’ (Max-Neef 1991; McIntyre-Mills 2014, 2017)	Sustainable human functioning supported by safe housing and a sustainable household economy
Meso	Local community involvement in state, market and civil society to protect habitat for renewable energy, food production and household construction (e.g. mud, grass, bamboo) to enhance agency through tasks and relationships expressed as weightings in terms of a score card generated by means of haves, needs, agency to add to the commons or to discard habits that undermine the commons, turning points for better and worse, barriers and resources (material and non-material)	Supporting food, energy and water security and community habitat based on reciprocity to support the commons
Macro	Agency to voice concerns through social movements through online advocacy to protect local resilient communities to enhance agency and voice	Support the wellbeing and resilience of the commons through representation and accountability through monitoring from below



The focus is on protecting ‘wellbeing stocks’ a concept adapted from Stiglitz et al. (2010: 15) to refer to a multidimensional measure of wellbeing spanning:

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.

Globally women, children and vulnerable members of the population face complex health, housing and social inclusion needs especially in disaster-prone areas (Figures 2017<sup>15</sup>). The border protection mentality is becoming more prevalent globally, but human trafficking, disaster and climate change are transnational issues that require a big picture approach. This collection of papers could provide improved understanding of how to manage complex needs based on mixed methods (Hesse-Biber 2010; Mertens et al. 2013; Mertens 2016). It aims to critique governmentality (Foucault 1980) and the existing governance context for 2005 UN Sustainable Development Goals through exploring frontiers (Rose 2005; Nussbaum 2006), discourses (Bacchi 2009) and scenarios of different policy and practice.

The links across greater equality and wellbeing and the prevention of global warming appear to involve ‘limiting consumerism’ and narrowing the gap in living standards between the rich and poor (Wilkinson and Pickett 2009: 221). It is assumed that greater social and economic equality will provide the key to reducing the cultural pressure to consume at the expense of the majority in this generation and the next.

The philosophy of ‘Fortress Europe’ has been held in check by the actions of Angela Merkel who has welcomed asylum seekers into Germany as part of her mission to make up for Germany’s holocaust history. Although this has come at the cost of narrowing her support base,<sup>16</sup> she stands as one of the few world leaders who have upheld social justice in the face of opposition. This is particularly important given the silence of Nobel Peace Prize winner, Aung San Suu Kyi, on the slaughter of the Rohingya people. There are few internationalists today with a focus on human rights with the standing of past leaders such as Gandhi and Mandela. The voices of Bishop Desmond Tutu and the Dalai Lama remain.

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<sup>15</sup>Women and children are particularly vulnerable to exploitation after natural disasters. Conceptually and methodologically, the research is at the intersection of ecological humanities, multispecies ethnography informed by a critical reading of sociology and anthropology of development (Sen 2003, 2005) and capabilities studies (Nussbaum 2011). *Transformation from Wall Street to Wellbeing* (McIntyre-Mills and Binchai 2014) stresses the importance of rethinking economics in terms of organic and inorganic relationships across living systems (including sentient beings, non-sentient beings and our shared habitat on which we depend). This is elaborated clearly as follows: ‘Let us try to think “economy” not as a unified system or a domain of being but as diverse processes and interrelations through which we (human and more than human) constitutes livelihoods. “Economy” (oikos-habitat; *nomos*-negotiation of order) might then become a conceptual frame or theoretical entry point through which to explore the diverse specificities of livelihood creation by a population (members of the same species) or a community (multi-species assemblage)’. (Gibson-Graham and Miller 2015: 12).

<sup>16</sup><https://www.theguardian.com/commentisfree/2017/sep/24/guardian-view-german-elections>.

The silencing of criticism is not only a hallmark of tyranny; it undermines science, art and ethics. A critical mindset is vital for testing out ideas, as Karl Popper stressed. Democracy requires an engaged population who care about the world around them. This requires ensuring that designs respond to the needs of people and the environment, rather than to the needs of capitalism.

The testing process can enable listening to many voices, and if we accept that the closest we can get to truth is through dialogue, then some of the lessons from Derrida are as relevant as lessons from Habermas. In fact, they would agree that the process of dialogue enables better decisions and helps to bridge the gap between so-called positivism and so-called post-modernism. Extremist positions are the problem, and an openness to diverse ideas is important, provided the balancing of views takes into account the need to protect people and the environment. This requires ongoing dialogue that is why democracy is always work in progress. It is exhausting and so passing on the baton to younger people is vital. Let us hope that the younger generation learn from the mistakes we have made. Certainly, narcissism is a danger, which we need to confront.

The balance of democracy rests on enabling the people who are effected by decisions to have a say and to be listened to, but policy and governance need to ensure that decisions are in the interests of all living systems in the short, medium and long term. This requires caring for people and the environment on which we all depend.

### ***Case Studies as a Lens to Understand the Broader Global Concerns***

This volume and its companion volume, 'We are the land', concentrate on a few case study areas. Indonesia and Africa and Australia are three regions affected by demographics, climate change and people movements. Three so-called canary cases in Australia, Asia (West Java and East Timor) and Africa (South Africa and Kenya) are selected because demographically they face increased levels of urbanisation and are impacted by droughts, floods and fires. The flow of people is from North Africa (less developed and more populated) down to Southern Africa (more developed emerging economy, but with a lower population increase of 2.4 children per woman). The push factors from the North are population growth (where the Democratic Republic of Congo and Central African Republic have five or more children per woman) affecting human security water and food shortages that lead to malnutrition (Harper 2016). These push factors are linked with the political dynamics of social exclusion, land loss and food insecurity that make people vulnerable to disaster and in its aftermath to trafficking. The role of trafficking is also a problem in Southern Africa where poverty is strongly linked with prostitution and human trafficking in urban centres such as Gauteng and Cape Town. Similar trends are becoming more prevalent in Indonesia (West Java).

A third case study is set in Australia, which has a growing population because of migration to the Lucky Country, Donald Horne's (1964) ironical title for a country and economy where sheep, cattle and mining will be explored as part of the economics and politics of climate change.

Saudi Arabia is also included as its economy is based on a carbon economy and (until recently) it was a destination area for migrant workers from Indonesia. It remains a destination for migrant workers. The paper by Algraini and McIntyre addresses the need to develop new capabilities in line with the Sustainable Development Goals to protect both people and the habitat of living systems.

The case studies provide a valuable lens for understanding the intersection of ecological humanities and ethics (Bird Rose 2015), multispecies ethnography informed by a critical reading of sociology and anthropology of development (Gibson-Graham and Miller 2015) and capabilities studies (Nussbaum 2011; Sen 2003, 2005).

The multisite symposium referred to earlier addressed gendered, cross-cultural perspectives on what it means or could mean to be an ecological citizen who respects multiple species.<sup>17</sup>

Transformative approaches (Cram and Mertens 2015; Mertens et al. 2013; Mertens 2016) refer to assumptions about power, the value of Indigenous knowledge, the need to make life chances and the lack of life chances visible and the need to develop trusting relationships that are responsive to complex needs.

The aim of the transformative concept in the context of this volume is to enable people to re-evaluate economics and to become more aware of the way in which we neglect social and environmental aspects of life. The pursuit of profit at the expense of people and the environment is a central problem for democracy and governance.

Education policy needs to be inspired by original thinkers such as Professor Wangari Maathai (2004) who stressed in her third Mandela Lecture:

There are simple actions we can take. Start by planting ten trees we each need to absorb the carbon dioxide we exhale. Practice the 3R campaign (reduce, re-use, repair and re-use, which is *mottainai* in Japanese), get involved in local initiatives and volunteer your time for services in your community. Governments should prioritize technical schools and give people knowledge and skills for self-employment.

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<sup>17</sup>The focus is on how to reinvigorate employment opportunities by enabling people to express their ideas. Complex policy decisions to support employment need to be made by better informed people at the local level. The dialogue aims to open up a conversation that respects our interdependency on living systems. We have been invited by the Rector of UNPAD to help foster movement towards achieving the UN Sustainable Development Goals and to emphasise ways to promote social and environmental justice through fostering job creation. The research aims to consider practical responses to address complex problems that comprise many interrelated variables and are perceived differently by stakeholders with different values, different life experiences and different life expectancies. Moreover, we strive to identify pathways towards ethical vocational education to enable lifelong engagement by active citizens which requires action learning to address areas of perceived policy concern.

Deborah Bird Rose stresses the importance of appreciating on Indigenous understandings of nature.<sup>18</sup> This approach could help us to understand what Gunter Pauli (2010) means by the following statement:

... While we are obsessed with monetarisation (to our own benefit) natural systems generate multiple revenue flows best measured in protein, drinking water, energy resources and defense systems. Nature produces benefit through the calculation of integrated benefit flow.... (Pauli 2010: 235–6).

Pauli (2010: 236) then goes on to explain that the costs of the linear economic model cost inputs, throughputs and outputs and externalise costs to society and nature and it does not disclose the opportunity costs to future generations of life. See <https://www.youtube.com/watch?v=sLh-U99avso>, <https://www.youtube.com/watch?v=sLh-U99avso>.

In many ways the visionary work has blind spots associated with gender mainstreaming within the political contexts in which he operates. In what ways are the examples of coffee production that also supports protein from waste appropriate in Zimbabwe? In what ways is the construction of a building based on termite construction inspirational? What are the implications of developing opportunities by and with people at the local level without addressing the issues of state capture? What are the issues associated with overcoming boycotts? What is the problem associated with being apolitical? How can the re-generative approach maintain agency whilst remaining critical?

Pauli argues that in the environment, there is no waste, because what is waste for one is food for another, and he suggests that there are important lesson to learn from this.

However, in the social context it is necessary to take the analogy of living carefully in ways that reuse and recycle so as to support creating something worthwhile out of waste. The chapters in this volume contribute towards the effort to:

- **Reframe** what we value as a society. Human development needs to protect ‘well-being stocks’ (Stiglitz et al. 2010) that include social, cultural and environmental

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<sup>18</sup>To what extent is there: A divide and rule approach?, Exclusion of subjects from participation, Might is right approach?, Reduction of complexity, Limiting the terms of reference, To what extent is a problem constructed in a way that is in the interests of the entrenched power elites? See <https://www.youtube.com/watch?v=qp3Ktlfy0Hw&app=desktop>; <https://www.youtube.com/watch?v=suSbvoAw0g4>.

What does Deborah Bird Rose mean by the colonisation of the land and the mind?

- Caring for country? Gift of country?
- What does she mean by *multispecies ethnography*?
- What does she mean by the human/nature divide?
- What is the implication for ethics and public administration?
- What does she mean by species extinction?
- What is the relevance for current policy decisions?
- Please watch and then think about responses to the questions.
- <https://m.youtube.com/watch?v=suSbvoAw0g4>.
- <http://umaincertaantropologia.org/2013/08/17/the-emergence-of-multispecies-ethnography-cultural-anthropology/>.
- What are the implications for human/animal habitat in South Africa?

dimensions. The concepts of stewardship and resilience are important notions through which to explore this nexus between wellbeing and environmental sustainability (Pauli 2010). Stewardship is based on awareness that the land and biologically diverse ecosystems are a cultural heritage (Flannery 2012) on which the wellbeing of current and future generations depend. Resilience is defined as the adaptive capacity of the physical environment, of an individual or of a group. It concerns factors such as the capacity of members of a community to act together and through creativity transform the current ways in which we live our lives (Rose 2005; Hulme 2009; Shiva 2012).

- **Explore** whether collaborative approaches drawing on diverse ways of knowing (Cruz et al. 2009) and user-centred governance of resources (McIntyre-Mills 2003, 2006, 2008, 2012; Podger et al. 2012) could support regional governance (Wear 2012) to support effective environmental management based on the UN sustainable development goals.
- **Till new ground** on understanding psychosocial, cultural relationships and power dynamics across diverse groups as they relate to wellbeing multispecies, habitat and environmental stewardship. The conversations will continue and extend to others via a face-to-face and digital community of practice to meet the different engagement needs of residents (Wenger et al. 2009). The engagement process, prompted by the index, enables people to think about the way they live and how this shapes their perceived wellbeing.

The challenge for governing the Anthropocene ethically and wholesomely is one of moving away from disciplinary and functional differentiation, in order to span biological, psychological, social, cultural, spiritual, political, economic and environmental dimensions to support living ethically in ways that redress the worst aspects of modernisation (Berger 1966; Berger and Luckman 1974).

Aboriginal cultures teach us about stewardship and relationships with the land, but these relationships have been lost in non-Aboriginal cultures. As Major Sumner, a Ngarrindjeri Aboriginal elder from the periodically drought-ravaged lower Murray River in South Australia and custodian of the river, stresses, 'we are the land and the land is us'. Re-establishing relationships with the land is at the heart of effective cultural ecosystem management.

The chapters strive to foster and manage diverse situated forms of contextual knowledge (Haraway 1991) including verbal, visual, physical, musical, mathematical, introspective and interpersonal (Gardner 2008) and thus develop human capacity to address complex socio-environmental challenges (Ehrlich and Ehrlich 2013).

There is evidence that many non-Aboriginal people desire more environmentally sustainable lives, but little is known about the influences on choices around the management of land, water and food that affect the environment. Government response to human wellbeing is often based on economic development, which inadvertently increases consumerism, resulting in greater environmental degradation. We know, therefore, that environmental sustainability, consumption choices and human wellbeing are intimately linked, but there is little knowledge about how this linkage can be built upon to improve both areas. Consumption based on living

simply and ethically and well versus consumerism to express status is very different. Zavestoski (2002) has stressed the voluntary simplicity movements (Alexander 2011) such as post-materialism, slow living, eating local food, reducing energy usage, reusing and recycling only tend to occur when status needs have already been met. Paradoxically some of the changes become status-driven consumerism that can appear to be simple but often lead to change for the sake of appearance (Binkley 2008) and do not lead to greater levels of happiness. Wellbeing and resilience are viewed through the lens of user-centric policy design to address food, energy and water security in Alice Springs and Adelaide to frame what works, why and how from diverse perspectives.

The design of inquiring system (DIS) is a process that builds on West Churchman's work (1971, 1979, 1982) to enhance our capability to work with many different kinds of knowledge. It is a means to enable us to 'think about our thinking' and our practice and to enable us to 'join up the dots'. It applies dialogue to consider ideas with stakeholders through asking questions in order to unfold ideas and values and to sweep in the social, cultural, political, economic and environmental factors.

Ulrich and Reynolds (2010) distil the work of West Churchman's DIS approach into 12 is/ought questions that help to shape boundary judgements when working with stakeholders and different kinds of knowledge (logic, empiricism, idealism, dialectic and pragmatism), in order to guide better decisions. The stakeholders and the environment of the problem are considered carefully in the questioning process (Table 1.2):

These volumes make a contribution to thinking and practice based on reframing issues by using conceptual (thinking tools) and by working with teams of people whose skill sets are appropriate to the area of concern.

The first step, however, is to understand what the area of concern is defined to be by considering the 12 is/ought questions that are the basis for a 'design of inquiring systems'.<sup>19</sup> These questions unfold the values of the stakeholders and consider who and what has been included or excluded and why? It then considers ways forward based on sweeping in the social, political, economic and environmental variables that pertain to specific contexts. The pragmatic critical systems thinking and practice approach is quite simple. It comprises some thinking tools and steps for doing participatory action research applied to designing a response in a community of practice (e.g. a network of relevant service users and providers) who are tasked with addressing the issues and suggesting ways forward.

The aim of the approach is to enable people to work creatively together to address complex challenges by matching the right response in context. This is achieved through the following simple steps:

- Work with people who have experience.
- Ensure that the people who are to be affected by the decision are part of the decision-making process or at least very well represented (known as Ashby's

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<sup>19</sup>The 12 questions are detailed in chapters 1 in Vols. 1 and 2.

**Table 1.2** Boundary judgements informing a system of interest

Sources of influence	Social roles (stakeholders)	Specific concerns (stakes)	Key problems (stakeholder issues)	
Sources of motivation	1. <i>Beneficiary</i>	2. <i>Purpose</i>	3. <i>Measure of improvement</i>	The involved
	Who ought to be/ is the intended beneficiary of the system (S)?	What ought to be/is the purpose of S?	What ought to be/is S's measure of success?	
Sources of control	4. <i>Decision-maker</i>	5. <i>Resources</i>	6. <i>Decision environment</i>	
	Who ought to be/ is in control of the conditions of success of S?	What conditions of success ought to be/ are under the control of S?	What conditions of success ought to be/ are outside the control of the decision-maker?	
Sources of knowledge	7. <i>Expert</i>	8. <i>Expertise</i>	9. <i>Guarantor</i>	
	Who ought to be/ is providing relevant knowledge and skills for S?	What ought to be/are relevant new knowledge and skills for S?	What ought to be/are regarded as assurances of successful implementation?	
Sources of legitimacy	10. <i>Witness</i>	11. <i>Emancipation</i>	12. <i>Worldview</i>	The affected
	Who ought to be/ is representing the interests of those negatively affected by but not involved with S?	What ought to be/are the opportunities for the interests of those negatively affected to have expression and freedom from the worldview of S?	What space ought to be/is available for reconciling differing worldviews regarding S amongst those involved and affected?	

Source: Ulrich and Reynolds (2010: 244)

rule and it applies the principle of subsidiarity, but do not worry about these names—They are addressed later).

- Test out the decision in pilots.
- Learn what works, why and how by listening to the perceptions of the different stakeholders.
- Take a decision and implement it.
- Evaluate the process and the outcomes and *begin the cycle again*.

The chapters all share the research aim to consider practical responses to address complex problems that comprise many interrelated variables and are perceived differently by stakeholders with different values, different life experiences and different life expectancies. Moreover, various chapters identify pathways towards ethical vocational education to enable lifelong engagement by active citizens, which requires action learning to address areas of perceived policy concern.

In line with the Paris Declaration (1997) and taking into account the UN Sendai Framework for Disaster Risk Reduction (2015–2030) we consider possibilities for

reducing the gap in life chances and enhancing social inclusion (Goals 10, 11, 12, 14, 15, 16) through partnerships: our approach needs to be framed together with co-researchers based on local lived experience. What can be done to enable women and young people to have a foothold in a financialised economy? The rate of urbanisation in Indonesia and Africa has increased so that by 2030 more than 65% of the population of both nations lives in cities. The number of people moving from the regional areas to Jakarta, Bandung and Jatinaror is rising as people seek a better life in the cities. According to Prof Praktino 71% of Indonesians will be living in cities by 2030. The implications for food security need to be addressed.

The purpose of this collection is to explore the implications of urban living, increasing rates of urbanisation and increased lack of contact with natural world in the big megacities in the world where those who are able to do so rely more and more on artificial environments to retreat from the heat or pollution. Some of these themes have been explored in my previous publication (McIntyre-Mills 2017) but are extended here.

In Australia we are a mostly urban nation hugging the coasts and clustering along rivers. Caring for country will also become increasingly important if we are to remain resilient. The increasing loss of land to commercial groups and the moneyed classes is making the rural poor more vulnerable.

The glossy presentations by government and the private sector of development interventions with civil society often bear little resemblance to what is happening on the ground. Participatory action research is now presented as a means to earn funding, but it does not translate into sustainable interventions, because the norms and values of so-called green sustainable development do not enable the poor to survive unless it creates employment opportunities. Thus the collection looks at ways of enabling people to become agents of change through job creation.

Two of the most hopeful projects I saw in West Java focused on creating jobs for people through visioning exercises, adding value to products and training people to have a role in the production process and marketing process. The West Java Co-op in Cibodas enables young people to make a living by selling dairy products, producing yoghurt and making fertiliser and producing biogas for cooking. The most unsuccessful project was a large Asian Bank Project which imposed a top-down approach and which resulted in doing more harm than good. The financialisation of the economy has resulted in young people becoming vulnerable to trafficking. Although young people do not starve, they desire an income to purchase consumer goods or to pay for education of another family member. For example, the ability to earn 150 dollars a day selling food as a hawker in the Bandung was contrasted with the earning of about 5 dollars a day from agriculture in Cibodas. The challenge is to find ways to develop opportunities to make a living by adding value to agricultural products or creating something out of nothing as a way to create a viable income. This provides independence, and it can be done through thinking differently about the local environment.



In the rural area of Cianjur,<sup>20</sup> I was told by the leader of a women's group that trafficking was becoming more of an issue in the region. The tourist areas up in the hills are more vulnerable she said, but the traffickers are extending their networks to this area. As the wife of a local government leader, she was concerned about the extent to which parents were encouraging daughters to take on domestic jobs offered by prospectors (pimps) acting for traffickers. The number of young women returning from Malaysia and previously from Saudi Arabia (pregnant) and then having unwanted babies has resulted in midwives facing the prospect of finding homes for unwanted babies.

The book focuses on ways to de-colonialise knowledge formation in public policy and makes the case for an alternative approach to governance and democracy that takes into account a range of local people's perspectives.<sup>21</sup>

### *Getting Lost in the City: Food, Energy and Water Security*

In the Neoliberal University, we rely on everyday reflections on everyday events. Staff received a witty email recently inviting us to:

“Bring out your dead ...look at your past and present work and try to re-generate it?” All in the interest of publications? The other way to gain understanding through participant observation of our everyday lives, in order to learn by ‘being, doing and reflecting on the systemic implications in the short, medium and long term’.

A flight on 30 December 2017 over the Arctic revealed the rate at which ice is melting. The following pictures are indicative of the extent of the drifting icebergs. The impact of melting ice on rising sea levels and local climate caused by changing temperatures to the water and cooling of the air further south will have systemic implications for weather systems:

Whilst the melting of an iceberg may seem irrelevant, it is in fact systemically critical to food, energy and water supply as we strive to explain in this collection. What will happen when food, energy or water security is under threat as a result of rural-urban flow into city environments?

The theme of re-generation is central to this volume as is the notion of intergenerational cohorts and population change along with changing climate. I read the book by Sarah Harper (2016) entitled *How Population Change Will Transform Our World* as I flew from Cape Town to Dubai. The Islamic shopkeeper and his colleague

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<sup>20</sup> <https://www.statsmonkey.com/sunburst/23644-cianjur-regency-population-statistics-by-gender-jawa-barat-indonesia-stats.php>.

<sup>21</sup> Both a priori norms to guide development and a posteriori consideration to measure the performance of the UN Sustainable Development Goals are needed to protect sentient beings and their habitat. The notion of virtuous living needs to be explored in terms of:

- A priori norms are guided by accepted rules of behaviour.
- A posteriori indicators and measures of performance. Both are needed in order to guide practices and to hold people and their elected government representatives to account.



**Photo 1.1** Melting Ice Flows near Casey Station in the Antarctic on 30 January 2018, Photograph Taken by Michael Rook from a Qantas Route to South Africa

who sold me the book discussed the issue of ‘population growth’ and said to me: ‘What can be done?’

At the time I responded by saying that the approach of development theorists Nussbaum (2011) and Sen (2000) is to support the education of women and to give them a political voice. Once women are able to earn a living, shape policy within their community and express their vote as literate and numerate agents, their life chances are greatly improved. They can decide how many children they want if they are not dependent on the power of men to decide their fate. Praxis for transformation starts by giving women a voice and an education. This role has been demonstrated by the stand taken by Malala, winner of the Nobel Peace Prize in honour of her stand for the educational rights of women.

Harper (2016) has stressed as a core thesis of her book that population is changing at different rates in different parts of the world. In South Africa the rate of growth is 2.4 whilst in other parts of Africa it is 3–4 times this rate. Needless to say, the movement from places with high fertility and high mortality rates to places with lower fertility and lower mortality rates is a trend within the African continent where people migrate from DRC and Zimbabwe to South Africa in search of work.<sup>22</sup> They also travel from North Africa to Europe in search of employment and a better life. The numbers of displaced people arriving in Europe are augmented by those fleeing Syria and conflict.

<sup>22</sup>In the Cape the lack of infrastructure, particularly water, to meet the needs of people is discussed in more detail in Chap. 4.

The population change is below replacement levels in many parts of Europe where the population profile is one of low fertility and low mortality. Therefore, population change needs to be viewed in terms of ballooning and shrinking populations. Added to this the life chances of young people need to be understood in different parts of the world.

The blue economy approach of Gunter Pauli (2010)<sup>23</sup> outlines more than 100 ways to create opportunities through environmental thinking that does not privilege the environment at the expense of people; instead his approach is to find ways to enable the unemployed to benefit through working on environmental challenges.

The symposium addressed gendered, cross-cultural perspectives on what it means or could mean to be an ecological citizen who respects multiple species.

Zoos are symbolic of the way in which anthropocentric approaches based on *power distance* play out in responses to the most vulnerable.

Even if the display of captured indigenous people (and their remains) is now being addressed, the display of captured Indigenous animals in better spaces is still a long way off. A group visit to the Bandung Zoo and the Monarto Zoo, outside Adelaide, would be appropriate as a way to focus on the potential of ecotourism rather than caged displays within the city environment.

The work of Donna Haraway is relevant to exploring the way in which ‘situated knowledge’ is framed from positions of power.

This is a systemic approach that could ensure that people come up with solutions that do not create divides across people, other species and the environment. It is unnecessary to argue that for people to flourish, the environment must suffer.



<sup>23</sup>The focus is on exploring ways to regenerate and invigorate employment opportunities by enabling people to express their ideas. The symposium topic is ‘Addressing unemployment with particular reference to those left behind in the current economy (particularly women and young people) to explore the potential of new alternatives such as the so-called Cascade, Blue Economy Approach by Gunter Pauli (known as Sustainability version 2). There are many definitions of blue economy. We extend the meaning as outlined by Gunter Pauli to emphasise opportunities to enhance social and environmental justice.



Above we show pictures of the project facilitators, the team of assistants who helped with data collection in Alam Endah and Cianjur region in Indonesia and who helped with the symposium in Bandung.



**Group picture on the steps of Government House West Java**



Participants at the Mixed Methods Symposium in Bandung

## Podcasts Vignettes and Websites

1. Key note by Hesse Biber on Mixed Methods  
[HB podcast West Java.mp4](#)  
[Hesse-Biber Podcast, Flinders \(2\).mp4](#)
2. McIntyre-Mills, J. On regionalism and critique of tragedy of the commons archetype <https://archive.org/details/VN860622>
3. McIntyre-Mills, J. Immigration, human rights and a 'totally avoidable tragedy'. <https://archive.org/details/VN860641>

4. Vignette by Widianingsih, I.,<sup>24</sup> Gunawan, B.,<sup>25</sup> Rusyidi, B.,<sup>26</sup> Wibowo, K.<sup>27</sup> Co-creating space for collaborative local governance in metropolitan Bandung: scoping the areas of concern.
5. Vignette by Warrantor, D.,<sup>28</sup> Widianingsih, I. Halimah, and M.<sup>29</sup> The challenges of building collaborative governance for rice security in the Bandung metropolitan area.
6. Vignette Diny Waskitawati,<sup>30</sup> Ida Widianingsih,<sup>31</sup> Budhi Gunawan<sup>32</sup> Addressing the Complexity of Wastewater Management for Sustainable Livelihood in Metropolitan Area.
7. Vignette by *Novieta H. Sari* Community Dialogue for ‘Pathway to Wellbeing’ <https://archive.org/details/NovieChapter> The paper supports pathways to well-being (inspired by planetary passport (McIntyre-Mills, 2017) in a vignette.
8. Vignette by *Purnomo, D and Bunyamin, A.* Systemic engagement across rural and urban areas <https://archive.org/details/DwiPurnomoChapter> Discusses rural development and training.

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9. Vignette by *Andi Wahyudi* on Creating Water Security through the ‘picking up rubbish’ movement in Samarinda Outlines a community movement to clean up the river as local government cannot maintain the health of the river system without community engagement <https://archive.org/details/CitizenInitiativeKrMumusAndiWFinal>
10. Vignette by *Zunariyah, S. Romdhon, A. and Sunesti, Y.* Village, river and the city: The Impact and Efforts of Citizens Responding to Environmental Change in Solo <https://archive.org/details/ZunariyahvillageVignette> The paper explores the environmental impact of rising water levels.

## Audio and Web Links

Audio material and posters from the fourth Regional Mixed Methods Symposium ‘Getting lost in the city’ held at Padjadjaran 15–18 December.





The papers cover projects for transformation to support social, economic and environmental justice

1. Wirawan, R. Alamendah - submission of paper to Hanoi sustainability Forum <https://archive.org/details/HANOIFORUM2018TowardsSustainableDevelopment-ClimateChangeResponseForSustainabilityAndSecurity.V3.0>
2. Submission on climate change bill food, energy and water security – Mapping the production and consumption cycle - [https://archive.org/details/WirasoftAndFlindersClimateChangeInSouthAfricaV4.0\\_201808](https://archive.org/details/WirasoftAndFlindersClimateChangeInSouthAfricaV4.0_201808)
3. Audio by Janet McIntyre on cascading risks and climate change with reference to day zero in Cape Town day zero: Political and policy dynamics of food, energy and water on human security <https://archive.org/details/VN860592>
4. Audio by Janet McIntyre audio on education and democratic engagement <https://archive.org/details/VN860626>
  - (a) <https://archive.org/details/VN860553> reconsidering boundaries and what constitutes knowledge,
5. [https://archive.org/download/pathway\\_DEMO\\_1/pathways](https://archive.org/download/pathway_DEMO_1/pathways) to wellbeing,
6. [https://ia801606.us.archive.org/20/items/pathway\\_DEMO\\_1/pathway\\_DEMO\\_1.mp4](https://ia801606.us.archive.org/20/items/pathway_DEMO_1/pathway_DEMO_1.mp4)
7. <https://archive.org/details/VN860546> ethics and design.
8. Audio by Stanley Machuki on urbanisation processes in Kenya, Nairobi.
9. <https://archive.org/details/veronica2016> refer to conversations on urbanisation and implications for human security and education in South Africa.
10. <https://archive.org/details/KofiPartA20165> refer to conversations on urbanisation and implications for human security and education in South Africa.



11. <https://archive.org/details/Kofi24> refer to conversations on urbanisation and implications for human security and education in South Africa.
12. Fajar on sustainable energy <https://archive.org/details/VN860606> is a presentation by Fajar Fadli on energy security

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## Chapter 2

# Getting Lost in the City and Implications for Food, Energy and Water Security: Towards Non-anthropocentric Rural-Urban Governance



Janet McIntyre-Mills

*'Ideas however outrageous have changed the world and they will again... indeed wrote Keynes, the world is ruled by little else'*

—John Maynard Keynes, *General Theory* cited by Bregman (2017: 157)

**Abstract** The chapter discusses the overall themes of the symposium and the challenges that water, food and energy security pose for humanity and the environment on which we depend.

**Keywords** Food · Energy · Water Security · Non Anthropocentrism

The arc from growing gap between rich and poor in developed nations and the lack of the electoral and governance system to take into account their needs to the election of Donald Trump and Brexit were foreseen by analysts such as Rorty (1999). *Expanded pragmatism* dedicated to sustainable social and environmental justice is more important than ever. In the wake of the elections in the UK, Europe and the USA, people have demonstrated the depth of their dissatisfaction that Rorty (1999) summed up in *Achieving Our Country*. In *Planetary Passport* (McIntyre-Mills 2017), the following quotation is cited in which Rorty stressed that 'something will crack' as follows:

The non-suburban electorate will decide that the system has failed and start looking around for a strongman to vote for—someone willing to assure them that, once he is elected, the smug bureaucrats, tricky lawyers, overpaid bond salesmen, and postmodernist professors will no longer be calling the shots.

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Rorty said ‘nobody can predict’ what such a strongman would do in office, but painted a bleak picture for minorities and liberal causes. ‘One thing that is very likely to happen is that the gains made in the past forty years ... will be wiped out...Jocular contempt for women will come back into fashion’. (Rorty 1999: 87–91 and cited by Helmore 2016)

In *Planetary Passport* (McIntyre-Mills 2017), I stressed that Rorty criticises the lack of agency in academia and the tendency to emphasise criticism rather than contributing to practical transformation. This is summed up in the pithy statement by Bauerlein (1998) when reviewing *Achieving our Country*, as follows:

Old Leftists sought to effect a just distribution of wealth and opportunity. New Leftists specialize in what they call the ‘politics of difference’ or of ‘identity’ or of ‘recognition’ (citing Rorty 1999: 76–77). Old Leftists worry about minimum wages, adequate housing, and universal health care. New Leftists worry about how to ... recognize otherness. (Bauerlein 1998 citing Rorty 1999: 79)

Policies of recognition and identity whilst very important need to be applied in order to address the growing gap in life chances.

The growing gap between capitalist West and those perceived as enemies is not an accident. Historically the divisions in Afghanistan can be traced back to the British and Americans backing the military against the Russians. The rise of the Taliban grew in the vacuum in power created by centuries of war.

Competition for the last of the non-renewables resulted in a specific approach to foreign policy where the fate of the west was seen in isolation from the rest of the world. Invasion of Iraq and a growing gap in values in the so-called war on terror has been the result.

The dormant cold war between the USA and North Korea has resulted in regional tension after the threatened missile strikes that have culminated at the time of writing in a missile strike over Japan. The context provides the background for the research on the needs of the most marginalised in ‘Getting lost in the city’. Shanahan (2016: 19) stresses:

To Clinton supporters, the four biggest problems facing the US, in descending order, were gun violence, the gap between rich and poor, climate change and college affordability. For Trump supporters the four biggest problems were illegal immigration, terrorism, job opportunities for working-class Americans and drug addiction... The US system of Electoral College votes, no compulsory voting and wild card independents running for president all contributed to Trump’s victory on the back of the desire for change and a lack of enthusiasm for Clinton. Conversely the Australian system of electorates, compulsory voting, and preferential voting all contributed to saving Turnbull’s government in the face of an equal desire for change...

According to Black (2016: 18)<sup>1</sup>:

In the eight years since the global financial crisis, employment in Australia has grown by 1,158,000 and nearly 90 percent of these jobs have been in the stable occupations of managers, professionals, service workers and sales people. Professionals make up nearly half of these jobs and hence dual income professional families, especially if one is in a secure tax

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<sup>1</sup>Black, J (2016) ‘Urgings for Australia made great again: politicians need to wake up to the divisions tearing apart our society’, *Weekend Australian* Nov 12–13 2016, p18.

payer funded or subsidized job, have little idea what is happening outside their reference network... That has left only 129 000 jobs generated since the crisis [2008] in the less stable categories of trades, clerical, semi-skilled and unskilled blue collar. None of these at risk jobs were created for women and the number of at risk jobs has remained frozen below 2 million workers for the past 8 years... if we add up the number of men in trades jobs and women in clerical admin job, we find 2,649,00 workers or about one in four workers in Australia

The purpose of this volume is to explore the implications of food, water and energy security for the most vulnerable. What can be done to enable women and young people to have a foothold in a financialised rural and urban economy, a voice and a future? The collection aims to enhance strategic decision-making and to develop inclusive development strategies in line with the Paris Development Agenda (OECD 2005/2008) which stresses that those on the receiving end of development aid need to be shapers of policy and the United Nations Sustainable Development Goals (2017). This research explores perceptions on ecological citizenship and rights and responsibilities to manage the size of our ecological footprint.

The research draws on and extends Hulme's research on why we disagree about climate change (2009) and Cornelius' research on systemic approaches to understanding emotions (1996). Values, perceptions and emotions could be better understood from a systemic viewpoint that draws on interdisciplinary theories, in this case such as to 'why more equal societies almost always do better' (Wilkinson and Pickett 2009). The 'best-worst' option, namely, democracy, is in need of improvement (Hulme 2009; Giddens 2009). The specific challenge that this research addresses is to match forms of appropriate participation that are accessible to diverse groups and not viewed with cynicism (Cooke 2004). Significantly, these questions assess whether participatory democracy and governance enhance sustainable living and wellbeing. It involves public education through local governments, schools, businesses and NGO organisations. It will identify the decision-making context; constraints to achieving outcomes; elements of three scenarios (denial of the need to change, too little action too late, sustainable long-term adjustments); and key factors (variables) in facing up to the risks. It could contribute to the SD21 policy initiative 'Sustainable Development in the twenty-first Century'. The ability of governments to secure the environmental regions—on which the cities depend—to deliver services and resources will affect the liveability of our communities and human security within our region.

Pauli's approach to development is to see the planet as a vulnerable blue orb suspended in space in need of stewardship. His blue economy approach is not merely marine or water focused, instead it emphasises a way to make the most of resources in a so-called cascade economy, based on identifying sources of abundance to benefit living systems.<sup>2</sup> Pauli stresses the need to provide opportunities

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<sup>2</sup>The Blue Economy approach of Gunter Pauli (2010) outlines more than 100 ways to create opportunities through environmental thinking that does not privilege the environment at the expense of people; instead his approach is to find ways to enable the unemployed to benefit through working on environmental challenges; his motto is: 'There is no unemployment in eco-systems' (Gunter Pauli 2016) (<https://www.speakersassociates.com/speaker/gunter-pauli>).



through design that taps into the abundant talent and environmental opportunities that can be found and to ensure that the designs protect both people and habitat. This is a systemic approach that could ensure that people come up with solutions that do not create binary oppositions between people and the environment. It is unnecessary to argue that for people to flourish the environment must suffer.

This is an issue in Australia where some sections of the environmental movement are clashing with Indigenous leaders such as Noel Pearson and Marcia Langton who argue that pragmatism is needed and that Aboriginal Australians have a right to benefit from the environment. Marcia Langton has stressed that Aboriginal people should not be stereotyped<sup>3</sup> and that it is appropriate that they should be able to benefit from the resources that are mined in Australia. As first Australians, they should benefit from the land. This is a pragmatic approach to development and one that needs to be discussed with environmentalists. The land is not empty of people in the remote parts of Australia, it is populated. Just as Noel Pearson argued in the contested Wild Rivers campaign it is important for Aboriginal Australians to benefit from their own land.

Marcia Langton (2012) in the ABC Boyer Lectures. She stressed that it is time to for a different approach to Indigenous employment. This is a form of **expanded pragmatism** based on considering the consequences of choices for all. In an article in Meanjin (2015)<sup>4</sup> Langton engages in a discussion with David Leyonhjelm in this exchange she makes the point that what matters is not race, but recognition of being first Australians and in her Boyer lectures she makes the case (like Noel Pearson) that Aboriginal Australians have a right to benefit from the land. The denial of Aboriginal Australians the right to exploit the land is tantamount to a new form of green colonialism. According to Langton 2012<sup>5</sup>:

In these lectures, I will examine the underbelly of the resources boom and the standing of the Indigenous population in the Australian economy—especially those who live in northern Australia and the remote regions which are the geographic heart of this activity. Mining is the only significant industry in remote communities, and dependence on it may leave these communities in a precarious position when an operation closes. High levels of dependency on mining can be detrimental for Indigenous and rural and regional communities, so development aimed at increasing economic diversity is needed. Now there is talk that the resources boom has peaked. How vulnerable to the mining downturn are these Aboriginal businesses.

The same kinds of arguments were made by Prof K, a biologist at Universitas Nasional in Jakarta who stressed that Indigenous people in Kalimantan want to be

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<sup>3</sup>Langton, M and Longbottom, J 2012 *Community futures, legal architecture*. Oxon Routledge. She defines indigenous as: ‘applied to territorially based ethnic groups that were culturally distinct from the majority population of the nation states in which they find themselves, that were politically marginalized and who identified as indigenous’ (Simpson 1997). Simpson, T. 1997 *Indigenous heritage and self-determination: the cultural and intellectual property rights of Indigenous people*. Copenhagen Denmark. IUCN.

<sup>4</sup><https://meanjin.com.au/essays/the-question-of-constitutional-recognition>: ‘The Question of Constitutional Recognition: Marcia Langton talks to David Leyonhjelm’.

<sup>5</sup><http://www.abc.net.au/radionational/programs/boyerlectures/boyers-ep1/4305610#transcript>.

able to make a viable living from the land. The challenge is to find a way to achieve this in ways that balance the needs of people, indigenous primates and their habitat. Prof K, who researches ways to protect orangutan, stressed that unless more was done to provide viable living options for people, they would not protect the primates. He also stressed that hunting is seen as enjoyable and people continue to believe that Indonesia has unlimited resources. In the context of our conversation, he raised the problem of the corrupt sale of forests to developers for palm oil and the resultant loss of habitat for the primates. People in the cities do not make the link between cheap palm oil and the loss of habitat. Some of these issues were addressed in 'Planetary Passport' (McIntyre-Mills 2017).

Prof K (who is concerned about caring about the orangutan) said that previously bush meat was abundant and that enabling the Indigenous people to understand that bush meat cannot be obtained without also sustaining the animals needs to be a starting point for engaging with communities. I reflected that hunting and being in the bush is regarded as training by many Indigenous people and that surveillance and laws to prevent poaching and deforestation are needed. He stressed that the sense of abundance and right to consume is shared by people across rural, suburban and regional areas as well as in the Cianjur region of Java.

Education is not the solution, according to Prof K, it is providing people with options so that they are not so desperate that they have to hunt and destroy forests and not so desperate that they are willing to sacrifice their land. He then went on to reflect that:

Hunting is a cultural experience that people like to pass on to their children. The hunt itself is enjoyable.

I agreed that in South Africa and Australia, hunting is also regarded as a cultural experience necessary for those engaging in sheep farming to ensure sufficient grazing for the sheep, whilst Aboriginal Australians talk of the joy of hunting and sharing kangaroo, as a way of passing on survival skills.

The rights of all sentient beings, including agricultural and wild animals, have been stressed in 'systemic ethics' (McIntyre-Mills 2014) along with the argument that meat eating is an unsustainable source of protein, given the rising human population and the need to find sources of food with a lower footprint.

Knowing the limits of environments and retaining balance is a skill that is becoming increasingly important. Whereas kangaroo meat is a good replacement for sheep and cattle, orangutan meat in East Kalimantan is not.

An understanding of our affinity with other sentient beings and the closeness of our primate connections was underlined by a member of the audience at a public lecture I gave on the evening of the 29 Sept 2016 in Jakarta. A man from Flores said that he believed it important when studying Indonesian perceptions that places like Flores be included, because their voices are often unheard. Similarly, another stressed that women's issues should be central, and I concurred stressing that all those who feel more marginalised need to be given a voice.

Individual and collective needs, power distance, gender rights and species rights are all important aspects as is the management of consumption choices, because the

sort of consumption choices that are being made are robbing future generations of life of a chance to survive.

The idea of solving all problems with better designs and better technology is fraught with problems, because all designs begin with values. So it is vital to design with the rights and capabilities of human and non-human animals and their habitat in mind.

The increasing loss of land to commercial groups and the moneyed classes is making the rural poor more vulnerable.

Once they have sold their land, they often buy TVs or other consumer items and when the money has run out they are more vulnerable than before they lost their land, which provides a means of production. At this point they become not just members of the poor landed class, but instead members of the lumpen proletariat.

The financialisation of the economy has resulted in young people becoming vulnerable to trafficking. Although young people do not starve, they desire an income to purchase consumer goods or to pay for education of another family member.

The ability to earn 150 dollars a day selling food as a hawker in the Bandung was contrasted with the earning of about 5 dollars a day from agriculture in Cibodas.

The challenge is to find ways to develop opportunities to make a living by adding value to agricultural products or creating something out of nothing as a way to create a viable income. This provides independence, and it can be done through thinking differently about the local environment.

In the rural area of Cianjur,<sup>6</sup> I was told by the leader of the PKK, a women's group, that trafficking was becoming more of an issue in the region. To paraphrase she said that the tourist areas up in the hills are more vulnerable, but the traffickers are extending their networks even here. As the wife of a local government leader, she was concerned about the extent to which parents were encouraging daughters to take on domestic jobs offered by prospectors (pimps) acting for traffickers.

The number of young women returning from Malaysia and previously from Saudi Arabia (pregnant) and then having unwanted babies has resulted in midwives facing the prospect of finding homes for unwanted babies.

The volume focuses on ways to de-colonialise knowledge formation in public policy and makes the case for an alternative approach to governance and democracy that takes into account a range of local people's perspectives.

The issue in places like Indonesia is that in the rural areas, people make less money from agricultural engagement than working as a hawker, domestic servant or road worker, for example. If they wish to save to buy more land, then working in the city makes sense, provided they do 'not get lost in the city' and become sidetracked from their original goals. One of my informants summed it up as: 'by spending their money on entertainment and girl friends'.

The book aims to explore the extent to which people understand the implications of their choices as to what they should eat. To what extent do people understand that whether they decide to eat has an impact on our ecological footprints? Some food

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<sup>6</sup> <https://www.statsmonkey.com/sunburst/23644-cianjur-regency-population-statistics-by-gender-jawa-barat-indonesia-stats.php>.

requires more energy and water, depending on whether the food locally grown and locally consumed. The growth of cash crops for marketing at a distance can add costs to people and the planet. Eating a punnet of strawberries out of season flown in from elsewhere makes a difference to the planet, particularly if it is sold in a plastic container, which is often the case. The EU decision not to tax the use of plastic wrapping is unfortunate. Surely, a ban on standard forms of plastic based on petrochemicals would be timely?<sup>7</sup>

Therefore, this research raises questions about everyday decision-making and is about culture, ethics and sense of place. Two basic approaches to ethics are defined:

- The first is an idealist, normative approach which is guided by values that are *a priori* and taken for granted.
- The second approach is a pragmatist approach based on considering the consequences of choices that are *a posteriori* and are not taken for granted.

We need both *a priori norms* to guide us and *a posteriori considerations* to measure the consequences of UN Sustainable Development Goals to preserve both people and the planet.<sup>8</sup>

The UN Sustainable Development Goals provide the basis against which to measure achievements, but as members of a Focus Group on Food Labelling and ways to engage the public in addressing food security. The event held in an upmarket Jakarta Hotel was funded by the UN stressed. The participants at the event comprised public officials, businessmen and women and representatives of NGOs and a few universities including University of Indonesia. In the capacity of an adjunct professor at the University of Indonesia, I attended the workshop. The participants at the workshop stressed the need for participation. An elderly spokesperson stressed:

The Goals keep changing and we are told about the Millennium Goals then the Development Goals then Development 2020 and what does this have to do with how people see things in Australia, South Africa and Indonesia?

The options are:

- Business and usual—with rapid descent into climate change and systemic problems
- Making changes too slowly
- Regeneration of habitat for human and non-human animals

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<sup>7</sup> <https://www.theguardian.com/environment/2017/oct/06/eu-rules-out-tax-on-plastic-products-to-reduce-waste>.

<sup>8</sup>The notion of virtuous living needs to be explored in terms of:

- *A priori* norms are guided by accepted rules of behaviour.
- *A posteriori* indicators and measures of performance. Both are needed in order to guide practices and to hold people and their elected government representatives to account.

## **Open State and Open Door Conference in Adelaide South Australia Held with Representatives from West Java (2016)**

In Adelaide, we have the highest levels of unemployment and also an ageing population. We need to find ways to create business opportunities based on seeking sources of abundant resources. Waste is an obvious place to develop employment opportunities through upcycling and through being creative.

The FGD for low-carbon living in Adelaide hosted by SA Government as ‘Open State’ and ‘Open Door Initiative’ (2016, A to Zero emissions) focused on three themes with the finalists for the Adelaide competition. The Carbon Neutral Adelaide Foundation Report published by Pitt and Sherry ‘identified the majority of emissions come from Energy, Transport and Waste...’

Adelaide is one of the most livable cities in the world and it is striving to be carbon neutral. The first group focused on waste and the need to address not just reducing, reusing and recycling but also upcycling. The need to move towards job creation from waste and reducing waste from restaurants was emphasised along with the need to package food and water more effectively in biodegradable and reusable containers. The recycling process could be encouraged through providing more incentive to minimise the size of the bins and to produce safe compost through public education.

The use of nappies for the young and old could ensure that a safe source of energy is created. This was contested until the work of Gunter Pauli was cited.

Energy was likened with waste and the need to provide subsidies for those who use solar panels and save energy through batteries of varying sizes that could be shared across households or clusters of homes sharing the costs. New forms of energy supply from algae were also discussed. More public transport and more sharing of vehicles could be addressed by providing well-serviced integrated routes where buses run in a timely way with good bush shelters and safe street lighting. Wider cycle tracks could also be encouraged. Private cars could be shared through software applications to enable carpooling.

Safer buildings could be managed through low-carbon emission on line applications which could then be linked to integrated community engagement software such as the Pathways to Wellbeing Software (McIntyre-Mills et al. 2014; McIntyre-Mills 2017).<sup>9</sup>

The need to creative incentives was stressed by all; these need to be reflected by the market and supported by the public sector at all levels.

One of the focus group hosts suggested that the work of Indy Johar, a panellist at the Open State Conference (Oct 2016), was particularly important in demonstrating how a small change in providing heating subsidies in the UK could make a difference to the community by ensuring that respiratory diseases are minimised and as a

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<sup>9</sup>[https://archive.org/download/pathway\\_DEMO\\_1/pathways to wellbeing](https://archive.org/download/pathway_DEMO_1/pathways%20to%20wellbeing).  
[https://ia801606.us.archive.org/20/items/pathway\\_DEMO\\_1/pathway\\_DEMO\\_1.mp4](https://ia801606.us.archive.org/20/items/pathway_DEMO_1/pathway_DEMO_1.mp4).

result fewer school days are lost. This results in better outcomes in terms of the social health and wellbeing of families.

At the Open Door Conference (27 Oct 2016) with West Java Provincial Government, the key themes for engagement identified by the Governor's representative are:

- E-governance and public policy research
- Leadership across sister cities
- Mental health
- Literacy, reading and writing skills in Indonesian and English
- Publishing ideas on line and in books in the more than
- Capacity building and training across all levels of education to address ways to design responses to meet the dreams of young people
- Agricultural development (protection of fruits from pests) and value adding
- Marine environments and fisheries (abalone)

Some would argue that resources are indeed limited and it is an issue of distribution of material and non-material resources by the 1% for the 1%; thus it is a problem of the state and the market. This is no longer just a critical, neo-Marxist critique; it is made by a growing number of theorists and practitioners spanning many disciplines and professions that stress the need to reframe the market, appreciate the commons and protect it and regenerate the social and environmental fabric of life, not just by redistributing resources but by being different and doing different things. Max-Neef draws on Indigenous perspectives to develop the 'Being, doing, having and interacting approach to development'.

Others would argue that it is possible to move away from neo-liberal market economy towards reframing thinking a practice to find sources of abundance and minimisation of waste. This is the approach used by Gunter Pauli whose work is refreshing but needs some extension to take into account social and gender perspectives. He comes up with good technical ideas but is value-free.

Which brings me to the point that indicators of wellbeing/resilience (or any other abstract concept along these lines) is based on values and perceptions. If people think something is good and if they perceive that something is meaningful to them, then it is meaningful 'sui generis'. The very process of engaging is part of the solution itself; it is the well-known virtuous circle of democracy. It is also a paradox that if you control democracy too much, then you destroy it.

Ecological citizens need to develop participation from below and above to balance individual and collective needs. This is at the heart of the democratic governance process. The democratic virtuous circle requires that people need to be free and diverse in their opinions to the extent that they do not undermine democracy itself. But when people of ill will stress that they have the right to say and do anything at all, they are in fact undermining democracy. This applies as much to states as it does to market actors and to civil society activists. That is why paradoxically, democracy needs the state, but the state needs to be controlled by civil society.

Democracy needs to foster freedom and diversity, but people need to be free and diverse in their opinions to the extent that they do not undermine democracy itself.

When the state sees indications of destruction of the rights of others (violence towards all vulnerable people and sentient beings and the fabric of life on which we depend), this sort of activity in the community is indeed problematic. This is one of the top-down control mechanisms that is indeed needed in the state to protect social and environmental justice.

The current architectures of democracy and governance are in need of revision. We need a better balance of top-down and bottom-up approaches to enable participation from below and above. We need a priori covenants and laws, and we need new engagement using multiple forms of media to protect the global commons and to challenge existing laws that appear to be on the wrong track. After all laws are constructs and the market is a construct. They are not givens. When the state and the market do not protect the fabric of life on which we depend, then they need to be challenged.

In 2017, I attended a *European Commission* workshop in Adelaide attended by senior public sector researchers and military strategists.

The event was opened by Danish ambassador to Australia with the statement that he stressed to his grandchildren that they should not have children as by 2050 life could be too stressful. Adelaide and Copenhagen are friendly rivals to become carbon neutral by 2020. More cities need to take up this challenge.

The aim of my research is to explore ways to narrow the gap between the life chances across the diverse stakeholders within nation states, respective of whether they are citizens of a nation state or not.

Most of my work to date has make a case for giving a voice to the voiceless and addressing the social, economic and environmental life changes of all generations by understanding our interdependency as part of an overall living system.

The theme for this conference and my work to date has been ‘weaving’. Recently I listened to a documentary on the life of Peter O’Neil, a hermit<sup>10</sup> whose lifework involved recovery from a sense of being out of place in the wider world. He wrote his story in a series of journals about his injury and illness, living sustainably, regenerating herbs and vegetables and other plants at risk by harvesting seeds and providing them by mail order to other gardeners. He read widely and tried to make sense of the big questions in life by weaving together a range of disciplines and searching across cultures for his personal sense of enlightenment. He documented his thoughts in notebooks using his own notation and a series of links across a range of topics.

The theme of regeneration is central to this volume as is the notion of intergenerational and interspecies cohorts.

Critical systemic practice is more important than ever in order to foster agency that is informed by a critical and systemic approach. The points made by Rorty (1999) about the academic *Cultural Left* failing to engage in practical action speak to current issues and stress the need for both praxis and pragmatism. However, entrepreneurial action without critical awareness is equally problematic. When the air-conditioned buildings in Zimbabwe are held up as an example, the political context of authoritarianism and control of opportunities cannot be left out of the picture.

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<sup>10</sup><http://www.abc.net.au/compass/s4699513.htm>.

When coffee production and waste are used for growing mushrooms, this is a success story, as is the marketing of the coffee, which needed to be achieved through finding a way to break sanctions. But an analysis of power dynamics locally and globally needs to be addressed too.

The filters of values need to be factored in as do the social, political cultural, economic lenses of different stakeholders. In approaching the blue economy, we need to take all the factors into account. By focusing on environmental flow and biomimicry, much can be gleaned, but it does remain important to address complex social justice aspects as well.

Much of my work to date has stressed mitigation and adaptation to climate change and on what works, why and how from the point of view of different stakeholders. Initially this book addresses the Dick Wittington syndrome:

- Do people get lost in the city when searching for a job and finding that the cities are not paved with gold?
- Do people at least find opportunity to connect with others? Some of these opportunities are positive and some are negative. Whilst some find jobs and become increasingly open to other worldviews in city environments, others become under or unemployed and in the process, become increasingly closed to other world views. These are two sides of the same coin.
- What happens to the people who are left behind in the rural areas or who find that their regional city areas have become rust belts as factories move away and shopping malls empty and neighbourhoods have more and more empty homes with boarded up windows?

Alongside 99% who are struggling to survive or becoming increasingly stressed as members of the shrinking middle class are the 1% who own the majority of the world's wealth. They own the media and shape the political agendas to protect their own interests. The populist responses demonstrated by the populist votes in the UK and USA illustrate the disappointments felt by those who feel 'let down' by the previous governments. The questions this book strives to answer are how to address the sense of loss that the disenchanting feel and how to restore social and environmental justice for all age groups.

Can this be done by restoring faith through full employment and a fair distribution of resources locally, nationally and internationally? The case is made that fairness and a sense of fairness is the cornerstone for transformation. In *Planetary Passport* (McIntyre-Mills 2017), I made the case that Stanford researchers found that primates responded negatively to unfair rewards for tasks and that basic empathy and an understanding of justice can be found across human beings and other animals.

A means to get off the carousel that only functions to benefit the few at the expense of the many is needed.

Examples of transformative practice are explored in this volume with the hope that it will provide seeds for improving public policy and governance.

An example of complexity is as follows. You are required to feed many diverse people who have survived a natural disaster. They are in temporary accommodation.



You have a bag of fruit. The fruit can be distributed to each person. If you have only 10 apples and 10 people, the decisions are quite simple. One apple is given to each person. If you have a bag comprising hard and soft fruit, dried and fresh fruit, then the decisions become more complex. Fresh fruit needs to be eaten first and dried fruit later. Types of soft and hard fresh fruit can be shared on the basis of taste and appropriateness to people's needs. Unfortunately, the complexity of the decision extends beyond the distribution of food to many other social, economic and environmental factors.

As policy makers, managers and those involved in planning and implementing better decisions together with communities, we need to make the right choices based on ethical representation, accountability, sustainability and regeneration for current and future generations.

The variables that we need to consider span social, economic and environmental factors. The limitations in water supply in times of drought need to be addressed by making immediate decisions but also need to be addressed by medium and long-term decisions. At the time this chapter was written, South Africa was experiencing the worst drought in over 300 years in the Western Cape. The area of concern needs to be addressed critically and systemically to put in place better plans to ensure that people's needs are addressed. Ackoff and Pourdehnad's (2001) 'On misdirected systems' provides a good introduction into the way human decisions can shape systems. Critical systems thinking and practice is about improving our design responses to areas of concern through working with people to achieve the best contextual outcomes. The online video on 'The Story of Stuff' provides another basic introduction. Our understanding can also be extended by reading Gunter Pauli's (2010) *The Blue Economy*. In his preface he sums up the issues by saying:

Perhaps the greatest freedom we can offer our children is to allow them to think differently and, more importantly, to act differently... (Pauli 2010: xxv)

### ***Planetary Passport and Transformation from Wall Street to Wellbeing***

The focus in the two companion volumes is on protecting 'wellbeing stocks' a concept adapted from Stiglitz et al. (2010: 15) to refer to a multidimensional measure of wellbeing spanning the following, as I also explained in more detail in Chaps. 3 and 4:

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.

The various chapters explore wellbeing in terms of the relationship between functioning and capabilities by enhancing space for social inclusion and recognition of

*both diverse standpoints on wellbeing as well as shared meanings.* The twofold aim is to:

- (a) **Protect diversity** and areas of common ground in the interests of current and future generations by focusing on rights and responsibilities to protect sustainable employment that ensures food, energy and water security.
- (b) **Explore ways to protect ‘wellbeing stocks’** (Stiglitz et al. 2010) for current and future generations.

One of the ways is to introduce approaches to support full-time employment so that unemployment becomes a relic of the past. Thus the research addresses perceptions on what it means to live well in ways that protect people and the planet, what constitutes representation of diverse voices (Hesse-Biber 2010) and the regeneration of social, environmental and economic fabric (McIntyre-Mills 2017) across different age cohorts. The engagement approaches that will be tested include forms of so-called systemic intervention defined as addressing specific areas of concern in specific contexts. Midgely (2017) defines it as:

Purposeful action by an agent to create change in relation to reflection upon boundaries.

This approach does not strive for closed ‘solutions’, instead intervention is an ongoing responsive, open process that aims to match responses in context. The systemic interventionist approach enables people to reevaluate the boundaries of an area of concern and to respond in context to the issues in ways that enable diverse voices to be heard.

The research addresses the following questions:

- Why measure wellbeing in terms of both functioning and capabilities?
- What is wellbeing perceived to be from the standpoint of diverse stakeholders in South Australia and West Java?
- How do we enhance wellbeing across diverse age cohorts, in order to address social inclusion in contexts where diversity is high and trust low?
- Who decides what constitutes wellbeing?
- By what process will the wellbeing measures decided?

Who makes those decisions?

- So what difference does engagement make for (a) perceived wellbeing and (b) social inclusion?

This research seen as a whole, based on the collective contributions, is vital for balancing individual and collective needs, in order to enhance democracy and governance at a time when people consider that their needs are not being met in increasingly diverse nation states.

The pursuit of profit at the expense of people and the environment is a central problem for democracy and governance.<sup>11</sup> The vulnerability of cities is a symptom of the lack of balance between individual and collective needs.

‘Planetary Passport’ (McIntyre-Mills 2017) and ‘Wall Street to Wellbeing’<sup>12</sup> make the case that participation in ‘if-then scenarios’ is important to redress the problem of populism if we are to achieve a more representative democracy. The view that passive voting leads to the wrong results and simplistic thinking is worth exploring. Participation per se is problematic if it does not encourage engagement. Online systems and digital media can expand the mind and expand our boundaries of inclusion, or it can be used to draw narrow conclusions through encouraging echo chambers of similar thinking by ill-informed narcissists. Some would say that the wrong kind of participation has led us to the situation of democracies delivering populist responses to the growing gap between rich and poor. This is one of the key themes underpinning my research. What is the problem represented to be?

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<sup>11</sup>We aimed to ask West Java Gov, SA government, Wirasoft and Indonesian Diaspora network (coffee and bamboo growers and Aid2 Nature group) to join with us. This collection can be considered as a source of ideas for policy makers and those engaged in strategic thinking to protect living systems of which we are a part and regeneration not merely sustaining so-called wellbeing stocks (Stiglitz et al. 2010: 15) to refer to a multidimensional measure of wellbeing. The aim of the concept is to enable people to reevaluate economics and to become more aware of the way in which we neglect social and environmental aspects of life.

<sup>12</sup>The Max-Neef (1991) Human Development Index (HDI) and Resilience Score Card have been applied in pilots funded by the Local Government Grant (McIntyre-Mills and de Vries 2011, 2012; McIntyre-Mills et al. 2014) and Attorney General’s Department (Gebbie et al. 2012) to promote wellbeing and better management of resource consumption to address sustainable development goals. McIntyre has led or co-researched these projects on which the DP builds to create a new Stewardship and Resilience Index (SRI). Social, economic and environmental deterioration for the majority is understood ‘as consuming the planet to excess’ according to Urry (2010). There is little doubt that accelerated climate change will adversely affect sustainability and its impact on wellbeing in Australia (Flannery 2005; Stiglitz et al. 2010; Pretty 2013)—particularly if we continue to consume at current rates (Davies and World Institute 2008; Rees and Wakernagel 2008; Rockström et al. 2009). It has been argued that after a certain point, increased consumption does not lead to more happiness (Pretty 2013). Thus, increased economic growth, driven by increased consumption, does not make people happier. Indeed, in more egalitarian societies, all people consume less and are less status conscious. Thus, the link between greater equality or wellbeing and the prevention of global warming appears to involve ‘limiting consumerism’ (Wilkinson and Pickett 2009: 221). It is assumed that greater social and economic equality will provide the key to reducing the cultural pressure to consume at the expense of the majority in this generation and the next. The research seeks to establish whether participatory democracy and engagement to address the UN Sustainable Development Goals enable participants to consider the consequences of socio-economic decisions for long-term sustainable wellbeing versus short-term livability and coping strategies (McIntyre-Mills et al. 2014).

**Table 2.1** Approaches to social transformation

Hunter gatherer society	Industrial society	Post industrial	Digital era	Bio-organic era
Myth religion and legend	Philosophy and science	Science	Data driven	Stewards of living systems
Controlled by the gods	Rational thought by experts	Questioning experts	Network design and big data	Monitoring from below

Source: Extending some of Banathy's 1996 ideas on design

## Current Policy and Governance Challenges

The aim in this volume is to address current policy and governance challenges in Indonesia, Australia and South Africa with a focus on the most vulnerable women and young people. The need to address policy concerns of young people<sup>13</sup> who are struggling to finance education is important, as is the need to redress the current imbalance in the development of university campuses in urban environments through scholarships to places of learning in the rural, regional and urban areas. The move from rural to urban areas is causing increased competition for scarce university places. Vocational education in rural universities and training colleges could help to promote the value of agriculture to bright students who could be tasked with the vital issue of food and water security. The protests and closures of universities in South Africa are indicative that higher education is failing young people and future generations as it is not addressing poverty and climate change.

Narcissus in Greek and Roman mythology became self-obsessed and in love with his own reflection.

The self-obsession of modern society where each individual strives to be a legend in their own social media network and constantly post their every move online (as if it matters) has played an important role in changing communication forever.

If we consider the history of social change, summarised below as follows, we can see the implications of self-obsession, the ability to mobilise people to follow ideas expressed by ill-informed egotistical voters (Table 2.1).

If we accept that people are too foolish to make decisions, then we open the doors to the notion that people must be controlled by elites. This is problematic. Democracy, governance, science and ethics rest on the ability to test out ideas. Today the problem is that the testing process does not go far enough. Voters are making ill-informed decisions because they are not thinking through their choices. We face more and more complex challenges that require the capability to make informed decisions.

Arthur Koestler (1967) suggested that it is inevitable that people will make poor decisions because they cannot process more than a few ideas at the same time (and

<sup>13</sup> <http://www.news24.com/SouthAfrica/News/hard-to-predict-the-next-step-for-fees-must-fall-20160814>.

this is because of the way the human brain has evolved—we are still driven by the amygdala and our instincts to protect self at the expense of others) and that they are driven by self-interest. This is the same sort of argument being put forward by those who say that democracy is doomed. Consider, for example, the statement that:

More professionalism, less populism: How voting makes us stupid, and what to do about it.  
Jonathan Rauch and Benjamin Wittes (2017)<sup>14</sup>

However, Susan Greenfield has shown that the more we make neural connections, the more conscious we become, and so the ability to help people to make informed decisions is very important.

The potential for computing to assist with better decision-making is being lost, and instead digital technology is being used for self-promotion and narcissism purposes by individual users. Digital control from above by states and markets who have their own selfish interests needs to be questioned. Digital democracy and governance from below could be used for enabling people to think through options and to monitor from below, in order to hold people to account.

The number of people in the world who are digitally connected has risen to 40% in 2016 whereas in 1995 only 1% were connected.<sup>15</sup> But the divide between those who can afford to have not one, but many, means to connect and those who are able to afford broad band and who live in areas that are well serviced by Internet companies is deep in many parts of the world.

In Indonesia, the total population is 259.1 million, and 326.3 mobile connections exist, whilst 88.1 million are active Internet users,<sup>16</sup> and at the conference on digital governance, Universitas Sebelas Maret in Solo Indonesia, it was stressed that this form of connection can be positive or negative (McIntyre-Mills 2017).

In South Africa almost half of the population are connected to some form of digital technology.<sup>17</sup> In Australia half the population are also connected.<sup>18</sup> Those with

<sup>14</sup> <https://www.brookings.edu/blog/fixgov/2017/06/01/why-voting-makes-us-stupid-and-what-to-do-about-it/>.

<sup>15</sup> Around 40% of the world population has an Internet connection today (view all on a page). In 1995, it was less than 1%.

The number of internet users has increased tenfold from 1999 to 2013. estimate for July 1, 2016 Source: *Internet Live Stats* ([www.InternetLiveStats.com](http://www.InternetLiveStats.com)).

<sup>16</sup> <https://www.techinasia.com/indonesia-web-mobile-statistics-we-are-social>, estimate for July 1, 2016 Source: *Internet Live Stats* ([www.InternetLiveStats.com](http://www.InternetLiveStats.com)) Elaboration of data by *International Telecommunication Union (ITU), World Bank, and United Nations Population Division*. <http://www.internetlivestats.com/internet-users/>; <https://www.techinasia.com/indonesia-web-mobile-statistics-we-are-social>. Around 40% of the world population has an internet connection today (view all on a page). In 1995, it was less than 1%. The number of internet users has increased tenfold from 1999 to 2013.

<sup>17</sup> **28,580,290**, Internet Users in South Africa (2016\*) Share of South Africa Population: **52%** (penetration) Total Population: **54,978,907**, Share of World Internet Users: **0.8%**.

Internet Users in the World: **3,424,971,237**, Source: *Internet Live Stats* ([www.InternetLiveStats.com](http://www.InternetLiveStats.com)) Elaboration of data by *International Telecommunication Union (ITU), World Bank, and United Nations Population Division*.

<sup>18</sup> 8153.0—Internet Activity, Australia, December 2016 [www.abs.gov.au/ausstats/abs@.nsf/mf/8153.0](http://www.abs.gov.au/ausstats/abs@.nsf/mf/8153.0) Apr 5, 2017—Fibre continues to be the fastest growing type of internet **connection** in both percentage terms and subscriber **numbers**.

access vary according to age, education, skills and affordability as well as whether they are living in the city or in rural areas<sup>19</sup>:

Overall, digital inclusion is growing in Australia. Australians are spending more time, and doing more, online. Since 2014, Australia's overall score has risen from 52.7 to 54.5, and every state and territory—besides Tasmania—has increasing scores. In 2016, the highest-scoring state or territory is the ACT (59.7, or 5.2 points above the national average), followed by Victoria (55.9). Groups with high digital inclusion include Australians who speak a first language other than English at home (LOTE) (57.9, or 3.4 points above the national average). This is a highly diverse group, so care should be taken in interpreting this overall finding.<sup>20</sup>

In Indonesia the mobile<sup>21</sup> market has:

exploded over the past couple of years. SIM subscriptions in Indonesia stand at 326.3 million, way more than its population. This means each mobile phone user owns an average of two SIM cards. 85 percent of the population own mobile phones, while 43 percent carry smartphones.

### Vignette

This morning (September, 2017), I was teaching a student via Skype who is currently based in Nairobi. I shared the story of my attending Open State, a meeting in South Australia for people who wished to share policy and business ideas or who had been invited on the basis of winning an award for research. The tent provided space for engagement, and the experience was fulfilling for those who were invited.

As I left the event, I saw a group of Aboriginal Australians sitting in the shade of a tree on North Terrace. They were being questioned by uniformed police.

What are the policy silences in the structure of 'open state events'? How could the situation be addressed? The country on which we were meeting had been their place long before Australian settlement. Acknowledgement of country is an obligatory

<sup>19</sup> Australia <http://theconversation.com/australias-digital-divide-is-narrowing-but-getting-deeper-55232>: 'Those living in major cities are more likely to have access than those in rural and remote Australia; 88% of households in our major cities have access. This falls to 82% for those living inner regional and 79% for those in outer regional and remote, or very remote, areas. While two thirds of low-income households have access, 98% of the highest-income households have an internet connection. And it's not just access that is affected by income of the lowest-income households, 44% have a tablet in the home, compared to 76% of the highest-income households. The mean number of devices used to access the internet in the lowest-income households is four compared to seven in the highest. This is important because these devices enable individuals in the household to access the internet simultaneously. Homework can be done while someone else plays games while that night's cook looks up recipes online'.

<sup>20</sup> <https://digitalinclusionindex.org.au/wp-content/uploads/2016/08/Australian-Digital-Inclusion-Index-2016.pdf>.

<sup>21</sup> <https://www.techinasia.com/indonesia-web-mobile-statistics-we-are-social>, estimate for July 1, 2016 Source: *Internet Live Stats* ([www.InternetLiveStats.com](http://www.InternetLiveStats.com)) Elaboration of data by *International Telecommunication Union (ITU)*, *World Bank*, and *United Nations Population Division*. <http://www.internetlivestats.com/internet-users/>; <https://www.techinasia.com/indonesia-web-mobile-statistics-we-are-social>. Around 40% of the world population has an internet connection today (view all on a page). In 1995, it was less than 1%. The number of internet users has increased tenfold from 1999 to 2013.

courtesy that is nearly always acknowledged at state-sponsored events, but the issue of constitutional recognition<sup>22</sup> remains unaddressed. Racialised discrimination remains a basis for discrimination within the constitution, and recognition of first nationhood within this document could perhaps be translated into everyday interactions. In preparation for a class for incoming international students on Indigenous policy issues, I researched the ninth and tenth ‘Closing the Gap’ Reports. Whilst there has been improvement, most of the health and employment benchmarks have not been met. However, the number of Year 12 students who have passed metric has been met. Systemically this could have a flow on effect.

Significantly, only 3% of Australians are Aboriginal and Torres Strait Islanders, and it will take a few more decades for the numbers to return to pre colonisation: ‘Aboriginal and Torres Strait Islander population may exceed 900,000 by 2026 (Media Release)’.<sup>23</sup>

Democracy depends on participation by engaged citizens for its very existence. Populism does not equal democracy, and growth in the size of the economy does not equal development, if the gains are unfairly distributed.

Growth can equal poverty and the destruction of the planet. The line needs to be drawn by the states where the freedom of one is at the expense of the other. Therefore, when the state sees indications of this sort of activity in the community, it is indeed problematic. This is one of the top down control mechanisms that is indeed needed.

Indicators of personal and interpersonal alienation and cruelty need to be addressed from kindergarten to the elderly retirement home, from protection of disabled people to protection of a life worth living for all sentient beings. This is about the normative value of quality of life, not because people are useful citizens or useful animals, but because they are sentient and we are all part of that fabric of life. Cruelty towards the defenceless is the best early indication of psychopathy. This is based on empirical research. The ability to recognise a sense of fairness is not a

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<sup>22</sup>To cite Constitutional Recognition: Since 2010 there have been two expert committees, the Expert Panel and the Referendum Council, which have consulted and reported on constitutional recognition and the process to the Parliament.

The Expert Panel—which included Indigenous and community leaders, constitutional experts and parliamentarians—consulted extensively across the nation and reported to the Prime Minister in January 2012.

The Panel recommended that Australians should vote in a referendum to:

**Remove** Section 25—which says the States can ban people from voting based on their race.

**Remove** section 51(xxvi)—which can be used to pass laws that discriminate against people based on their race.

**Insert** a new section 51A—to recognise Aboriginal and Torres Strait Islander peoples and to preserve the Australian Government’s ability to pass laws for the benefit of Aboriginal and Torres Strait Islander peoples.

**Insert** a new section 116A, banning racial discrimination by government.

**Insert** a new section 127A, recognising Aboriginal and Torres Strait Islander languages were this country’s first tongues, while confirming that English is Australia’s national language.

<sup>23</sup><http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3238.0Media%20Release02001%20to%202026?opendocument&tabname=Summary&prodno=3238.0&issue=2001%20to%202026&num=&view=>.

uniquely human condition. Indeed, a sense of fairness and empathy is shared by many primates (and non-primates too).

Stanford researchers have found that when animals are not given the same rewards for a task, they recognise that they are being unfairly treated and they throw the food back at the researchers. Therefore, it is hardly surprising that people want to throw insults (or worse) at those they think are treating them unfairly.

We evolved through our capacity for empathy. What will happen if society does not protect the conditions for empathy? Wilkinson and Pickett (2009) have found that fairness leads to better social outcomes—see ‘Why more equal societies almost always do better’. So sharing food, energy and water fairly could be a means to develop an alternative way of doing things that cuts across differences in some cultural aspects of what is perceived to be important. All human and sentient beings need to have food, energy and water, and this is a good place to start in getting engagement to address social and environmental justice.

We need a planetary score card that measures how well or badly we are doing in terms of social, economic and environmental supports for food, energy and water supply. These aspects are core requirements for life. Participation in the development of a priori indicators is needed based on varied lived experience.

The measurement within and across local government areas to benchmark the fairness in social, economic and environmental indicators and the way they are being used could be a starting point. Giving weightings to perceptions could be used as a way to work out what people consider to be most and least important to promote wellbeing stocks.

Democratic engagement could be along the lines of saying: what can we do to protect so-called ‘wellbeing stocks’ in terms of personal perceptions of what people value in terms of both material and non-material aspects of life: What do we have and what do we need? What are we prepared to add or discard to make life better for ourselves and others?

My reading of McDonald versus Jihad (Barber’s 1995) characterisation of global capital versus global terrorism is that the phenomenon of selling fast, branded, non-nourishing food and the phenomenon of terrorism are in fact part of one problem, namely, a global economy where people are pushed beyond their limits. The terrorism is in fact pervasive and we in Australia know very little about it.<sup>24</sup> That is, the

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<sup>24</sup> ‘Aid agencies have warned that Yemen is “at the point of no return” after [new figures released by the UN](#) indicated 17 million people are facing severe food insecurity and will fall prey to famine without urgent humanitarian assistance. *A total of 6.8 million people are deemed to be in a state of emergency—one step from famine on the five-point [integrated food security phase classification \(IPC\)](#), the standard international measure—with a further 10.2 million in crisis. The numbers reflect a 21% increase in hunger levels in the Arab world’s poorest state since June 2016*. Save the Children’s Yemen spokesperson Mark Kaye said, ‘for me these numbers highlight that we’re at the point of no return. If things are not done now we are going to be looking back on this and millions of children will have starved to death, and we’ll all have been aware of this for some time. That will shame us as an international community for years to come’. This follows numerous other warnings of the catastrophe in Yemen. On 31 January, UNICEF put out an [urgent appeal](#) for funds to help children in crisis zones around the world. This included about 7.5 million children facing ‘severe acute malnutrition’. They estimated that this included about half a million children in Yemen.



famine in Yemen is not the result of some strange confluence of factors, or an act of god. It is a conscious war policy adopted by the Saudi-led coalition. Yemen academic specialist Sheila [Carapico](#) [observed](#) that:

for more than a year the objective seems to be to starve Yemen into submission. The naval blockade, supplemented by bombing of hospitals, ports, bridges, and other infrastructure, has prevented imports of essential foods, fuels, and medicines and stunted delivery of basic social services like electricity and water.<sup>25</sup>

This is a decision taken to win the war on terror by being terrorists.

The ‘banality of evil’ is evident, to use Hannah Arendt’s concept, and despite the lessons of history, they are being repeated. The way in which the Australian people remain ignorant of the issues is no excuse.<sup>26</sup> The role of the state in forming coalitions against terror remains a challenge. So if we ask the question how can governance be improved, what is the way forward?

I run the risk of writing the same arguments as previously, and so I have invited others to share their ideas with readers in this volume. But the issues hinge on the competition for resources and the way in which the rich are riding the backs of the majority in this generation and the next. The art work of Jens\_Galschiot which he sculpts and displays (at his own cost) as public art makes a statement that is easily lost in misunderstanding by those who do not want to acknowledge the injustice that the few rich in the world are living at the expense of the majority who are groaning under the weight of the rich.<sup>27</sup> If one analyses the sculptor of the grossly obese women being carried by a young, small male, it could be construed as sexist and aiming to shock. It was placed next to Hans Christian Anderson’s mermaid with the hope that it would be photographed and that people would take note that we need a new narrative and that fairy tales do not always end happily for those who think that they can live without acknowledging that the consequences of their decisions to exploit others is misery not just for others but also for themselves.

The enclosure movements (that argued for protecting property by privatising it) have now reached a planetary level. The commons need to be protected. This goes beyond protecting public goods. It requires ensuring that people have the means to subsist and to live lives that are worth living.

As a South African (born in Zimbabwe, whilst my father an architect was working there), I am concerned that the fate of landless people remains an issue. This is another governance issue that needs to be addressed in many parts of the world where colonisation and enclosures have wrested a future from the commoners.<sup>28</sup> The issue is how justice can be restored so that everyone can live simply and elegantly in an environment where people can enjoy the company of others in a rich

<sup>25</sup> <https://newmatilda.com/2017/03/19/the-war-in-yemen-is-turning-to-genocide-and-australia-is-quietly-supporting-it/>.

<sup>26</sup> <http://www.abc.net.au/foreign/content/2016/s4525147.htm>.

<sup>27</sup> [https://en.m.wikipedia.org/wiki/Jens\\_Galschi%C3%B8t](https://en.m.wikipedia.org/wiki/Jens_Galschi%C3%B8t).

It does not help much to show art work as <http://volokh.com/2009/12/10/survival-of-the-fattest-and-the-global-superfluous-poor-in-the-negotiations-in-copenhagen/>.

<sup>28</sup> <https://www.facebook.com/Landless-Peoples-Movement-of-South-Africa-370225656442794/>.

biodiverse region. We can live differently without lapsing into another round of ‘winners and losers’.

This is a collection of examples of governance where water is seen as a symbol of a new way of doing governance.

It requires transparency and an immediate perception of equity and fairness that is designed and owned by the people and for the people. The Balinese Subak systems enabled people to water their crops through a simple method of using gravity and canal dividers. Once this simple system was mechanised and they could not see the actual amounts going from one canal to another, it was impossible to monitor. Without transparency there can be no sense of fairness:

the method[the flooding of rice fields on a careful schedule] depends on a smoothly functioning, cooperative system of water management, physically embodied in proportional irrigation dividers, which make it possible to tell at glance how much is flowing into each canal and so verify that the division is in accordance with the agreed on schedule... Modernisation plans called for the replacement of these proportional dividers with devices called ‘Romijn gates’...The use of such devices makes it impossible to determine how much water is being diverted.... (Tenenber [2012](#): 91)

The challenge for governing the Anthropocene ethically and wholesomely is one of moving away from disciplinary and functional differentiation to support living ethically in ways that redress the worst aspects of modernisation. This requires simple systems that support:

- Representation—equity
- Accountability—fairness and transparency
- Regeneration—restoration of the commons and the assumptions and values that support it

Water management systems that rely on performance management by experts and that place a monetary value on the fabric of life do not protect the commons. They commodify it.<sup>29</sup> Thus, the approach I have suggested is to enable local people to think in terms of being the change through being rewarded for living differently. So instead of pricing nature as a commodity, those who live virtuously and well through measuring their personal consumption and demonstrating that they care will be given recognition points that can be exchanged for other services within the local community.

Community service training by high consumers could enable shared learning and act as an incentive to share and redistribute. If each household shared its abundance, then there would be a means to run an alternative economy. Some people may have time to exchange or skills in home maintenance or tutoring, or perhaps excess garden produce or perhaps energy from stored batteries. If the source of abundance is the basis for the local community ecosystems, then the caring household economy

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<sup>29</sup>Molinos-Senate, M and Maziotis, A. and Sala-Garrido, R. 2017 Assessing the productivity change of water companies in England and Wales: a dynamic metafrontier approach *Journal of Environmental Management* 197 1–9.

could identify their sources of abundance and share it with others. By setting up face-to-face networks, much could be gained at a neighbourhood and community level.

The software that I have discussed in ‘Planetary Passport’ and ‘Wall Street to Wellbeing’<sup>30</sup> does not attempt to measure productivity; instead it provides a way for people to participate in the commons through identifying what they have, what they need, what they are prepared to add or discard, barriers and existing resources which could be material and non-material. This is an open-source software and can be downloaded and adapted as people see fit.

## Representation, Accountability and Regeneration

Representation, accountability and regeneration are the three aspects that need to be addressed, and throughout my research, I have focused on these aspects. I return to the core process of subsidiarity and community of practice, based on valuing interdependency understanding that once a price is given for something that ought to be priceless, it is devalued. Just as friendship and love cannot be bought but are earned through the building of trust, so too local communities need to foster face-to-face connections and protection of the place which nurtures them and which they in turn nurture.

All protection of the commons begins through recognising our interrelatedness. Therefore, although some would say that water management could be the basis of addressing needs by measuring it, they would be correct only if the measurement processes are local, immediately transparent and informed by social, cultural, political, economic and environmental indicators.

Ulrich’s systemic approach to decision-making to underpin systemic planning and decision-making to support better governance (see page 38 of this volume) and Bacchi’s (2009) questioning are the starting point for debunking control from above. According to Bollier and Helfrich (2012: xvii):

“The commons is a ‘discourse’ which helps get us outside the market economy ‘and helps us represent different more wholesome ways of being. It allows us to more clearly identify the value of inalienability—protection against the marketisation of everything. Relationships with nature are not required to be economic, extractive and exploitative; they can be constructive and harmonious. For people of the global South, for whom the commons tend to be more of a lived, everyday reality than a metaphor, the language of the commons is the basis for a new vision of development.... notwithstanding the longstanding smear of the commons as ‘tragedy’, the commons, properly understood, is in fact highly generative. It creates enormous stores of value...the commons tend to express its bounty through living flows of social and ecological activity, not fixed countable stocks of capital and inventory”.

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<sup>30</sup>[https://archive.org/download/pathway\\_DEMO\\_1/pathways to wellbeing.](https://archive.org/download/pathway_DEMO_1/pathways%20to%20wellbeing)  
[https://ia801606.us.archive.org/20/items/pathway\\_DEMO\\_1/pathway\\_DEMO\\_1.mp4.](https://ia801606.us.archive.org/20/items/pathway_DEMO_1/pathway_DEMO_1.mp4)

Recent work by Hay and Beaverstock (2016) illustrates that the gaps between rich and poor and the powerful and the powerless have become wider and wider. The greatest challenges are the consequences of inaction. This has implications for the way we live and the need to change our way of life through living sustainably.

The research for *Planetary Passport* (McIntyre-Mills 2017) aims to support the implementation of the United Nations Development Goals through fostering human development and capabilities by means of a Stewardship and Resilience Index. How can it be used not merely to map and record food, energy and water consumption decisions at a local household level, but to support local governance from below by residents by considering food, energy and water security as every day issues?

The research links participatory democracy and governance with the development of human capabilities through enabling people to check the extent to which they are addressing the Sustainable Development Goals by means of a raft of indicators that together create a Stewardship and Resilience measure. These dimensions together impact on so-called wellbeing stocks (Stiglitz et al. 2010) comprising social, cultural, political, economic and environmental dimensions to support current and future generations of life. Human development needs to protect these wellbeing stocks, but **how** to encourage people to reduce consumption in ways that protect both people and the planet is the conundrum. Wellbeing is now widely located in mainstream transdisciplinary literature that reframes what we value as a society. 'Wellbeing stocks' are the basis for reevaluating the way in which we live as detailed by Stiglitz et al. (2010: 15) in 'Mis-measuring our lives', which the research papers that contribute to this symposium aim to extend.

My research focuses on balancing individualism and collectivism by exploring the food, water and energy consumption choices people make and how these relate to their perceptions on 'wellbeing stocks'. These are defined by Stiglitz et al. as multidimensional.<sup>31</sup> *Planetary Passport* and *Wall Street to Wellbeing* link wellbeing stocks explicitly to developing everyday decision-making capabilities on food, energy and water consumption made by households and organisations at the local government level. It is vital to measure a raft of social, cultural political, economic and environmental indicators that pertain specifically to everyday living. Thus, the multivariate research approach is also participatory, because it is important to find out whether the setting of Sustainable Development Goals through public engagement and recording pledges on an interactive digital site could make a difference to consumption choices and whether this public participation impacts on living ethically and well.

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<sup>31</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 interrelationships. The raft of concepts is necessary for defining wellbeing as stressed in several publications by McIntyre-Mills (2003, 2006, 2008, 2011, 2014, 2017).

Instead of merely listing goals and asking people to meet them, the approach is to request people to make a personal pledge to address food, energy and water consumption by thinking through the consequences of their choices in terms of three scenarios, namely, *Business as Usual*, *Making Small Adjustments* and *Living Virtuously and Well* in terms of considering what they have, what they need, what they are prepared to add or discard from their lives, the turning points for the better and worse, the barriers and the resources and or services which they could draw upon in their local government area or to which they could contribute.

To sum up, the symposium and some of my related publications compare and contrast socially diverse communities where poverty and climate change are relevant concerns and pose a challenge for disaster-prone areas. In these contexts, complex health housing and social inclusion pose a challenge and in particular, the basic needs associated with food, energy and water security are **relevant concerns**. The threefold aim is to (1) **explore** the socio-cultural influences, habits and a range of behaviours that potentially shape perceptions on food, energy and water consumption and thereby (2) **extend the potential of Max-Neef's *Being, Having, Doing and Interacting Index*** (Max-Neef 1991: 33) by adapting it to address the United Nations Sustainable Development Goals (2017) and consumption choices and thereby (3) **explore** ways to balance individual and collective needs (McIntyre-Mills 2017). Stewardship and Resilience need to be fostered based on more collaboration across regions to extend the 'frontiers of justice' (Nussbaum 2006).

Wellbeing needs to be considered in terms of **meeting the 10 capabilities of a life worth living** for human and sentient beings (Nussbaum 2011). How can we increase engagement in the environment that balances individual and collective wellbeing and simultaneously protect people, sentient beings and the environment when we know so little about this nexus?

The hypothesis is that participation through awareness and consciousness-raising about ethical (a) food, energy and water consumption and (b) the ways in which people value other species and the environment (McIntyre-Mills 2010, J. of Consciousness Studies) will influence the extent to which the United Nations SDG are implemented.

This hypothesis is based on the notion of neural plasticity in that the brain shapes the environment and, in turn, is shaped by social and environmental factors (Bateson 1972; Greenfield 2000). The multisite symposium (Flinders and UNPAD 2017) builds on the programme of participatory action research on representation (McIntyre-Mills 2003, 2006, and 2008), accountability (McIntyre-Mills et al. 2014, 2017), sustainability, systemic ethics (McIntyre-Mills 2010, 2014) and regeneration (McIntyre-Mills 2017; McIntyre-Mills and Wirawan 2017). Furthermore, it takes into account the need to address diverse views.

The purpose of the policy research is to deepen an understanding of the complex, interrelated factors underpinning decision-making and resource sharing, in order to respond to the UN Sustainable Development Goals. The Intergovernmental Panel on Climate Change (IPCC) formula suggests that the privileged urban lives of some could lead to 'existential risk' for people and the planet (Bostrom 2011) which is why it is necessary to enhance the governance and implementation of the UN

Development Goals. The research aims to ascertain if participatory engagement supports **the will** to manage the consumption of human and natural resources carefully—as opposed to denying that by making every day voluntary changes, we can enhance stewardship and resilience (Dobson 2007; Held 2004).

Wellbeing is a carefully assembled raft of concepts that form the basis for codeveloped user-centric, multidimensional measure of wellbeing. It is based on the perceived ideas that are cocreated together with all the stakeholders in a project.<sup>32</sup>

The might right notion is undermined through growing the assemblages of ideas, drawing on Deleuze and Guattari's notion of meaning making and the importance of sharing the process with all those who are to be affected by a decision.

The concepts of stewardship and resilience are important notions through which to explore this nexus between wellbeing and environmental sustainability. Stewardship is based on awareness that the land and biologically diverse ecosystems are a cultural heritage (Flannery 2012) on which the wellbeing of current and future generations depend. Resilience is defined as the adaptive capacity of the physical environment, of an individual or of a group. It concerns factors such as the capacity of members of a community to act together and to be able to modify or even transform existing ways of life (Rose 2005; Hulme 2009; Shiva 2012). This research explores whether collaborative approaches drawing on diverse ways of knowing (Cruz et al. 2009) and user-centred governance of resources (McIntyre-Mills 2003, 2006, 2008, 2012; Podger et al. 2012) could support regional governance

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<sup>32</sup>Representation, accountability and sustainability challenges need to be met through addressing consumption choices that are currently very unequal. If non-anthropocentric wellbeing, rather than the economic bottom line (Boulding 1966), needs to be the focus of our attention to achieve cultural transformation in consumption patterns, then we need to develop a deeper understanding of how the intangible aspects of perceived wellbeing can be understood, and we need to measure them in relation to the links across perceived wellbeing, sustainability and resilience (Stiglitz et al. 2010). The number of interrelated factors pertaining to the consumption of food, energy and water were operationalised in terms of what people have, what they need, what they are prepared to add or discard, turning points for the better and worse, barriers to address social, economic and environmental needs at a local and community level. Then indicators of wellbeing were co-created with the Aboriginal and non-Aboriginal stakeholders. Their narratives are the basis for pathways to protect wellbeing stocks using a multivariate data analysis platform <https://wellbeing.csem.flinders.edu.au>. The research developed the 'Being, doing, having and interacting' index (Max-Neef 1991; McIntyre-Mills et al. 2017) to address capabilities to meet sustainable and regenerative living at a personal and community level. The engagement process aims to address ways that participants could strive to meet some of the goals at the individual, personal and interpersonal level. The research breaks new ground on understanding psychosocial, cultural relationships and power dynamics across diverse groups as they relate to wellbeing multispecies, habitat and environmental stewardship. To explore the wider potential of the SRI, it will be used in focus group conversations on consumption, sustainability and wellbeing. The conversations will continue and extend to others via a face to face and digital community of practice to meet the different engagement needs of residents (Wenger et al. 2009). The engagement process, prompted by the index enables people to think about the way they live in terms of what they have, what they need, what they are prepared to add or discard, the consequences of their decisions which are turning points for the better or worse in terms of perceived wellbeing, sustainability and resilience. Their responses will be used as the basis for developing indicators.

(Weir 2012) to support effective environmental management based on the UN Sustainable Development Goals.

The challenge for governing the Anthropocene ethically and wholesomely is one of moving away from disciplinary and functional differentiation, in order to span biological, psychological, social, cultural, spiritual, political, economic and environmental dimensions to support living ethically in ways that redress the worst aspects of modernisation (Berger and Luckmann 1966). Aboriginal cultures teach us about stewardship and relationships with the land, but these relationships have been lost in non-Aboriginal cultures and when Aboriginal Australians lose connection to country they suffer (Atkinson, 2002). As stressed in *Planetary Passport* (McIntyre-Mills 2017), Major Sumner, an Ngarrindjeri Aboriginal elder from the periodically drought-ravaged lower Murray River in South Australia and custodian of the river, stresses we are the land and the land is us. Reestablishing relationships with the land is at the heart of effective cultural ecosystem management (see <http://www.mdba.gov.au/what-we-do/working-with-others/aboriginal-communities/ringbalin>).

There is evidence that many non-Aboriginal people desire more environmentally sustainable lives, but little is known about the influences on choices around the management of land, water and food that affect the environment. Government response to human wellbeing is often based on economic development, which inadvertently increases consumerism, resulting in greater environmental degradation.

We know, therefore, that environmental sustainability, consumption choices and human wellbeing are intimately linked, but there is little knowledge about how this linkage can be built upon to improve both areas. Consumption based on living simply and ethically and well versus consumerism to express status is very different. Zavestoski (2002) has stressed the voluntary simplicity movements (Alexander 2010) such as post materialism, slow living, eating local food, reducing energy usage, reusing and recycling only tend to occur when status needs have already been met. Paradoxically some of the changes become status-driven consumerism that can appear to be simple but often lead to change for the sake of appearance (Binkley 2008) and do not lead to greater levels of happiness.

Wellbeing and resilience are viewed through the lens of user-centric policy design to address food, energy and water security. The findings could contribute to our understanding of rights and responsibilities.

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# Chapter 3

## Everyday News: Living in the Anthropocene—Autoethnographic Reflections



Janet McIntyre-Mills

**Abstract** The Western and Eastern Cape in Southern Africa are at risk as a result of climate change. The regional farming areas surrounding metropolitan Cape Town and metropolitan Mandela Bay face water insecurity. As a result, these city areas have been required to restrict their water usage. A range of NGOs and some farmers in the Western Cape made donations of water. For example, some of the farmers released water from their private dams, in order to help residents in the city area.

**Keywords** Conservation · Consumption and distribution

### Everyday News ‘*From the Margins*’: Autoethnographic Reflections on Conservation and Consumption

Who decides what is real or fake and on what basis? Critical systemic social anthropology helps reflect on current events by drawing on documents and media. It can be regarded as fieldwork on everyday life and experiences. Axel (2002) edited a series of papers on ‘historical anthropology as a way to comment on everyday life’. Jean Comaroff contributed to Axel’s volume and when I read her chapter it reminded me of her role in my life as she kindly commented to my own work many years ago as a raw social anthropologist trying to write a Master’s thesis.

The theme of the collection made me think about the need to do new forms of ‘field work’ spanning digital and paper-based archives on current events that are experienced and the accompanying news reportage as issues unfold. My elderly parents and I spent time during January preparing for day zero—the day the taps will run dry in Cape Town by installing in a rain tank. I am a participant observer of the experience of trying to conserve water through consuming less as part of the response to the plummeting water levels in the six dams serving Cape Town. This is part of the planning for the day water does not flow from taps in Cape Town.

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John and Jean Comaroff used ‘news’ as a lens to reflect on the everyday, in order to understand contemporary issues which today is bandied around as real versus fake news. We are confronted daily of news of displaced people fleeing conflict or natural disaster. Cape Town currently faces a water crisis as a result of the following factors:

- Drought associated with climate change
- An energy crisis
- Greater immigration from the north of Africa to the south
- Lack of governance and planning
- A failure in democracy

Each of these aspects will be discussed in turn.

### *Drought and Water Stress Associated with Climate Change*

According to Purvis (2016),<sup>1</sup> water stress is faced by at least 2.7 billion people globally for at least 1 month every year.

The Middle East has more desalination plants than anywhere else. Whilst Los Angeles and California have experienced water stress and insecurity in 2014 and 2015, they continued to use water liberally and relied on dwindling underground water supplies, according to Purvis. In South Africa, the drought in the Western and Eastern Cape is thought to be linked with the change in temperature and a high-pressure area that has prevented rain. The cold Benguela current shapes the winter rainfall and summer droughts.<sup>2</sup> Cape Town, South Africa’s largest metropolitan city, faces a water crisis in the rain shadow areas behind Table Mountain that creates upward currents and precipitation. Urbanisation and increased migration to the Western and Eastern Cape in search of work result in increased pressure on water, energy and food. Day zero has been adjusted at the time of writing from 21 April to 12 April, unless everyone reduces their water usage to 50 L per person for a household of four people.<sup>3</sup>

Many holidaymakers visiting Cape Town in January and 60% of Capetonians have not changed the way in which they use water. Without winter rain in June, there could be 3 months without tap water. Small businesses such as laundrettes, restaurants, dog washing, hairdressing salons and nurseries speculated how they would survive.

Farmers are struggling to keep their crops alive in the wine- and fruit-growing areas. Some, who were better off, generously shared water with city dwellers by releasing their water into the catchment dams and described their offers as ‘a

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<sup>1</sup>Purvis, K. 2016 <https://www.theguardian.com/cities/2016/jul/29/where-world-most-water-stressed-cities-drought>.

<sup>2</sup>[http://learn.mindset.co.za/sites/default/files/resourcelib/emshare-show-note-asset/859\\_fdoc.pdf](http://learn.mindset.co.za/sites/default/files/resourcelib/emshare-show-note-asset/859_fdoc.pdf)

<sup>3</sup>How will day Zero work? Don’t ask the City of Cape Town. Times Live, 20 January 2018.

leap of faith'.<sup>4</sup> City dwellers raised concerns about hygiene and the prospect of epidemics.<sup>5</sup>

The six dams on which Cape Town relies are together unable to ensure water is supplied once they fall below 13%. One of the dams is the Theewaterskloof Dam that is so arid that it was used to site a rain dance by a Phetla of the Johannesburg Ballet who invoked the legendary Queen Modjadji of the Balobedu people.<sup>6</sup>

Watts (2018) stresses that water consumption by the rich in the leafy suburbs will need to reduce consumption in order to conserve water resources. He includes a video explainer in which Kristy Garden, a UCT academic, stresses that the highest levels of consumption are of the people living in the leafy suburbs. Out of the four million people, the one million with higher incomes are the ones who use more water. Watts<sup>7</sup> (2018) sums up the implications of the worst drought in 384 years. All water from the designated water collection points will be free. The number of collection points is revised regularly. Legally they should be no more than 200 m from a household. The cost of delivering free water will be in the region of 200 million rand. As the water must be delivered free of charge to everyone, this will result in a loss of 1.4 billion rand.

Watts (2018) cites the deputy mayor, Ian Nielson, who stresses that because the city of Cape Town has a budget of 40 billion rand, it will be possible to provide water at the collection points. Christine Colvin (a spokesperson for the WWF and member of the mayor's advisory board) is cited in this same reference as stressing that cutting off water to taps to a million homes (which she estimates as 75% of all homes) in Cape Town 'will be terrifying' for many people.

Colvin then continues by explaining that the Cape will be one of the driest zones as a result of rapid climate change and stresses that planners have been caught out because the diversification of water supplies such as boreholes and that desalination plants were only scheduled for 2020. Watts (2018) then goes on to cite a botanist, David Gwynne-Evans, as follows:

Watts cites a botanist, David Gwynne-Evans:

You go to the shops and see people buying 20 bottles of water. It is a ridiculous increase of disposable plastic.

The National Water Act (1998) stresses that bulk water supply is a national government function, but the Department of Water Affairs and Forestry<sup>8</sup> stresses in the preface of a document detailing responsibilities for local government that:

Since 2002 Local Government has the responsibility to implement water supply and sanitation services and the Department of Water Affairs and Forestry now acts as sector leader, by regulating, monitoring and supporting to ensure effective service provision.

<sup>4</sup>Evans, 2018, 5th Feb Fruit farmers opening sluices for Cape Town. New24. <https://www.news24.com/South-Africa/News/fruit-farmers-opening-sluices-for-cape-town-2018025>.

<sup>5</sup>Hygiene biggest worry in water crisis Echo Thursday 25 January 2018.

<sup>6</sup><https://www.thesouthafrican.com/joburg-ballet-rain-dance-drought-western-cape-video/>

<sup>7</sup>Watts, J. 2018 <https://www.theguardian.com/cities/2018/feb/03/day-zero-cape-town-turns-off-taps>.

<sup>8</sup>Department of Water Affairs and Forestry, Republic of South Africa. Water and Sanitation Business: The roles and responsibilities of local government and related institutions, [dwa.gov.za](http://dwa.gov.za).



According to the constitution of South Africa, it is the right of all South Africans to receive water. The Department of Water Affairs and Forestry<sup>9</sup> (under the Minister of Water Affairs and Forestry):

sets the national objectives for protecting the resources in the national water resources strategy. Each catchment management agency is then responsible for protecting the catchments and aquifers within their water management areas in accordance with the national water resource strategy.

Unfortunately, at the time this chapter was written, water provision had been neglected. The Democratic Alliance was voted in by Capetonians, and the Democratic Alliance (DA) is being held responsible for the lack of forward planning to cope with the increased immigration to the Cape and the increase in tourism in the context of climate change. Water has become a political means to ensure that the DA takes sole responsibility for the crisis, despite the boast that the Cape was one of the best run provinces. In Cape Town, the Democratic Alliance won the vote, and it is believed that Zuma has politicised his opportunity to block funding to the Cape by not signing the documentation to declare the Cape a disaster zone. Avaaz has called people to support Capetonians and to depoliticize the attitude of the current leader of the ANC. Avaaz has run a campaign to raise awareness and to ask people to declare the Cape a disaster zone:

Day Zero is getting closer and closer—and it will affect every one of us. We all want to help, but real action is being held hostage by political bickering. Together we can still stop the worst by getting Zuma to declare a national disaster—but to break the political deadlock; it has to come from the people, every single one of us. So I've just joined this campaign, I hope you will, to [https://secure.avaaz.org/campaign/en/day\\_zero\\_11/?knPhtab](https://secure.avaaz.org/campaign/en/day_zero_11/?knPhtab)

The Minister of Water and Sanitation at national level will need the support of Ramaphosa to find funding to support infrastructure development. Ramaphosa has stressed at Davos that climate change is a reality that will need to be addressed in the Western and Eastern Cape.

J. P. Smith has stressed that unless water is saved, Capetonians will need to queue.<sup>10</sup> In 21 January, Zille, the Western Cape Premier,<sup>11</sup> made a video saying that she had requested assistance from the Minister of Water and Sanitation but that the minister was out of the country at that time. According to Zille, desalination plants are in progress, and these will produce 16 million litres, but currently the city uses 600 million litres per day. So pumping aquifers and drilling in the short term that will be critical.

Major desalination is the only answer in the medium and long term for the Cape. Apparently, desalination plans were delayed, because they were considered too costly. This was a wrong decision. The Department of Water and Sanitation has also not offered financial assistance. The talk on the streets and in the digital and print

<sup>9</sup>Department of Water Affairs and Forestry, Republic of South Africa. Water and Sanitation Business: The roles and responsibilities of local government and related institutions, [dwa.gov.za](http://dwa.gov.za).

<sup>10</sup>J.P. Smith answers Day Zero questions: “it’s going to be really unpleasant”. News 24.

<sup>11</sup>Helen Zille speaks on Cape Town water crisis—youtube. 22 January.

media is that the department is corrupt, that is, mismanages funds, and that politically the DA can be made to look bad as Cape Town is the first large city at risk of running dry. However, the Eastern Cape is in a very similar situation and Mandela Bay is equally at risk.

Zille (previously the leader of the DA) then stressed that the Constitutional mandate has to be respected and that the National Water and Sanitation Department has not met the bulk water supply. At the time, Zille stressed that buck-passing is unacceptable and that although water must be saved to help stave off day zero for as long as possible, that water at collection points must be free and that the drought levy is not an option.

In terms of Chap. 2 of the constitution, human rights are protected through the Bill of Rights. It protects the right to health care, food, water and social security (Moran 1996: 16).

In Section 27 page 13 of the Constitution, it states:

the state must take reasonable legislative and other measures within its available resources to achieve the progressive realisation of each of these three rights.

The National Water Act stresses that the responsibility is disaster management and also water treatment, but not the provision of bulk water. Nevertheless, in the past the city of Cape Town did construct the Berg River Dam, and without it day zero would have been earlier.

The collective level across all the dams needs to be above 15%. When it reaches 13%, the taps will be turned off, and only designated areas in the city centre would continue to receive water. Part of the sacrifice to save water has been made by the agriculturalists who will no longer have enough to irrigate their crops. In 2015 Zille requested a natural disaster plan be requested, but had to wait until March/April 2017 for the Cape to be declared a disaster zone.

J.P Smith, a member of the Safety and Security Mayoral committee, stresses that Capetonians will have to save water and reduce usage to less than 50 litres per day or queue:

It would be catastrophic if we end up having to collect water at pods.<sup>12</sup>

The Democratic Alliance have been accused of shifting responsibility for the water crisis.<sup>13</sup> But they stress this is a national responsibility and they have complied with the terms of reference of the constitution and the Water Act. The current minister of Water and Sanitation Nomvula Mokonyane has not provided any funding for emergency infrastructure to date.<sup>14</sup> A practical intervention is meanwhile being promised by Ramaphosa at the Davos meeting.<sup>15</sup>

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<sup>12</sup>J.P. Smith answers Day Zero questions: “it’s going to be really unpleasant”. News 24.

<sup>13</sup>Water woes: Maimane, Zille shift blame to Nomvula Mokonyane, News 24.

<sup>14</sup>Our mandate for water provision and support knows no politics- Nomvula Mokonyane, News 24.

<sup>15</sup>Ramaphosa to put together team to mitigate Cape Town’s Day Zero crisis. News 24.

## *Greater Immigration from the North of Africa to the South*

It is estimated that 4 billion people live in cities and a further 2.5 billion people will become urban dwellers by 2050. The recent reports by the UN (2014) suggest that it could be higher as more people are displaced from regional and farming areas with minimal infrastructure.

In Africa the movement is from north to south as detailed in Chap. 1.

## *Lack of Lack of Systemic Governance and Planning*

The tiers of government involved in water provision span the Western Cape Province, the City of Cape Town and the national Department of Water and Sanitation. The water shortage is a result of failing to develop appropriate infrastructure to cope with the increased levels of migration to Cape Town. In a bid to turn around the rapid approach of day zero, Cape Town has mapped water usage and provides a dash board on the levels of the dams and progress towards meeting the cities requirements through drilling into aquifers and developing desalination plants. Dam levels continued to fall, and rain was not due to fall until June or July 2018. It was though at the time that 3 years of drought could be the new norm.<sup>16</sup> (As I finalised Volume 2 for publication, the dams had reached 57.6% overall by 12 August 2018.)

Heavy fines continue to be applied to water abusers who use more than the allocated 50 L. This governance decision was applied from 1 February. Schools at the time planned to remain open, but school sport was cancelled to conserve water.

In January News 24 reported that 200 water collection points were in the process of being planned.<sup>17</sup> However, in 2018 Cape Town has an official population of 3.7 million according to World Population Review.<sup>18</sup> This figure does not take into account the informal immigrants. The prospect of long lines of people is a concern and both the military and police have been scheduled to manage the water collection points. Smith, however, in his report stressed that the 200 points have been downgraded to 149. Water will be delivered through pipes and there will be tankers delivering water to locations such as old age homes. Each set of water collection pods will be carefully managed by means of a digital system, and updates will be provided to the water website.<sup>19</sup>

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<sup>16</sup><https://www.timeslive.co.za/news/south-africa/2018-01-24-dams-that-supply-cape-town-fall-further-as-water-crisis-looms/>

<sup>17</sup><https://www.timeslive.co.za/news/south-africa/2018-01-24-dams-that-supply-cape-town-fall-further-as-water-crisis-looms>

<sup>18</sup>[Worldpopulationreview.com](http://Worldpopulationreview.com)

<sup>19</sup>J.P. Smith answers Day Zero questions: “it’s going to be really unpleasant”. News 24.

Voluntary donations of bottled water at 59 points across South Africa have been set up by the Gift of the Givers, an organisation founded by South Africans of the Muslim faith.<sup>20</sup>

Governance decisions stalled at one point as accusations were made against Patricia De Lille for corruption or mismanagement. Her powers were restricted and the deputy mayor, Neilson, has taken over and ‘punitive tariffs are to be introduced to promote water saving’.<sup>21</sup> Whilst the decision is being made as to when De Lille will step down, the deputy mayor is making decisions as to what will be done to provide water in Cape Town.

Simultaneously in 20 January, Ramaphosa called for the incumbent president Zuma to step down, and a council of six has been set up to enable a process that will enable Zuma to depart with dignity. The political dramas provide a distraction from the increasing problems associated with climate change in the Western Cape and the Eastern Cape. ‘Naming and shaming’ were used during 2006–2009 drought, according to *African Independent*. The transparent household management of water is mapped across Cape Town to put social pressure on households to do the right thing. Households that are using water within the limits of per person per household<sup>22</sup> have a dark green dot (using less than 6000 L per day), those who are reducing water usage have a pale green dot (using over 6000 but less than 10,500 L a day) and those who are not managing water have no dot at all. The water usage has been reduced from 85 L per person to 50 L per person:

The latest weapon in Cape Town’s water saving arsenal is a map that exposes private metre readings to public scrutiny... Unless residents can cut their daily water use to 50 L per person, city authorities estimate that the taps will run dry on 21 April, 2018.... [T]he aim is to publicise houses that are saving water and to motivate others to do the same. They even dropped an earlier idea that a red dot should appear on plots where water restrictions are being broken...

According to *African Independent*,<sup>23</sup> the City Water Map shows that 200,000 homes have not saved water and instead use more than the 87,000 L allowed per person for a family of 4. Sixty percent of Capetonians are not reducing water consumption.<sup>24</sup> According to WWF only 39% of Capetonians have adhered to the water restrictions in January (WWF 2018).<sup>25</sup> At the time of writing, no water collection points have been notified nor have the operating hours been mentioned. People will need to bring their own containers. The same reference stresses that separate queues will be

<sup>20</sup> Gift of the Givers sets up 59 water drop-off points across South Africa for drought-stricken Cape Town. *News 24*.

<sup>21</sup> Herman, P. 2018. ‘Water crisis: De Lille’s powers limited, tariffs to be introduced’. *News 24*, 19 January.

<sup>22</sup> *African Independent*, ‘Cape Town’s map of water usage has residents seeing red’, 19 January 2018.

<sup>23</sup> *African Independent*, ‘Cape Town’s map of water usage has residents seeing red’, 19 January 2018.

<sup>24</sup> ‘City of Cap Town withdraws drought levy proposal’. *New 24*, 19 January.

<sup>25</sup> Cape Town water crisis: WWF helps you understand the basics. *News 24*, 19 January 2018.

provided to the frail and elderly, and bottled water will be provided in old age homes by water tanker collection points. All collection points will be managed by the police and military.

In 18 January, it was reported on News 24 that the unpopular drought levy would be waived, as people feel that they cannot carry the costs for drought proofing the Cape. The ANC criticised the city council for not acting sooner as researchers had warned the council of the need to plan more than a decade ago for a water crisis caused by both reduced rain and rising population. This was stressed in a report posted on News 24, in which it was revealed that the city council has sought aid from France and Germany.<sup>26</sup>

The South African Broadcasting Service (SABC) news stresses that water will continue to be provided to the metro centre to ensure that business continues as usual. Water provision will also continue to be delivered to informal sector areas to help prevent the outbreak of cholera, typhoid and other water borne diseases. Listeria on fruit and vegetables has already affected health in the Western Cape due to limited water.

In 19 January, the City Council debated in the corridors of power as to who would take responsibility for the water crisis. Whilst conflict occurs within the corridors of power, conflict is increasing at water collection points, such as the South African Breweries outlet in Newlands Cape Town, where 25 L can be collected free of charge.<sup>27</sup>

Other springs exist in St James and Dido Valley, near Murdoch Valley where people queue to collect water for their ponds.

From the 1 February, it will be illegal to collect water from springs as it is seen as depriving others of the right to public water supplies:

Level B will also limit irrigation using boreholes and well points and new daily collective consumption target is 450 million litres of water a day.<sup>28</sup>

According to a local resident whose front tap was used to siphon off 87,000 L whilst she was away<sup>29</sup>:

I for one know exactly how much water I personally use, and I will never take it for granted again.

As day zero approached, namely, the day the taps will run dry in Cape Town, people were starting to panic. The queues in hardware shops selling tanks grew longer. Water purification liquids were being sold along with bottled water in 20 January, and the level of panic seems to be rising.

A local person said to me:

It is like medieval times, biblical times. If you want to see someone, you will meet them at the Newlands well.

<sup>26</sup> 'France offers Western Cape help with drought'. *News 24*, 13 December.

<sup>27</sup> 'Tempers fray at Cape Town water collection point'. 25 December, 2018, *News 24*.

<sup>28</sup> Du Preez, Y. and Williams, M. 2018. *From threat to imminent crisis*. 25 January Echo pg. 4.

<sup>29</sup> Kotze, K 2018 'Lock up your waters', Echo page 3.

Or

People are so helpful, they share their pumps with me.

The resident explained that neighbours share pumped water from boreholes. Borehole water is however also a source of concern as drilling for personal water usage could lower the water table. New regulations require that borehole users register their water supply.<sup>30</sup> All borehole water is under the auspices of the national government, whereas spring water is under the auspices of the provincial government. It leads to unfair advantage to those with access to ground water and the funding to support drilling for a borehole.

### *Increased Reliance on Social Services and Community Support*

By 20 January, the fear of lack of water has led to longer queues at water collection points where restrictions are placed on the amount (usually 25 L) that can be collected by each person. However, this is mostly unregulated, and for those who can afford to stockpile water, the number of 25 L bottles purchased remains unregulated.

The noise at one spring has led to complaints in the upper-income area of Newlands. More angry outbursts have been reported in areas where people fear that water will be commodified in ways that create an apartheid water systems where the poor and the rich will experience water scarcity in different ways. This has been discussed by Patrick Bond in 18 January<sup>31</sup> ‘when the shit hits the fan’ in which he stresses that the Cape is one of the most climate-affected cities in the world and also one of the most divided. He also drew attention to the protests in which the civil society has resorted to throwing buckets of raw sewage as a way of drawing attention to the lack of safe water and sanitation on the Cape Flats. He drew a parallel with this protest and the way that students had covered the statue of Rhodes with sewage as a way to register their anger at unaffordable education, perceived to be shaped by colonial agendas that are unresponsive to current social, economic and environmental crises during the ‘Rhodes must fall’ and ‘Fees must fall’ campaigns that symbolised the need to decolonise education and ensure access to all. Now the next step is to address the gaps in life chances across different South Africans that are a relic of apartheid plus the disadvantages faced by those left behind in the globalised capitalist economy (see Chap. 4 for analysis). Civil society is however not only protesting but also organising to ensure donations

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<sup>30</sup>De Wet (2018) ‘As of noon on Monday, virtually every domestic borehole user in the Western Cape started to break a rule that was, at the time, less than 72 hours old. While the potential consequences for these residential users are neither clear nor seem imminent, existing rules mean their agricultural counterparts could face up to 5 years in jail for the same breach. And though the department of water and sanitation says, it is not looking to send anyone to prison just yet that may not help when it comes to future disaster relief’ .<https://mg.co.za/article/2018-01-18-tough-new-regulations-hit-western-cape-borehole-users>.

<sup>31</sup><https://m.youtube.com/watch?v=SLXByr1ax18> in 18 January Real News.



**Fig. 3.1** Increased use of plastic bottles and reliance on transport to collect water from water collection points

of water to Cape Town in the form of bottled water and to provide water for the agricultural sector.

In Cape Town elderly people will need to rely on support from neighbours, friends, NGOs and local volunteers. In 25 January, I consulted the local GP practice in Fish Hoek to find out what provision had been made for elderly people. A doctor's letter was provided to ensure that my parents are able to queue in a shorter queue for the elderly. The water collection point will be supported by people in the informal sector who will take the water to the boot of the car. My father will then decant the water into smaller containers for usage (Figs. 3.1 and 3.2):

GP: 'We do not expect water to flow from the taps until August, so it could be 3 months of water collection. Fish Hoek is a funny little community; we will all pull together and make it work'.

Janet: 'The old age homes will be hard pressed to keep functioning. The elderly or frail who can cope in the homes could be better off'?

GP: People will pull together and it is likely that the centres will be well managed.

The proliferation of plastic bottles is evident as is the way in which the crisis will be a leveller for all the residents of Cape Town who will stand in queues together. The residents in the leafy suburbs and the townships will all be required to comply with a 25 L limit if day zero eventuates in April.



**Fig. 3.2** Collecting water in the countdown to ‘day zero’ in Cape Town

In 21 January, Hellen Zille (who was at that time the leader of the DA) wrote to President Zuma, saying that the situation in Cape Town had changed ‘from a threat to an imminent crisis.’<sup>32</sup>

Zille held a meeting at Tygerberg hospital with ‘the army, the police, the National Disaster Management and the State Security Agency, amongst others, at the Provincial Disaster Management Centre, at Tygerberg Hospital to discuss contingency plans’<sup>33</sup>

By 26 January, day zero had been pushed back to Thursday, 12 April:

Ms. De Lille said she would personally guarantee that residents using less than 6000 litres a month would be exempt from higher tariffs...<sup>34</sup>

In the same article, it was stressed that the water collection centres would be open 24 h and that some drive-through facilities would be set up. The collection of water from pods will thus be like filling up with petrol at the petrol station!

Although alternatives can be found to petrol, water remains the basis for all living systems. Water is at last being recognised as a precious commodity, and

<sup>32</sup>Du Preez, Y. and Williams, M. 2018. *From threat to imminent crisis*. 25 January Echo pg 4.

<sup>33</sup>Du Preez, Y. and Williams, M. 2018. *From threat to imminent crisis*. 25 January Echo pg 4.

<sup>34</sup>Du Preez, Y. and Williams, M. 2018. *From threat to imminent crisis*. 25 January Echo pg. 4.



over-usage will be fined ranging from R 2888.81 to R20 619.57 for using more than 50,000 L.<sup>35</sup>

The next step will be to design cities and houses in ways that use resources carefully and that protect habitat and corridors for wildlife in search of food and water.

Meanwhile habitat loss leads to confrontations amongst residents and between residents and wildlife threatened by food and water security as urban sprawl increases. For example, in Cape Town the local baboon troops are competing with residents on the side of the mountain in Murdoch Valley (Jeranji, 16 January 2018)<sup>36</sup> and are euthanized.

## A Failure in Democracy and Blame Game

The erosion of democracy is just one aspect that is on my mind and the need to rely on many sources of information, in order to triangulate ‘news’, to ascertain the range of perspectives.<sup>37</sup> Archives, digital media and daily news feeds are one lens for everyday teaching, research<sup>38</sup> and governance. As a result of not taking the threat of climate change seriously and three successive years of drought, Cape Town City’s water planning has failed.

The alternative sources of water provision are unlikely to come on line until 2019. Winter rainfall is unlikely until June or July. The donations of water by some farmers plus the savings made by residents living in the metropolitan area pushed

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<sup>35</sup>Water usage dash board [www.capetown.gov.za/dayzerodashboard](http://www.capetown.gov.za/dayzerodashboard) and [water.restrictions@cape-town.gov.za](mailto:water.restrictions@cape-town.gov.za).

<sup>36</sup>Meanwhile habitat loss leads to confrontations. For example, in Cape Town the local baboon troops are competing with residents on the side of the mountain in Murdoch Valley (Jeranji, 16 January 2018):

‘Dodger was a young dispersing male from the Slangkop troop who first showed up in the Da Gama troop home range in October. Dispersing to new troops is vital to keep gene pools strong—even more so on the Peninsula where traditional migration routes on and off the Peninsula have long since been cut off by urban sprawl’.

<sup>37</sup>Ironically fake news is now being accused of suggesting that Malania Trump has a double and that when Trump refers to his wife as ‘being right here’, that too could be doubted! George Bush Junior (2002) recently published a book called ‘Reflections on my father’ in which the life of American politics is described from the point of view of the status quo. I read it at the height of the North Korean nuclear standoff in the form of twitter posts by Trump to Kim Jong Un.

The Republicans of the past and the present are different in that their sense of values and service has changed. But this is perhaps because the public of the past and present has changed too. They are more media savvy, more overwhelmed with information and rather lacking in wisdom. This morning I was woken by a news cast by Bush senior saying Americans need to reconnect with values of decency to define them and not let bullying define the culture of the nation. Archives, digital media and daily news feeds are the lens for everyday teaching and research in the Anthropocene.

<sup>38</sup>Everyday reflections in a neoliberal economy: Staff received a witty email recently inviting us to ‘Bring out your dead ...look at your past and present work and try to regenerate it!’ All in the interest of publications?

day zero out in 11 June. Thus the worst case scenario of 4–5 months of water collection was reduced to fewer months. According to Zille:

Not since 9/11 has a city faced such a major crisis. Day zero will happen when dams reach 13.5% and augmentation is insufficient. It is only if every person keeps to the limit of 50 litres. Then the dams will turn to 15%

You can live comfortably if you are careful. No water down the drain, only down the toilet. We have been working with disaster management for a year.... We have been meeting every day. The role of the province is disaster management. National government's role is bulk water supply...<sup>39</sup>

In this same interview, Zille emphasised that when she was mayor the province worked with citizens to fund and build the Berg River Dam, which will be fully funded by 2020. In 2013 this seemed like the right approach. Desalination was not prioritised. This is where the forward planning failed. She emphasises that at this stage energy security seemed to be more of an issue and rolling black outs needed to be addressed.<sup>40</sup> At the time, Cape Town faced an energy crisis and the city government wished to avoid placing a further financial and supply burden on ratepayers.

Desalination requires a cost-effective supply of energy; thus systemic approaches to providing energy and water in a regenerative system are so important. Instead of focusing on a way through the challenge by thinking systemically, personal politics has taken over.

In the media blame has been placed on Patricia De Lille (mayor) who has been accused of inept governance, whilst Helen Zille (Premier of Cape Town) has been accused of arrogance, and at the time President Zuma exploited the 'fall out' by not supporting the only large DA government in South Africa. The Minister of Water and Sanitation has also been accused of inept governance, mismanagement of funds and an over-allocation of water to agriculture without forward planning to ensure that cities in the Western and Eastern Cape are water secure.

Ironically, the leaders who seem to have risen to the challenge have been community organisers. For example, the leader of the Gift of the Givers<sup>41</sup> who has used his community networks to demonstrate practical support<sup>42</sup>:

'National coordinator Emily Thomas said the foundation was trying to push back Day Zero. Besides installing boreholes, we are collecting bottles of containerised water, sealed and labelled', she said.

Ironically, the proliferation of plastic is being increased by the distribution of water, thus escalating the environmental damage because of trying to avoid prioritising

<sup>39</sup>Helen Zille speaks on Cape Town water crisis—youtube. <https://www.youtube.com/watch?v=CH18VtMADks>.

<sup>40</sup><http://www.dw.com/en/the-environmental-downside-to-desalinated-water/a-15335132>

<sup>41</sup><http://www.giftofthegivers.org/about> "Thus far we have disbursed R2.1 billion in aid to needy individuals and communities in our 25 year history. Our motto is simple: "Best Among People are those who Benefit Mankind" and accordingly we serve ALL people irrespective of race, religion, culture, colour, political affiliation or geographical location, unconditionally".

<sup>42</sup><https://www.news24.com/SouthAfrica/News/gift-of-the-givers-sets-up-59-water-drop-off-points-across-sa-for-drought-stricken-cape-town-20180126>

desalination plants, which also come with systemic risks if energy is not provided in a sustainable manner and if the water is not managed to prevent too much acidity or alkalinity:

...A further environmental factor is the disposal of the highly concentrated brine—an inevitable by-product of desalination. To date there are no studies to indicate the long-term effects of tipping it back into the sea from which it came.<sup>43</sup>

Instead industries associated with salt production will need to be set up to make the most of the resource and ensure that it is used as an opportunity to create jobs in a cascade economy founded on waste along the lines suggested by Pauli (2010).

Economically the businesses ranging from agriculture to service industries will experience hardship and so the opportunities to do more creative regenerative development are important for Cape Town. Whilst grapes may increase in intensity and fruit can be dried, the next harvest will be severely impacted without early rain. Without rain the crops will need to be replanted once desalination plants restore the potential for agriculture.

Nevertheless a further act of generosity has been performed by the fruit farmers of the Western Cape who have donated some of their water to Cape Town to help push back the day the taps run dry (Evans 2018).<sup>44</sup>

The costs associated with the delivery of affordable food, energy and water are the focus for future planning. Socially the risks of conflict will need to be managed through transparency and efficient supply hubs. Traffic congestion will need to be managed a people stand in long thirsty queues or line up in their cars at drive-through points. The frail and isolated will need to be identified and assisted. The plight of wildlife, liminal creatures living on the margins, such as baboons, birds, reptiles and domestic animals, will need to be cared for.

## **Conclusion: Managing the Social, Economic and Environmental Risks Associated with Water Delivery, Public Health and Desalination**

By 1 February, a disaster plan was published by the City of Cape Town and the provincial government stressing that management of fires would continue, as chemicals would be used and that the city was preparing clinics and hospitals with antibiotics and public health posters on hygiene and rehydration.<sup>45</sup> A range of water- and

<sup>43</sup>Reporter: Madeleine Amberger/tkw Editor: Holly Fox <http://www.dw.com/en/the-environmental-downside-to-desalinated-water/a-15335132>.

<sup>44</sup>Evans,J2018.[https://www.news24.com/SouthAfrica/News/fruit-farmers-opening-sluices-for-cape-town-20180205#cxrecs\\_s](https://www.news24.com/SouthAfrica/News/fruit-farmers-opening-sluices-for-cape-town-20180205#cxrecs_s).

<sup>45</sup><http://resource.capetown.gov.za/documentcentre/Documents/Procedures,%20guidelines%20and%20regulations/Disaster%20and%20demand%20FAQ.pdf>

sanitation-related diseases are anticipated. In January, a *Listeria* outbreak indicates that food needs to be carefully managed in the public and private sector.

The public health risks associated with water- and sanitation-related disease will need to be carefully managed in all public places and in institutions such as schools, universities and human services for disabled, elderly and prisoners. To date the record of care in public health is dire for those who are voiceless. According to the executive summary of the Esidimeni-Report,<sup>46</sup> the Ombud established that:

A total of ninety-one (94+) and not thirty-six (36) mentally ill patients (as initially and commonly reported publicly in the media) died between the 23rd March 2016 and 19th December 2016 in Gauteng Province. All the 27 NGOs to which patients were transferred operated under invalid licenses.<sup>47</sup>

The minister has been held accountable for moving the patients in a bid to cut costs. The result was that many starved to death or died as a result of neglect and a lack of suitable care. This track record speaks for itself. Social and environmental justice remain a priority for those who are least powerful and unable to protest. This applies to young people, the elderly, disabled, undocumented migrants, the frail and animals dependent on water.

Previously water usage was based on shared practices (not unlike the Balinese system) that were based on trust and sharing.

We need to work more creatively across the social and natural sciences. Historians, sociologists and social anthropologists are well placed to make policy suggestions by looking at the past to inform the present social, economic and environmental challenges are now making the current way of life unsustainable.

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<sup>46</sup>[https://www.scribd.com/document/338095858/Esidimeni-Report#from\\_embed](https://www.scribd.com/document/338095858/Esidimeni-Report#from_embed)

<sup>47</sup><http://www.politicsweb.co.za/documents/the-life-esidimeni-disaster-the-makgoba-report>

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# Chapter 4

## Vignette: Speaking Truth to Power in the Digital Economy—Can the Subaltern Be Heard?



Janet McIntyre-Mills

**Abstract** The chapter reflects on the content and context of the International Society for the Systems Sciences Conference held in Vienna in 2016. Vienna aims to be a smart, carbon neutral city and has signed legislation making this a requirement for planning.

### Vienna: Reflection on ISSS Conference

Genevieve Bell (2016) makes the point that robots taking jobs are problematic—they could be empowering and make opportunities for all age groups.<sup>1</sup> Vienna aims to be a smart city and carbon neutral; furthermore it has signed legislation making this a requirement for planning.

The Vienna Biennale robotics exhibition (2017) at the Austrian Museum of Applied Arts (MAK) aimed to support education towards digital living and served to help conference participants explore what it means to be human. The European Union is beginning to explore the ethical implications of transhumanity and what it will mean to be post humanists.

In the future, the rights of digital humans will need to be addressed in law. The robotics exhibition displayed games to teach children to feed a robotic being who 'died' if not fed. At one level it teaches responsibility as a precursor perhaps to allowing a child to keep a sentient being as a pet. At another level it raises questions as to whether mistreatment of a digital being can be considered as irresponsible as mistreatment of a sentient being.

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<sup>1</sup>Bell (2016), The Milken Institute Global Conference (2016) <http://www.milkeninstitute.org/events/conferences/global-conference/2016/panel-detail/6335> <http://www.milkeninstitute.org/events/conferences/global-conference/2016/panel-detail/6335Tech> vs. Talk: Is Technology Changing Human Relationships? Monday, May 2, 2016/10:45 am–11:45 am.

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As digital beings become more and more conscious or aware, the issue of what it means to be human in a natural environment becomes a central issue for consideration.

One of the exhibits is called *Artificial Tears: Singularity & Humanness—A Speculation*. It poses the following question in the age of the Singularity (Ray Kurzweil)<sup>2</sup>:

When artificial intelligence, sensory machines and ultimately “the singularity” take over every last bit of human existence by simulating nature and human life; by storing, recalling, and analyzing all data; by providing answers to every question and remembering everything that ever happened—will we still know what it means to be “alive”, to love, to laugh, to cry, what a tree smells like, what our skin feels like, or what saltwater tastes like?

The increasing disengagement from nature or ‘nature deficit’ combined with increased narcissism and captured by digital sites needs to be redressed by enabling people to reconnect with nature and with face-to-face community. The chapters in this volume make a case for increased engagement through using mixed methods as part of a *Systemic Intervention* (Midgley 2000) approach based on matching the right responses in context using multiple mixed methods for transformation. The axiological assumption is that regeneration of connections with the natural world and other sentient beings is important, rather than taking the digital transformation and smart city approach to extremes.

The preservation of diversity is assumed to be worthwhile, without assuming that there is no place for digital responsiveness. Instead, digitalization is assumed to be appropriate for matching responses in context. The notion that this transformation is inevitable seemed to be taken as a given by the conference participants. Any alternative was viewed as a form of denial or Luddism. The latter is the practice of destroying machines by early crafts people who resisted mechanization.

The transformational steps from mechanization and computerization to unite organic and inorganic life are a step further and need to be carefully designed in ways that protect both people and the planet. The question remains what is technology for, who designs it and what is the purpose of the design? In whose interests is it designed? Who and what does it serve? Historically discrimination has been characterized by sexism, racism, nationalism, ageism, discrimination against the disabled and speciesism.

For example, Aleksandra Domenici addresses the role of women in film production:

Whereas the creative work, the designing and drawing of figures, was the exclusive realm of men in American animation studios, the repetitive filling in of outlines and backgrounds was women’s work.

In America the work of black women, known as ‘computers’, made a vital contribution to Nasser’s space research and although they received scant recognition at the time, their role has been increasingly recognized in recent years. The recent

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<sup>2</sup> <https://singularityhub.com/2017/06/23/ray-kurzweil-heres-what-will-happen-when-we-connect-our-brains-to-the-cloud/>

production ‘Hidden figures’ is a tribute to the lives of Katherine G. Johnson, Dorothy Vaughan and Mary Jackson.<sup>3</sup>

Ageism discriminates against the young unemployed as evidenced by the high unemployment figures for young people (see this volume, Chaps. 5 and 6) and the elderly are bullied by human services that are supposed to protect them. Scandals in aged care in Australia culminated in revelations of abuse in public sector care at Oakden as reported by the chief psychiatrists report (see Groves et al. 2017) and in named private sector services provided, for example, by Bupa.<sup>4</sup> Discrimination against the voiceless, namely, all those who are not protected by the current system of democracy within nation-states, has been raised by Nussbaum (2006) as one of the final frontiers of justice that need to be addressed (see McIntyre-Mills 2014a, b, c, 2017). In each age the frontiers of justice need to be extended if we have a hope of achieving transcendence. One of the early enlightenment thinkers is Lady Ann Barnard (nee Lindsay) who spoke out about the rights of people in France and Africa and highlighted her connection with plants and animals and railed for the rights of animals ranging from domestic to oxen and wild creatures. Although served by servants and slaves, she believed that they should be treated with care and spoke out against the practice of slavery:

I ...thought of Wilberforce, how it would have agitated his nerves to have looked at them when it agitated mine ...who am accustomed to see slavery all day.... (Barnard 1799 cited in Taylor 2017:60)

At every opportunity, she raised the potential for better relationships with others, albeit from a much, much lower benchmark than would be anywhere near acceptable today. Ironically, the development of the Cape was based on slave labour (many of whom were radical thinkers, academics and skilled artisans removed by the Dutch East India Company from Indonesia).

Local Khoi men and women worked for the colonists, for the Dutch and the British (Barnard 1799 cited in Taylor 2017:60). Although Barnard expressed abhorrence of slavery per se, she saw them through the lenses of the day. To her credit she adopted the Khoi child fathered by her husband and regarded her as a daughter in defiance of the mores of the time. But the attitude of the child’s mother to this removal of her child is unknown.

As we face the prospect of increasingly large numbers of displaced people without the protection of citizenship rights and in need of human rights protection, we need to transform our approach to governance and include rights for sentient beings and their habitat.

<sup>3</sup>[https://www.rottentomatoes.com/m/hidden\\_figures/](https://www.rottentomatoes.com/m/hidden_figures/): “HIDDEN FIGURES is the incredible untold story of Katherine G. Johnson (Taraji P. Henson), Dorothy Vaughan (Octavia Spencer) and Mary Jackson (Janelle Monáe)-brilliant African-American women working at NASA, who served as the brains behind one of the greatest operations in history: the launch of astronaut John Glenn into orbit, a stunning achievement that restored the nation’s confidence, turned around the Space Race, and galvanized the world. ...”

<sup>4</sup><http://www.abc.net.au/news/2017-05-01/bupa-adelaide-nursing-home-accused-of-poor-care/8487694> accessed 9th/04/2018.



What will happen to the marginalized and unemployed in an increasingly digital city? This could be either a positive or a negative step forward depending on the nature of the design.

Hales (2005) cites the work of Kurzweil (1999) on the implications of digital transformation for human beings and what it means to be human. Since the publication of this work, Kurzweil has co-founded a university focused on the singularity project to address the evolution of human beings through digital enhancements.

The issue of technology needs to be addressed in terms of an examination of what is being designed, for what purpose and by whom?

A prior question needs to be asked, namely, to what extent should design be conducted on the basis that human beings and the environment can and should be reified? In addition, what happens to those who are already silenced?

The emotional life of the embodied sentient being is not centre stage. The notion of the gender and sentience being important and the symbolism associated with cultural meanings is denied.

Just as Gustav Klint's work was censored so designs that factor in only the male, European designer are problematic. It seems to me that in the same way that powerless animals, the voiceless (young people, asylum seekers, disabled, the culturally other), and women have been the objects of medical research (Haraway 1991, 1992), human beings in general (along with the environment) are seen as objects for research design.

Human rights and environmental rights appear to be less of an area of concern than previously. The silence around the death of the human rights activist who stood with students against the tanks in Tiananmen Square is just one example of what seems to me to be a trend as capitalism strives to protect profits and engage in trade at the expense of people and the planet.<sup>5</sup> Similarly, dissent in Hong Kong now comes at a price<sup>6</sup> that seems to be of little interest in international relations focused on global capital opportunities.

Human beings and the environment are not things; they are living systems with the potential to generate life. Thus considering relationships is the starting point for all conversations on design.

The boundaries of inclusion and exclusion are central for all discussions on social, economic and environmental regeneration. The presumption that design needs to be focused on smart city development underpinned the conference.

But the issue remains why, who decides on what constitutes a so-called smart design?

Anthropocentric design funded by big business will predictably promote profit, rather than protecting wellbeing stocks spanning:

1. Material living standards (income, consumption and wealth), 2. Health, 3. Education, 4. Personal activities including work, 5. Political voice and governance, 6.

<sup>5</sup> Reuters in Abuja (2017) Malala Yousafzai condemns China over treatment of Liu Xiaobo <https://www.theguardian.com/world/2017/jul/18/malala-yousafzai-condemns-china-treatment-liu-xiaobo-death>.

<sup>6</sup> <https://www.theguardian.com/world/2017/jul/17/chinas-growing-intolerance-for-dissent-will-come-at-a-high-price>

Social connections and relationships, 7. Environment (present and future conditions), 8. Insecurity, of an economy as well as a physical nature (Stiglitz et al. 2010).

Stiglitz et al. (2010: 15) use this multidimensional measure of wellbeing which requires reframing not only economics but our relationships.

The axiom for transformational design needs to be:

Freedom and diversity to the extent that freedom of some is not practiced at the expense of others (including all sentient beings and the environment on which we all depend) (McIntyre-Mills 2017).

I ended my last book *Planetary Passport* with the plea that we act as stewards for this generation of life and the next. *Non-Anthropocentrism* protects the lives of all living systems and would not preclude rights to digital beings provided the designs are carefully constructed to balance individual and collective needs.

The ISSS conference in 2017 was held in Vienna. The conference participants and organizers have long-standing links with the Bertalanffy centre and with the International Federation for the Systems Sciences which I attended in 2010. The city of Vienna has played an important role in receiving refugees.

According to the plenary speaker, Vienna received around 10,000 refugees a day who arrived after the 2015/2016 war on Syria.

The outer ring of Vienna is most affected by graffiti, whilst the inner ring has less graffiti. It caters for the arts, education, commerce and conferences (Figs. 4.1 and 4.2).



**Fig. 4.1** The angry graffiti ‘Police are Pigs’ illustrates some of the sentiments of local residents



**Fig. 4.2** The angry graffiti ‘Police are Pigs’ illustrates some of the sentiments of local residents

Whilst the graffiti expressed attitudes towards the police, an angry taxi driver who pointed out the graffiti expressed openly racist, nationalist rhetoric.

Vienna has changed—there are too many Muslims. It is OK to come here on holiday but not to stay!

It is hardly surprising that graffiti provides an outlet for those who do not have a voice:

The challenge of living in the Anthropocene is, for the majority of the world’s population, an urban challenge. Finding ways to connect with each other and our urban environments is an essential task. Where might we find examples of an ‘ethics of care’ taking shape in our cities to inspire us...?. (Iveson 2015:77)

Protests can be direct or indirect such as the work of Banksy in Bristol where it seems apt that an ex choir boy led by Banksy (a pseudonym for an ex choir boy from Bristol) comments on the silenced aspects of society by creating alternative forms of public art. Protest in the form of recent graffiti<sup>45</sup> is his way of commenting on society. ‘Mobile lovers’ was created near to a club for young people who are facing unemployment in Bristol.

Recent reports from the Brookings institute discuss the extent to which Germany is becoming increasingly intolerant towards refugees and asylum seekers. Angela Merkel stressed that she feels embarrassed by some of the statements made by the far right which undermine the direction in which her party has tried to steer Germany and European policy towards those seeking refuge.<sup>7</sup>

<sup>7</sup> <https://www.brookings.edu/blog/order-from-chaos/2017/09/25/after-the-election-germanys-democracy-faces-its-hardest-test-since-1949/>

The ISSS conference presentations in Vienna stressed the potential changes that are likely to occur in European cities, as they become the so-called digital smart cities of the future. The prospect of autonomous digital, battery-operated vehicles travelling across the city. Passengers could hold meetings whilst travelling. The issue is that the number of vehicles will not necessarily be reduced. More public transport is needed. If public transport becomes carbon neutral and digital, this could be a positive step forward in terms of public policy. But the prospect of a proliferation of autonomous vehicles would be a step in the wrong direction. An image of streams of autonomous vehicles below and above streams of drones delivering items, delivering services such as firefighting or observing and reporting to protect and control could also be problematic in terms of privacy and human rights, not to mention the potential for accidents.

The extent to which whole cityscapes could become digitally responsive was the focus of many presentations. But the issue to me remains: to what extent can ‘country’, to use the Aboriginal term, be protected?

To what extent can small scale face-to-face sense of community be retained by creating villages/communities within cities and by retaining the viability of rural and regional areas so that people do not feel obliged to move to cities?

The displacement of people from war torn or disaster zones affected by major environmental impacts will need to be factored into the planning of all cities in the future—given the impact of climate change.

### **Statement of the Challenge: From Building Walls to an Appreciation of Our Interdependence—Representation, Accountability and Regeneration**

The section addresses the increasingly populist responses characterized by populist responses in developed and developing countries, such as the UK leaving the European Union because voters in the regional areas were concerned about employment and immigration. Rorty (1999: 38) foresaw the rise of increasingly disenchanted populations who see globalization as a means by which a cosmopolitan elite are able to shape the market in their own interests and who hide their assets with impunity. For example, the

election of Trump and the rise of Fascism in the EU (indicated by the rise in popularity of Le Pen’s Party in France) and the populism that has resulted in Germany experiencing a rise in the far right needs to be understood systemically as a result of national policy and international foreign policy that is becoming increasingly containerist and less cosmopolitan in its approach.

Urban residents in inner city areas where they are exposed to diversity appear to have voted progressively in London for a Muslim Mayor and to remain within the EU. In London the proportion of people who are employed is higher than in more regional and rural areas where people have less hope of employment.

Similarly, in the USA big cities like New York are more cosmopolitan because of the concentrations of wealth than the rust belts of USA and the rural areas where people are less exposed to other cultures. In these contexts people voted for Trump.<sup>8</sup> Both Republicans and Democrats did not listen to the people. But the notion of dismantling caring for the commons or to use the Australian Indigenous expression: 'Caring for country' has not accompanied his approach. The withdrawal of funding from Environmental Protection and Welfare are two obvious policy moves that have been made. Neither of these policy moves support the commons or the public good.

In contrast the urban poor population of Jakarta has become increasingly conservative. In Indonesia the backlash of populism results from the feeling that government needs to take into account the needs of the so-called little people who have been displaced as a result of the destruction of villages within the city in the name of 'normalization', slum clearance and protection from flooding. Ahok received support from the middle classes and elites in Jakarta for his modernizing approaches to city planning.

This has resulted in many people being resettled from areas deemed vulnerable to flooding. They have used populism to shape the debate and to punish the architect of the removals, a mayor who was setting himself up to compete in the running for the next president of Indonesia. He appealed to the middle classes and elites, but not to the largely Muslim majority; many of whom had been affected by the removals in Jakarta. This is a context that helps to shape the election for the next president of Indonesia. Many of the mayors and senior public or private sector elites compete for this role. According to Jong (2016), the destruction of a sense of community and the sense of alienation has resulted in populist movements to oust Ahok by stressing that he is not a Muslim and that he has committed acts of blasphemy. The successful removal of Ahok<sup>9</sup> needs to be understood within the context of the competition between *haves* and *have nots*, expressed in the cultural idiom of religion:

The blasphemy allegation against Ahok has divided the nation and emboldened radical Islamist groups who claim to speak on behalf of all Muslims. It was also instrumental in causing Ahok's defeat in the April 19 gubernatorial election<sup>10</sup>.

Trump's notion of addressing unemployment through building a wall to keep out people from Mexico or from Islamic nations expresses the challenge of the day faced internationally, namely, to address social inclusion and social justice for all within increasingly diverse nation-states.

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<sup>8</sup>The argument is that just as in the Weimar Republic, people were prompted to elect a strong leader, namely, Hitler, people look to strong leaders when they face what seem to be overwhelming challenges. Paradoxically the election of Trump who is held up as a strong leader in the mold of Vladimir Putin who it has been suggested had an interest in seeing Trump elected to office. The election which brought Trump to office was at the time of writing under scrutiny resulting in the departure of Michael Flynn from government as a result of having conversations with the Russian Ambassador and failing to disclose these. See also: <https://www.theguardian.com/us-news/2017/mar/04/donald-trump-wiretap-barack-obama-coup>.

<sup>9</sup><http://www.thejakartapost.com/news/2017/05/16/prosecutors-appeal-ahoks-verdict.html>

<sup>10</sup><http://www.thejakartapost.com/news/2017/05/09/ahok-guilty-of-blasphemy-sentenced-to-two-years.html>

Piketty (2015) has focused on class in his examination of the growing gap between rich and poor, and although this is important, it does not go far enough in acknowledging the racial and cultural dimensions of discrimination.

Populist nationalism has expressed the us/them feelings in terms of racial stereotypes as evident in the exit of Britain from the EU, the election of Donald Trump and the increased conservatism in Europe in the wake of terrorist attacks which have escalated in the wake of the wars in Iraq and Syria.

How can a balance between individual and collective rights move beyond the anthropocentric human rights focus on social justice to a more non-anthropocentric approach to social and environmental justice? The aim of my research is to address everyday decisions. The hypotheses briefly addressed in this paper are:

- The greater the level of (A) local participation, the greater the level of (B) trust and the greater the control of (C) the powerful who have their own monetary interests at heart.
- The greater the level of (A) public education on Nussbaum's ten capabilities for a life worth living, the more likely (B) people are to participate as active agents to protect their rights.
- The greater the level of (A) participation through diverse forms of engagement to protect of local habitat and local living systems as stocks for wellbeing, the greater the (B) level of local employment.

To sum up, participation through awareness and consciousness-raising (McIntyre-Mills 2010) will influence the way in which people think about boundaries. Participation could help them to remake connections with others and the environment through valuing the environment and engaging in healthy relationships (Wynne 1996). It is based on the notion of neural plasticity in that the brain shapes the environment and, in turn, is shaped by the environment (Bateson 1972; Beer 1994; Capra 1996; Greenfield 2000).

### Three Cultural Bases for Human Organization

Humans evolved from primates, and we share the capacity for empathy, reciprocity and fairness. In fact human beings evolved through our ability to co-operate and not only to compete (De Waal 2009). Thus the emphasis is on developing a new basis for transforming the way in which we live. The emphasis needs to be on what we all share in common, namely, the need for food, energy, water, safety and the capabilities, to live a good life. This is stressed by Nussbaum (2011) who uses the concept of capabilities and wisely avoids too much emphasis on culture per se. Culture is a way to adapt to an environment. It needs to be seen as responsive, rather than as a pre-given. Mary Douglas, a social anthropologist who has inspired systemic thinkers, distinguishes between what is perceived to be culturally 'sacred' and 'profane' and stresses that norms guide social choices and they are reinforced by authority and religion. She argues from a so-called structural functionalist perspective, and,

according to her, religion has a purpose and is functional for social order. The ‘sacred’ covers all aspects within the pale (fence) or the boundaries of a culture, and these norms are regarded as ‘ethical’ and supported by civilized society. The ‘profane’ covers all those aspects that are *beyond the pale* and pertain to the wild, the ‘untamed’ or the uncivilized. So this argument begins to challenge the independence of religious values. In some contexts values are individualistic, and this can support materialism and selfish decisions. In other contexts the group’s values prevail because people are communal, and this can support collective concerns. Nevertheless, God can be invoked to support both individual and collective concerns.

The Khoi and San peoples, for example, draw on a sense of connection with the land animals and believe that egalitarian norms should prevail. They draw power from a sense of their interconnectedness with the land, animals and one another. Fiske (1992) extends the work of Mary Douglas and develops an argument that hierarchies and communal sharing characterize the two dimensions for guiding behaviour. These are in turn linked with different kinds of relationships associated with treating people as equals and distributing resources equally or alternatively giving a price or value based on benefits or entitlements. He sums up the relationships and ways of organizing and implications for ethics and morality as ‘community sharing’, ‘authority ranking’, ‘equality matching’ and ‘market pricing’:

“The motivation, planning, production, comprehension, coordination, and evaluation of human social life may be based largely on combinations of 4 psychological models. In communal sharing, people treat all members of a category as equivalent. In authority ranking, people attend to their positions in a linear ordering. In equality matching, people keep track of the imbalances among them. In market pricing, people orient to ratio values. Cultures use different rules to implement the 4 models....”

Both rational and emotional dimensions are important for ethics. When we place too much emphasis on culture and religion as a basis for the sanctity of choices, we also have to deal with different viewpoints. This is problematic within Western culture and even more so across cultures. This is why I make a case that we are interdependent. Pragmatic recognition of this fact could be the basis for working co-operatively to draw on practical cultural knowledges for the survival of living systems. In this paper I sum up three bases for human organization (all of which can occur at multiple levels within and across nation-states) as follows (Table 4.1):

A way forward needs to foster more trust to narrow the gap between the powerful and the powerless, summed up as follows (Table 4.2):

## Post Script

Bernard Scott of the cybernetics group shared a thought-provoking article posted on Nautalis, entitled: ‘The man who tried to redeem the world with logic’.

The principia by Whitehead and Russell inspired a young Pitt to write to Russell to point out errors. A brilliant career followed teamwork with Weiner and McCulloch in which they modelled the human brain. Despite the attempt to impose order on life

**Table 4.1** Implications of three bases for human organization for governance and reframing economics

Trust	Power	Measurement
<b>Face-to-face small subgroup, organization or community</b>	<b>Large organization, network or society</b>	<b>Abstractions</b>
<i>Egalitarian community</i>	<i>Hierarchy and networks</i>	<i>Conceptualization extends the power based on measurements</i>
Relationships based on reciprocity	Managed by social distance or social mobilization	Commodification for extraction of profit <sup>a</sup>
<i>Equality matching based on reciprocity and sharing (Fiske 1992)</i>	<i>Authority ranking and equality matching (Fiske 1992)</i>	<i>Market pricing (Fiske 1992)</i>
Communal sharing	Authority based on a narrative of entitlement to enhance status, equality matching and/or the potential for violence (Fiske 1992)	Money as a symbols of power ascribes value, based on measurement
Stewardship to sustain a way of live	Extraction of resources based on structural violence entitlement	Extraction of profit based on structural violence and market pricing

Source: Inspired by and adapted from Fiske, A. 1992. Four elementary forms of sociality [http://www.sscnet.ucla.edu/anthro/faculty/fiske/pubs/Fiske\\_Four\\_Elementary\\_Forms\\_Sociality\\_1992.pdf](http://www.sscnet.ucla.edu/anthro/faculty/fiske/pubs/Fiske_Four_Elementary_Forms_Sociality_1992.pdf)

<sup>a</sup> People, plants and animals are part of an interlinked living system

**Table 4.2** Three bases for organization to address the growing gap between rich and poor and the worsening social, economic and environmental conditions

Local engagement to promote a sense of community to hold the powerful to account and to protect natural and social fabric	Constitutional protection to ensure that the powerful are held to account	Transforming the narrative to ensure that we do not ‘mismeasure’ our lives (Stiglitz et al. 2010)
Engagement spans arts, science, politics and forms of economics that protect people and the planet	Engagement includes sanctions to uphold the law	Engagement to include positive and negative sanctions to protect living systems
Monitoring ‘from below’ to protect people and the planet	Monitoring ‘from above’ to protect people and the planet	Changing the narrative to protect people and the planet through monitoring from above and below through public education to enhance representation, accountability and regeneration

itself, he failed to order his own life.<sup>11</sup> Walter Pitt’s academic career was disrupted by personal jealousy that resulted in chaos. He became so upset by the rejection by his mentor that he became an alcoholic.

<sup>11</sup> He grew up in an abusive family from whom he escaped by spending time in a library and eventually winning a scholarship.



The notion of entropy and open systems characterizes the work of C. West Churchman who stresses that there is no such thing as a closed system and that closure leads to entropy. The sort of universal solution and closure that the original programmers were striving for is thus problematic.

The hope is that an open system will enable people to address the many social, economic and environmental challenges underpinning this programme of research.

The universalist approach based on trying to use the logic of one human mind to model the world shows attempts to close off a system are unrealistic.

There is indeed, no such thing as a closed system as we are part of our own subject matter. We are embodied social actors. Past and current challenges influence our life chances and the paths we take.

The challenge with all computer aided systems is how to manage entropy. It made me think about our current research.

Life requires balancing a priori norms and a posteriori consequences when making decisions. When addressing the challenges we face today, namely, poverty and climate change, we need to think of ways to enhance resilience and mitigate risk.

- How can we make the best use of available resources? Specifically energy and water for food security?
- Can the Sustainable Development Goals help us achieve these ends?

The Design of Inquiring Systems approach is based on asking questions to enable better decision making informed by:

Logic

Empiricism (qualitative and quantitative)

Idealism

Dialectic and

Dialectic and Pragmatism.

However, empiricism needs to be extended to take on board other ways of knowing including spirituality, knowing by many species, cultural knowledge from lived experience, embodied knowing, knowledge of plants and ecosystems. The pathways software aims to address resilience using blockchain based on network knowing. Many human beings could pool knowledge and cross check decisions through communication that maximises local resources with effectiveness and efficiency. The research aims to find a way to maximise resources and minimise risk through pooling and cross checking. The pathways software (based on extending the prototype see McIntyre-Mills, DeVries and Binchai, 2014) provides a potential design to link the resources that individuals, households, neighbourhoods, communities, nations and post national regions have, what they need, what they are prepared to change by adding habits that support social and environmental justice. The software can map the turning points for better and worse. Barriers (material and non material) are identified. For example, it could act as a bartering system to enable people with resources and skills to share anything from time to do child minding or supervision of home work (plus a good set of references to show that one is of good character), building or gardening skills or energy supply stored in batteries to share with a neighbouring community, or water stored in rain tanks that are connected

with a shared pump station. This approach could enable communities to enhance their resilience through both mitigation and adaptation strategies and thus make some steps towards Rifkin's (2011) vision.

We hope the Elam Endah pilot can support vocational learning and employment opportunities in South Africa by enhancing the rural-urban balance and reducing rapid urbanization and the resultant food insecurity. Harper (2016) in her latest book explains that mobility and displacement as a result of food and water insecurity and of course the pull of the cities is one of the big factors in planning for climate change.<sup>12</sup>

- Could a distributed network of hubs help to create a new approach to managing the commons and sharing resources?

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<sup>12</sup>Papers delivered at the Venture Institute Symposium, July 2018, and International Systems Sciences (2018) cover what has been learned from pilots and pre-pilots. The next step is a planned study in South Africa. We hope to extend the proof of concept to show how a distributed network of hubs can help to create a new approach to managing the commons and sharing resources. Yvonne perhaps this will help as a basis for discussion in Mongolia next month and we can work with your colleagues there to develop another pilot?

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**Part II**  
**Social and Environmental Security:**  
**Towards Non-Anthropocentric**  
**Rural-Urban Governance**

# Chapter 5

## Policy Design for Vocational Pathways to Protect Biodiversity and Regenerate the Land



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**Abstract** The aim of the paper is to make the case for educational pathways to address the big issues of the day, namely, poverty, climate change and competition for resources in an increasingly unequal world where the gaps between rich and poor grow wider.

Internationally, the problem is that education is increasingly shaped within neo-liberal institutions that measure the value of educational outcomes in ways that can limit creativity and devalue diverse ways of knowing that are vital for protecting both people and the planet.

Education needs to inspire learners of all ages to voice their ideas and to draw on many strands of experience (across diverse age cohorts) to prevent the loss of knowledge. A case is made for changing the way in which we educate people in the interests of regenerating biodiversity in this generation and the next through valuing lived experience and cultural memory.

**Keywords** Age groups · Systemic challenges · Redesign · Social and environmental justice

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## Introduction: Framework for Systemic Analysis of the Current Challenges

Hlengiwe Mkhize the successor to Blade has stressed that free education remains a goal.<sup>1</sup> Blade Nzimande ended his post as Minister of Higher Education and Training on 17 October 2017.<sup>2</sup> Systemic challenges are a residue of colonial disadvantage as well as the need to address the demographic dividend and the large numbers moving into cities. The rising costs of education could be addressed through a new model of education.

A new model is proposed to enable young people to learn vocational skills whilst helping the community to develop green economic skills for social and environmental justice along with skill sets that enable them to address the wicked problems of poverty, crime and climate change.

The paper reflects on some of the aspects of an educational program that responds to the call for an African Renaissance (Mbeki 1999; Sesanti 2016). In South Africa people have lost faith in the state, because the elites in the public and private sectors are not accountable to the people they serve. The price of inequality—national and global—has escalated. The competition for scarce university places in metropolitan areas is a symptom of the need to develop more places of learning to foster educational pathways to enable this generation and the next to protect the environment. In order to address wicked, convergent problems, we need to address education to meet the needs of the big issues of the day—poverty, climate change and competition for resources.

The gap between rich and poor grows globally and in South Africa. South Africa faces the challenge of providing employment opportunities to a growing population of young people. A greater emphasis on core principles and engagement with the people in discursive democracy is suggested by Mangu (2016). This is in line with the point made by Michael Hardt (2010) when he stressed the importance of transformation. The potential for establishing a new form of governance to protect people and the planet (McIntyre-Mills 2014a, b: 113) is discussed in *Planetary Passport* as follows:

Neo Marxists such as Michael Hardt make the case for the adaptability of human nature and culture. Hardt (2010: 86) in conversation with Astra Taylor as part of her interview on ‘the Examined Life’ stresses the need for ongoing training for participatory democracy and the need to achieve transformation.... He stresses that Bolivia and Ecuador are places to watch for examples of how to live differently—because of their constitutional protection of the planet—although they have some failings and although the rhetoric perhaps outweighs the reality of what has actually been done to protect the forests and to limit mining. But as Hardt stresses they are indeed ‘places to watch’, for examples, as to how to do better. However, what is even more important is ... the legal transformations that could eventuate from the spiritual connection to the land. I would argue that the hypocrisy of appearance needs to be avoided through implementing ways to ensure that the ideals are translated into practice in an open and transparent manner.

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<sup>1</sup>Appointed to replace Blade as Minister for Higher Education and Training, see whoswho.co.za/hlengiwe-mkhize-8953.

<sup>2</sup>Blade who told truth to power but could or did not provide a viable proposal on alternative education within a viable political environment.

Unemployment has not been redressed in South Africa by means of a class-based analysis that denies the relevance of other factors that also play a role. Gender, level of ability, language, class and culture as well as race played a role in terms of job eligibility in South Africa like elsewhere. This engagement process needs to enable participation on a number of issues pertaining to identity and opportunity. Clearly being employed gives a sense of purpose, identity and respect and is a vital aspect of people's lives. Being employed can thus contribute to both material and non-material dimensions and determine wellbeing, and the converse is obviously that being unemployed undermines wellbeing. Given the high levels of unemployment, opportunities for universal employment and a universal wage for fulfilling the role of global citizens who protect wellbeing stocks need to be considered. This requires building stocks for the future (Stiglitz et al. 2010) and reframing not only economics but our relationships based on participatory democracy and governance that narrows the gap between haves and have nots (Stiglitz 2012). Stiglitz et al. (2010: 15) use a multidimensional measure spanning eight factors that together are indicative measures of wellbeing.

The mixed methods symposium spanning both South Australia and West Java provides insights for the new South Africa where more and more young people are seeking university places. The system of education needs to accommodate a range of skills through vocational and educational training in design, arts, natural and agricultural sciences, computing and connecting the social, economic and environmental opportunities to live sustainably and well. The potential for using the pathways to wellbeing software detailed in *Planetary Passport* (McIntyre-Mills 2017c) and *Transformation from Wall Street to Wellbeing* (McIntyre-Mills 2014a, b) enables matching the needs of ecologically minded people to services and opportunities. It is currently being explored by the leader of the Indonesian diaspora, Pak Rudolf Wirawan, through his company Wirasoft. The first digital villages have already been created, and they provide opportunities for showing an alternative model of education to South Africa. The aim is to discuss this in more depth during a visiting professorship in South Africa in August 2018 at UNISA.

The purpose of the paper is to scope out the social, cultural, political, and economic and environmental context and to suggest some of the possible ingredients to inspire cocreated design, based on many ways of knowing. The notion of African Renaissance characterizes the mission for UNISA, and it is the focus of its accountability to this generation and the next. This requires an approach to education policy that represents the perceptions of diverse learners as a starting point for matching the right policy approach in context (Hesse-Biber 2010). The wellbeing stocks concept could be explored and developed as part of the curriculum for vocational education and training.

The ability to work with many ways of seeing requires the ability to think about multiple texts and contexts and to develop a way to respect situated knowledges to the extent that the approaches do not undermine the rights of others or the environment. The notion that a good meal is meat and three vegetables needs to be revised. The fact that cattle are dying of heatstroke<sup>3</sup> in Australia is not an indicator only of

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<sup>3</sup> Vogel, E. Meyer, C. Eckard, R. 2017 <http://theconversation.com/severe-heatwaves-show-the-need-to-adapt-livestock-management-for-climate-73447>.

the need to change the way in which we manage livestock; it is also necessary to think about what we eat and why. The high methane output of livestock impacts on emissions, so perhaps the wellbeing of living systems would be enhanced by eating more protein from pulses (Shiva 1989) and mushrooms (Pauli 2010).

The rise of Donald Trump who used the metaphor ‘Drain the swamp’ effectively underlines how the so-called unprotected and marginalized in cities feel about their lives and how identity politics has played out by those who feel abandoned by a globalized elite who benefit from ‘business-as-usual’ narratives which exclude them. Obama has stressed that the notion of ‘clash of civilizations’ just helps the terrorists, and Huntington’s narrative can be understood as part of the same self-fulfilling narrative. We need a new narrative of Earth Democracy.<sup>4</sup>

## Steps for Ethical Vocational Education

To enable lifelong engagement by active citizens requires action learning to address areas of perceived policy concern. The policy proposal is to develop more educational institutions (from primary to secondary and tertiary level) that focus on teaching design skills in sustainable development, the blue economy and biomimicry in ways that draw on the learner’s own lived experience.

In rural and regional areas, the local plant materials, for example, could be used for developing a range of products, according to Pauli (2010) including cosmetics, cleaning agents, building materials, plant dyes and biodegradable plastics, to name but a few examples. In urban developed areas, the blue economy could be used to recycle and reuse materials for building sustainable housing powered by sustainable energy and supplied with carefully collected rainwater to support indigenous plants wherever possible in the urban environment.

It is proposed that an additional subject is provided based on critical systemic thinking and practice in both academic and vocational trainings supported by the best teachers who foster education, along with apprenticeships, ongoing education until 18 and then full-time employment opportunities linked with a series of education and vocational hubs spanning rural, regional and urban areas.

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<sup>4</sup>We are interconnected. The narrative of *Earth Democracy* helps to support Spaceship Earth. There is hope, because according to Evans-Pritchard the Nuer (a very warlike group) understood that they needed to unite against a common enemy. So they set aside their differences when facing a large outside threat. Today the threat is us. We need to understand that to survive we need to cooperate not only with one another but also with living systems of which we are a strand. Respecting and enabling diverse capabilities of sentient beings and enabling them to live a life worth living are part of Earth Democracy. Gender diversity needs to be addressed so that women are able to play an equal role in Earth Democracy where they fulfil all their capabilities—not just reproductive roles but also productive, creative and strategic roles—so that the demographic transition from overpopulation to balanced reproduction can occur. This occurs when literacy and numeracy—or educational opportunities for all—are achieved. We are interconnected—we can no longer address differences merely through ‘exit’, because the challenges are planetary, and so we will need to apply ethics to enable loyalty to current and future generations through being the change not merely voicing stewardship concerns.



Policy refers to who is included and excluded in the decision-making on who gets, what, why, how and to what effect. Policy needs to be ‘tried out’/piloted through ongoing learning.

Policymakers need to work with stakeholders in ways that explore their assumptions and values based on local, lived experiences of what works, why and how. This user-centric policy approach starts with the axiological assumption that local knowledge is relevant and that the intention of policy needs to privilege the perceptions of service users to the extent that their diverse ideas do not undermine the rights of others.

Policy needs to be framed and reframed, in terms of:

- Content, context, structure and process
- A priori and a posteriori dimensions
- Many ways of knowing spanning human logic, empiricism, dialectical thinking and pragmatism and extended to include spiritualism and appreciation of animal knowing, biomimicry and learning from nature

Retroductive logic refers to learning from social, economic and environmental patterns that may be qualitative and quantitative in nature and thus spans many methods that are combined in creative ways to suggest alternative ways of ‘being, doing or interacting’. It does not require only narrow linear approaches to research. Instead, it requires learning from history and from contemporary issues. This approach to research was used when doing coresearch in Alice Springs over 3 years and learning from Indigenous mentors who explained the importance of country for a sense of wellbeing (McIntyre-Mills 2003). The research was only possible as I was living the research over a number of years.

By valuing certain kinds of knowledge at the expense of others, human beings have created a new age, namely, ‘the Anthropocene’, characterized by rapid urbanization and unsustainable development. The ‘ABC’ resource needs to be regarded as a discussion paper and open to the lived experiences of people living in different contexts. In line with the Paris Declaration (1997), education policy needs to be framed together with coresearchers with local lived experience as teachers, trainers and learners.<sup>5</sup> What is the problem and what is it represented to be? Students led the ‘Fees must fall’ and the ‘#Fees will fall campaign’ in order to stress their right to an affordable education. The campaigns need to be understood as an expression of the anger felt by those who consider that apartheid has made little difference in their lives.

The paper reflects on some of the aspects of an educational program that responds to the call for an African Renaissance (Mbeki 1999; Sesanti 2016). In South Africa people have lost faith in the state because the elites in the public and private sectors are not accountable to the people they serve. The price of inequality—national and global—has escalated. The gap between rich and poor grows globally and in South Africa. The challenges are as follows to:

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<sup>5</sup>The idea is that those who are affected by a policy decision should be part of the policymaking process. Thus the approach to representation is inclusive and based on testing out ideas.

- **Design** places of learning to **match the educational content** to the **contextual needs** of a growing population in need of sustainable employment in liveable biodiverse environments
- **Sustain** a system of education to prepare people across the life cycle to **protect diversity** and the land on which we depend

The competition for scarce university places in metropolitan areas is a symptom of the need to develop more places of learning to foster educational pathways to enable this generation and the next to protect the environment. In order to address wicked, convergent problems, we need to address education to meet the needs of the big issues of the day—poverty, climate change and competition for resources.

Decolonization requires providing many ways to enhance creativity. Educational institutions should also be practical, based on providing conducive conditions for *being the change*. Leaping beyond the taken for granted is an act of faith. It also provides the means to *learn by doing* by identifying what is perceived to work, why and how. This involves finding patterns rooted in practical evidence. The next step is providing the necessary curriculum that aims to protect people and the planet through understanding that we are *all living systems*. This requires stewardship of current and future generations of life through everyday thinking and practice that enables people to become ecological citizens through respecting one another including the multiple species of which we are stewards. The notion of living systems is one held by First Nations around the world expressed as a sense of interconnectedness based on caring for the environment of which human beings are an integral strand. The rich diverse way of knowing need to be maintained through education that values caring and re-generation.

Evaluation based on examinations and journal rankings (whilst important to measure some forms of knowledge) can also act as gatekeepers for neoliberalism and channel out creativity by rewarding people for working in narrowly circumscribed ways that lose the rich heritage of diverse ways of knowing and being. Education is currently shaped within increasingly neoliberal institutions that measure the value of education in terms of short-term performance indicators and in terms of ranking educational outcomes in terms of journal rankings. In-depth research needs time, and it may not fit the narrowly defined parameters of existing models.

South Africa faces the challenge of providing employment opportunities to a growing population of young people. A greater emphasis on core principles and engagement with the people in discursive democracy is suggested by Mangcu (2016). Unemployment has not been redressed in South Africa by means of a class-based analysis that denies the relevance of other factors that also play a role. Gender, level of ability, language, class and culture as well as race played a role in terms of job eligibility in South Africa like elsewhere. This engagement process needs to enable participation on a number of issues pertaining to identity and opportunity. Clearly being employed gives a sense of purpose, identity and respect and is a vital aspect of people's lives. Being employed can thus contribute to both material and non-material dimensions which determine wellbeing, and the converse is obviously

that being unemployed undermines wellbeing. Given the high levels of unemployment, opportunities for universal employment and a universal wage for fulfilling the role of global citizens who protect wellbeing stocks need to be considered. This requires building stocks for the future (Stiglitz et al. 2010) and reframing not only economics but our relationships based on participatory democracy and governance. Stiglitz et al. (2010: 15) use a multidimensional measure of wellbeing stocks spanning:

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.

In South Africa, the outcry against apartheid control of labour movement resulted in sanctions and eventual transformation. The invitation to Thomas Piketty to give the 13th Nelson Mandela Address in 2015 was appropriate as Piketty has stressed the need to narrow the gap between the haves and have nots through greater levels of transparency<sup>6</sup> and less opportunity for corruption. As Piketty stressed, the data on money trails and wealth could be managed to ensure fairness and reciprocity. In some instances this would require some transfers to restore the balance. Although transparency is vital for public trust a further step is required, namely the need to protect the environment through everyday decisions, as stressed previously by Wangaari Maathai in the 3rd Nelson Mandela Lecture. This requires:

- **Addressing** resilient urban, rural and regional infrastructure by
- **Exploring** the implications of urbanisation, loss of territory, water insecurity<sup>7</sup>, loss of species and the implications for living systems of which we are a strand.
- **Focusing** on the challenge of creating jobs that protect people and the environment

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<sup>6</sup> <https://businessstech.co.za/news/wealth/150853/the-wealth-of-these-3-sa-billionaires-is-equal-to-the-bottom-half-of-the-population/>. Drawing on the World Wealth and Income site, the Business Tech report cites data by Piketty and Emmanuel Saez, and the report stresses that: “the top 1% in South Africa had a fiscal income share of 19.2% of the economy in 2012 ...and that the rich are getting richer since the early 1990s”. The Oxfam SA report is entitled *An economy for the 99%*. Business Tech cites Oxfam’s report as follows: “...the world’s richest eight men own the same wealth as the poorest half of the world. Using data from the Credit Suisse Global Wealth Report 2016, Oxfam said that this inequality is more pronounced in South Africa as the richest 1% of the country’s population have 42%, or \$272bn (R3.7tr), of the total wealth of \$650bn. The wealth of the richest 10% also accounted for 31% of total wealth, or \$202bn (R2.8tr), according to Oxfam. The remaining 90% of the population only account for \$175.5bn (R2.4tr) of the country’s wealth. ...Such inequality is the sign of a broken economy, from global to local, and lack of will from government to change the status quo,” said Oxfam SA Executive Director Siphon Mthathi.... who added... “The recent State of the Capture Report revealed how private rich individuals influenced public policy and the allocation of public resources”.

<sup>7</sup> Waughray, D. (2017) Water-energy-food: can leaders at Davos solve this global conundrum? Huge demands for water present complicated challenges, but leaders will not resolve these kinds of interconnected risks without a systems approach. <https://www.theguardian.com/profile/dominic-waughray> <https://www.theguardian.com/global-development-professionals-network/2017/jan/16/water-energy-food-challenge-davos>

- **Developing** options for responding and adapting to the impacts of environmental change’ and
- **Contributing** to expanding knowledge through studies of human society by exploring culturally diverse ways of caring and stewardship through fostering values that protect biodiversity for social and environmental justice (see Table 5.1)

According to the United Nations World Urbanization Prospects (2014) in 2014, ‘54% of the world population was urban, and by 2050, 66% of the world’s population is projected to be urban if current trends continue’. Better urban governance needs to ensure that cities remain liveable and sustainable during and after the development process. Another central concern that urban governance schemes need to consider is the balancing of resources to meet both state and individual needs and goals. Land usage, either for agricultural production or for urban development, strategies and policies, needs to be well informed to ensure not only optimal production is achieved but also elements of justice and equity prevail for a balanced development.

The challenge for South Africa is to balance the complex needs of both the individual and the collective. The prospect of 65% of South African’s living in cities has implications for food, energy and water security. The UN estimates that 71% will be in cities by 2030 and 80% in urban areas by 2050—if current rates are maintained

**Table 5.1** Values for a new narrative to address convergent social, economic and environmental challenges

<p>Axiological underpinnings</p> <ul style="list-style-type: none"> <li>• Decisions need to be made at the lowest level possible in society</li> <li>• People should be free and diverse in their praxis to the extent that their decisions do not undermine the rights of others (including sentient beings) and the environment</li> </ul>	<ul style="list-style-type: none"> <li>• Unemployment and a gap between rich and poor</li> <li>• World’s population is spending more time online: 40% in 2016, 1% in 1995</li> <li>• Less time interacting face-to-face in real time</li> <li>• Urbanization has increased and we are experiencing ‘nature deficit’</li> <li>• Increased commodification</li> <li>• Need to transform democracy and governance through increased monitoring from above and below to balance individual and collective interests across the age groups</li> <li>• This requires public education and engagement in making decisions on options that are shaped by a global covenant from above but driven by social movements from below.</li> </ul>
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Arguably culture is relevant, but it plays out differently depending whether people are middle class or working class and whether they were educated in the pre- or post-apartheid era. What are the links between use of scarce of resources, sustainability and inequality? Can living more simply promote sustainability and minimize inequality? The ability to engage in a respectful dialogue can help to develop reconciliation based on telling one’s story, listening deeply and acknowledging the experiences of the other and the consequences of our own thoughts and actions on other people’s lives. This process was guided by Bishop Desmond Tutu in South Africa within a framework of trying to build a new South Africa.

(UN Report on Urbanization 2014, Rand Daily Mail, 26 May, 2015). The flow of people from the north of Africa where the population replacement rate is much higher than the 2.4% in South Africa is another area of consideration.

The Council of Higher Education in Pretoria Report (2016: 6) cites outdated statistics that nevertheless make it clear that the number of learners has increased from 90,000 in 1994 to a million or more in current enrolments (CHE (2015) based on Vital statistics: Public Higher education 2013, p. 3). The same report goes on to cite Department of Education Data that are also outdated and based on the 1996 census that the :

[P]articipation rates for black and white students differ significantly: 55% for whites and 16% for African students in 2013—while overall the participation rates, currently around 19% has changed only marginally from the reported 17% of 1996, albeit in the context of population growth from 40.5 million to almost 50 million.

But Harper (2013) stresses that the increase in Southern Africa is largely the result of migration and from North Africa where the population growth rate is much higher that 2.4 per woman and reaches up to 10 or more children per woman in some of the Northern states.

If we consider the life chances and experiences across these cohorts,<sup>8</sup> then we are likely to understand that the social determinants of wellbeing such as access to housing, home ownership and full-time, permanent employment will have an impact on life chances. Education policy thus needs to meet the complex needs of a growing population of young people.

A whole of community approach to vocational and educational training (VET) could make a difference as higher levels of participation in employment and VET pathways across the generations tend to lower the risks for families and communities. This paper advocates for a policy and governance approach to public education, community engagement and a range of accessible vocational educational pathways. Educational outcomes need to be underpinned by norms and measured by social, economic and environmental indicators of the perceived wellbeing of participants spanning different age cohorts. Young people need access to health, education and safe housing, in order to have the stability they need to learn every day. For this reason, action research is needed to find out the needs across the cohorts and to explore dynamic pathways to enable early identification of needs across the age groups and across different times of the year. For instance, cyclical needs over 12 months tend to vary, and places of learning could identify those who are most vulnerable at significant times of the year (e.g., celebrations, holidays) and provide holiday programs.

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<sup>8</sup>More policy research is needed to explore the life chances of socio-demographic groups by exploring the life chances of the elderly spanning the so-called; ‘Silent Generation’ at the height of Apartheid, Baby Boomers in their late fifties to early seventies who were part of the struggle against Apartheid, Generation X (now middle aged around their late thirties to early fifties) born as Apartheid began to wane, Generation Y in their twenties and thirties who (although born after Apartheid ended) now face cascading social, economic and environmental risks along with their own children, members of Generation Z.

UNISA could position itself strategically to become a ‘wellbeing university’ that plays an important role to meet the changing employment needs across the age groups and to support vocational programs through social and environmental impact bonds and also through philanthropy.

McKay et al. (2010, cited in Quan-Baffour and Romm 2015: 459) stress that adult basic education and training is required to support ‘the basic foundation for lifelong learning and equip them with skills and critical capacity to participate fully in society’.

Quan-Baffour and Romm (2015) stress the need for ‘Ubuntu-inspired teachers to foster adult literacy and community enterprises that link education with employment creation in the development of community enterprises’. In many instances people need debt, merely to make ends meet in urban and rural environments where earnings do not keep up with rising costs.

In South Africa the issues of both affordable and relevant education are important. The decolonization of the education curriculum has become the cornerstone for transformation in South Africa based on a renewed understanding of the importance of Biko’s black consciousness political agenda and an increasing usage of the discourse of race, rather than the discourse of class which was favoured previously by Mandela. This is explained by a sociology Professor Mangcu at the University of Cape Town as a recognition of the contribution that can and must be made by black scholars. Whilst his article is about decolonizing sociology,<sup>9</sup> his discussion extends to the content of curricula, the nature of democracy and the governance of educational institutions:

Participation is the cardinal principle of democracy—not only because of its intrinsic value, but also because it increases the political efficacy of citizens by giving them direct training in the policies and tools of governance. Almost 200 years ago, John Stuart Mill suggested that this kind of democratic training is best obtainable at the local level, where citizens can make decisions about issues they can immediately relate to, and then generalize that knowledge to the broader, national political system (Mangcu 2016: 31).

South Africa has a resurgence of race-based politics featured, for example, in the ANC discussions on nominations for future leadership of the ANC (2017). The ANC youth<sup>10</sup> league stresses the need for radical transformation in the areas of education, employment creation and access to land. According to Crenshaw (1991: 299):

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<sup>9</sup>He cites Biko’s notion of a ‘joint culture’ for South Africa (see Mangcu 2016, p57, who cites Biko, 2004) and stresses that the ‘shared ‘text of Blackness’ could be the basis of a conversation between Black and White academics about reframing ‘what a new sociology might look like’.

<sup>10</sup>UNICEF’s Generation 2030 Africa’ reports that by 2019 out of South Africa’s projected population of 53 million people, 18 million of those would be under the age of 18. This is reported in the following article on [24.com/Web/News24/](http://24.com/Web/News24/), as follows: “Over one third of South Africa’s population is expected to be under the age of 18’ in 2015, according to a United Nations Children’s Fund (UNICEF) report released on Tuesday. “South Africa was also expected to have 65% of its population living in urban areas next year, the ninth highest level in Africa. According to the report, in 2050 around 41% of all births worldwide would take place in Africa, while in the same year 25 people out of every 100 would be African. This was against the expected figures in 2015, where Africans would make up 16 people out of every 100 around the world. In 2015, 40% of Africa’s population was expected to be living in cities, versus over 50% in 2050”. href=’http: //pubads.g.doubleclick.net/gampad/jump?

Recognizing that identity politics takes place at the site where categories intersect thus seems more fruitful than challenging the possibility of talking about categories at all. Through an awareness of intersectionality, we can better acknowledge and ground the differences among us and negotiate the means by which these differences will find expression in constructing group politics.

Thus the concerns raised by Mangcu in South Africa about the focus on class in post-apartheid South Africa could be addressed through more intersectional<sup>11</sup> discourses that take into account the many different life chances experienced by people as a result of socio-demographics (racialized social groupings, culture including religion and language, gender, age, level of ability), economic aspects (class) and contextual political aspects (citizenship). If the roll of the dice determines that one is born in a context that favours or discriminates on the basis of one or many of these variables, then the life chances of individuals will be very different from the life chances of one who is politically privileged in this context. This is why national and international law to protect the capabilities of all are needed to uphold human rights.

## **An ABC Resource for Education Policy: Collaborative Design to Protect People and the Planet**

This section discusses a priori norms *to promote and protect African knowledge creation* and a posteriori measures of *educational outcomes*. Africa has a wealth of Indigenous knowledge, and we need to ensure that it is placed at the heart of the curriculum<sup>12</sup> to remedy the loss of appreciation of the spirit of Ubuntu and Ukama, meaning that people are people through others and through their connection to the environment (according to Murove 1999, 2005, cited in Romm 2017) where she explains it as follows:

Murove refers to the African concept of *Ubuntu* (translated as “I am because we are”) and relates this to the Shona concept of *Ukama*. He explains that *Ukama* means: being related and interrelated, whereby human well-being and the well-being of everything that exists is understood in terms of interrelatedness. Relationality is seen as indispensable to the well-being of everything. (Murove 2005: 151)

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<sup>11</sup> Andrea Nightingale has developed an intersectional study on access to land in Nepal that is shaped by caste and gender. Thus intersectional analyses need to take categories as just one dimension of more comprehensive analyses to support social and environmental justice. Furthermore we need to take political and historical context into account, and so some of the points made by Mangcu about social justice in south Africa being inadequately served by a purely class-based analysis can be taken on board as a means to achieve a more comprehensive intersectional understanding of why people feel ‘let down’ by current policies in South Africa.

<sup>12</sup> <http://www.sanews.gov.za/south-africa/former-president-mbeki-appointed-chancellor-unisa>

**Anthropocentrism** refers to a human-centred approach that disregards other living systems.<sup>13</sup> The key concepts for a transformative educational approach need to be based on non-anthropocentrism. This means focusing on ways to protect the habitat of all living systems. The approach takes the next important step in the research agenda, to link the notion of relationships across humans, animals and the land as a source of Indigenous and non-Indigenous wellbeing and the broader societal need for environmental protection and effective ecosystem management of domestic, liminal and so-called wild or natural habitat (Donaldson and Kymlicka 2011).

### *A is for A Priori Norms and A Posteriori Measures to Promote Ukama (African Non-anthropocentrism)*

South African education policy could be informed by Ukama as well as an adapted form of Nussbaum's (2011: 33–34)<sup>14</sup> normative ideas about capabilities for all sentient beings and an adapted version of the UN Sustainable Development Goals, but I do not take an essentialist approach to a priori norms:

*A priori norms to govern South Africa* need to be adapted and extended to protect a habitat protected for human and animal life where three locations are available, namely:

- **Domestic spaces** for human beings and animal life that can co-exist
- **Liminal spaces** where domestic and suburban areas give way to shared spaces that enable life
- **Wild spaces** protected for animals and *their* habitat

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<sup>13</sup><https://archive.org/details/VN860553> reconsidering boundaries and what constitutes knowledge  
<https://archive.org/details/VN860546> ethics and design  
<https://archive.org/details/VN860542> topics [critical systemic thinking and practice](https://archive.org/details/VN860537/VN860535.MP3)  
<https://archive.org/details/VN860537/VN860535.MP3> governance across boundaries  
<https://archive.org/details/VN860540> designing a response to address an area of concern  
<https://archive.org/details/VN860555> wicked problems  
<https://archive.org/details/VN860538> non-anthropocentric approaches  
<https://archive.org/details/VN860534/VN860533.MP3> social and environmental justice

<sup>14</sup>To draw on and paraphrase, Nussbaum's ten capabilities address a life worth living in a material and non-material sense. They include the right to health, safety and respect, but also the right to use all one's senses and to be able to think, reason and imagine. This in turn requires the right to express emotion and to make connections or affiliate with others, including other species. This in turn requires the right to express ourselves through play that enables us to re-create ourselves when we take a rest from our learning or work. Underpinning a life worth living is the right to have some control over our environment and to express our political choices. Finally, Nussbaum stresses that we have the right to own land or moveable goods that will not be seized from us.



*A posteriori measures are based on* what works, why and how and what the consequences of a particular policy decision would be to people and the environment. As such a priori norms provide benchmarks, and a posteriori measures ensure accountability based on a broad range of indicators of education effectiveness to enhance educational pathways. Policy guided by pragmatism takes a consequentialist approach based on considering the meanings of the ideas and practices for the majority of stakeholders. It is a posteriori approach, and it takes into account the points of view of the stakeholders in specific contexts. Pragmatism can be divided into *narrow pragmatism* that considers the majority, but not all stakeholders.

At the other end of the continuum of pragmatism is *expanded pragmatism* that considers the consequences for all life.

**Narrow pragmatism** is based on thinking about the consequences only for ourselves and not others. It leads us to believe that our power and profit must be driven by self-interest and that the bottom line, namely, ensuring our powerful positions and our profits. We tend to think that social and environmental considerations are ‘externalities’ rather than embedded in the current system.

**Expanded pragmatism** (EP) is the capability to think in terms of the consequences for self, others (including sentient beings) and future generations of life. It has much in common with idealism in that it considers the consequences for all life. It also has much in common with virtue-based ethics in that it is based on dialogue with those who are to be affected by decisions and with the rights of future generations in mind. The way to teach ethical thinking is to help people to learn through engaging in practical learning to address everyday challenges. This is action learning which Denzin & Lincoln (2011: 567) defines as a problem-solving technique that:

Engages people’s concrete experiences to explore the current situation, clarify the purpose of the organization and removing obstacles to achieve effectiveness and efficiency

Learners can be facilitated to engage in a self-reflection to assess what works, why and how and equally important what does not work and why. An action learning approach that supports ‘planning for country’ (Walsh 2002) can be used to explore how to care for country. It can be used to engage with all the stakeholders so they decide on areas of concern, frameworks and methods. Social and environmental justice are central to new participatory architectures for democracy and governance (Mertens 2016; Romm 2017).

The curriculum needs to enable learners to understand that living systems are interconnected. Human beings are linked with other animals and the land as a source of wellbeing. This is why Indigenous people say ‘we *are* the land’!

Rose (1996, 2004, 2005) explains in her publications and website how the land nourishes the body and that it is the best medicine. Without the land ‘as mother’ we face extinction (Gibson, Rose and Fincher, 2015).

We return to the land when we die. We rely on it for every breath we take during our lifetimes. Education needs to foster effective ecosystem management of domestic, liminal and so-called wild or natural habitat (Donaldson and Kymlicka 2011).

## ***B is for Boundaries That Support Social and Environmental Justice***

**Boundary** refers to policy decisions to protect a priori norms and a posteriori indicators which can be reframed through different conceptual constructions of the way in which relationships across the material and non-material world ought to be defined. Marin-Guzman (2017) has stressed that the ability to conceptualize and design ways to respond to challenges is the key contribution that human beings make to the world of work. Technology responds to design. ‘We are the boundaries’, as Donna Haraway (1992) reminds us. Boundaries can be open or closed, depending on whether inclusion or exclusion is considered to benefit the common good. Inclusive policy decisions as to whether to exclude or include depend on considering the consequences in the short, medium and long term, guided by considering the consequences for people and the planet. Only then can a line be drawn. Taking a policy decision is thus based on an ongoing policy process based on drawing and redrawing boundaries.

Thus post-national regions could only be achieved when nation states within a region agree on federalist-type arrangements that provide incentives for people *within the federation to balance individual and collective interests*. One of the ways to achieve this balance is to reward people locally in terms of a score card that measures the extent to which so-called wellbeing stocks (Stiglitz et al. 2010) spanning social, economic and environmental indicators based on ‘being, doing, having, giving and interacting’ (adapted from Neef 1991) are monitored from above and below (Keane 2009a, b). An early prototype has been developed and tested (McIntyre-Mills et al. 2014a, b).<sup>15</sup>

**Biodiversity** is the focus for a new approach to economics developed by Gunter Pauli (2010). He outlines more than a 100 ways to create opportunities through environmental thinking that does not privilege the environment at the expense of people. Instead his approach is to find ways to enable the unemployed to benefit through working on environmental challenges. His motto is: ‘There is no unemployment in eco-systems’ (Gunter Pauli 2010).<sup>16</sup> He stresses the need to provide integrated opportunities through design that taps into the abundant talent and environmental opportunities that can be found and to ensure that the designs protect both people and habitat. This is a systemic approach that could ensure that people come up with solutions that do not create binary oppositions between people and the

<sup>15</sup>[https://archive.org/download/pathway\\_DEMO\\_1](https://archive.org/download/pathway_DEMO_1) pathways to wellbeing  
<https://archive.org/details/VN860546> ethics and design

<sup>16</sup><https://www.speakersassociates.com/speaker/gunter-pauli> Accessed 20/12/2016

environment. It is unnecessary to argue that for people to flourish, the environment must suffer. Sustaining the social and environmental fabric of which we are part ought to underpin our policy designs for governance. Participatory action research on democracy and governance to enhance sustainable living and wellbeing are discussed in the ‘Contemporary Systems Series’ (McIntyre-Mills 2014a, b, 2017a, b, c; McIntyre-Mills et al. 2014a, b, 2017) which explores the suggestion made by Florini (2003) in *The Coming Democracy* that the Aarhus Convention (1998) on freedom of environmental information and participation could be usefully extended to support the nexus between sustaining human and environmental wellbeing and resilience.

Similarly, in Africa the elimination of indigenous fauna will have an impact on regeneration. The faeces of herbivores and omnivores fertilize the ground and are important for its regeneration.

South Africa needs to lead the way to regenerate education for Africa’s young people and their families. This requires a new narrative based on practical transformation using a trisectoral approach to development for social and environmental justice. This needs to be led by the people for the people. For this to occur, monitoring needs to occur from below and above.

Nature does not calculate cash flow. While we are obsessed with monetarization (to our own benefit) natural systems generate multiple revenue flows best measured in protein, drinking water, energy resources and defense systems. Nature produces benefit through the calculation of integrated benefit flow.... (Pauli 2010: 235–6)

The policy approaches and subsequent governance responses that have flowed from this misunderstanding can be characterized as not only an incorrect framing of the issue but also incorrect policy and governance that has been used by populists on the right and on the left for their own political agendas. A change in direction is needed.

Developing the cascade economy requires addressing policy to enhance representation, accountability and regeneration through reframing governance.

Instead of valuing profit, we need to think quite differently in terms of so-called *wellbeing stocks* (Stiglitz et al. 2010). Gunter Pauli (2010: 230–235) explains that natural systems do not work in linear ways. He stresses that they are ‘cyclical’ and that they avoid waste. When applying the notions of *wellbeing stocks* and *regenerative economics* to education policy it is vital to draw on diverse strands of experience for inspiration. A case is made in this chapter for changing the way in which we educate people in the interests of re-generating biodiversity in this generation and the next. Instead of building unsustainable schools and universities, a new approach is needed through a curriculum and infrastructure that supports education and training to protect scarce resources, prepare students in terms of literacy and numeracy and address the current challenges—namely, the need to feed and clothe a growing (unsustainable) urban population. A new transformational agenda is needed to meet the needs of young people and to prepare them in ways that protect and regenerate the environment on which they depend.

The chapter explores the different life chances across age cohorts and the need to ensure that the life chances of young people from low- or no-income families are

placed uppermost in the policy decisions. The so-called cascade economy conceptualized by Pauli (2010) is based on emulating nature. The following ideas (and more) are explained by Gunther Pauli (2010) and William McDonough<sup>17</sup> who developed the Hannover Principles to encourage better design for living in 1992:

Imagine a block of flat design to follow natural flows. Rain falls and is collected on rooftop gardens where rain tanks channel water for drinking; grey water can be used to flush toilets and filtered to be reused for growing food. Gardens could be extended to sides of building, on bridges across buildings and in basements. Natural materials could be used, such as mud, cow dung, thatch and bamboo. Termite mounds could be used as templates for designing air flow, and maggots could be used to process waste.

Those who live sustainably could be rewarded through measuring their low impact and be afforded points on a local government resilience scorecard that indicates transparently what a low footprint they have and the extent to which they are contributing to socially, culturally, economically and environmentally. Bonus points are rewarded in the form of social status advertised in the form of local government honours lists and in the form of a social and environmental wage for those who are actively engaged in protecting their local community and thus contributing to the 'one people and one planet philosophy'. Practical engaged citizenship is the way forward, but it needs to be promoted through immediate feedback to promote realistic rewards.

What are the views on consumption-related ethical decision-making in South Africa? The World Development Report (2017: 30) stresses that in South Africa there is resistance by some elites to moving towards renewable energy as it is perceived to impact their business interests in coal, for example. Focusing on the consumption of food energy and water, it seeks to understand how participatory democracy and governance may shape personal practice in regard to sustainable living. This participatory action research provides interdisciplinary theory and models on consumption across the public, private and business sectors on 'caring for country'.

This can be achieved by enhancing human development and the capability to be actively engaged in shaping the future. The difference between the natural system and the human capability system is that people do have choices. The capability to be destroyers of sociocultural, political, economic and environmental systems or creators is based on will and on values.

This remains an area that is vitally important, and it cannot be glossed over. Even though natural resources are limited, human beings have the capability to envisage a different future, but dreams need to be practical: people need to reuse and regenerate resources so as to eliminate waste. Pauli stresses that he does not see carbon as a problem as it can be used as a resource. Instead our wasteful, linear thinking is the problem. Economic performance is determined by the capabilities to maintain the cyclical ecological system or cascade economy. In a cascade economy,

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<sup>17</sup> [http://www.archdaily.com/804110/william-mcdonough-on-sustainability-carbon-is-not-the-enemy?utm\\_medium=email&utm\\_source=ArchDaily%20List](http://www.archdaily.com/804110/william-mcdonough-on-sustainability-carbon-is-not-the-enemy?utm_medium=email&utm_source=ArchDaily%20List)

production and consumption are efficient and effective in order to minimize waste of people and resources. Economic performance is understood as a flow that assembles ideas like the polymers assembled by the spider who weaves its web by reassembling the parts to form and re-form the whole.

The reuse and reassemblage of resources are encouraged to enhance the protection of living systems and ‘wellbeing stocks’ (Stiglitz et al. 2010) rather than emphasizing production. The *Planetary Passport* (McIntyre-Mills 2017a, b, c) is a means to maintain and regenerate wellbeing stocks. Production and consumption are indicative of GNP, but the focus is on maintaining human and natural resources. Boulding (1966) and Pauli (2010) distinguish between renewables and non-renewables. Stiglitz et al. (2010) stress that economic performance is less important than protecting the fabric of life on which we depend. But Pauli (2010) goes further than Stiglitz et al. to suggest that a paradigm shift is required to appreciate how economies can be seen as flows that abhor any form of waste. Thus wasted opportunities are important. Unemployment and social and environmental injustice are not externalities in this approach; they pose challenges for policymakers and academics who need to decide if they are going to be part of the problem or part of the solution. Praxis is not a spectator sport, and it needs to avoid being blind to the differing life chances that flow from being male, female, educated, uneducated, black, white, a citizen, non-citizen and able to communicate or unable to communicate with powerful decision-makers.

### ***C is for Culture, Caring for Country and the Common Good Rather Than Buying into Commodification***

**Cultural memory** refers to a practical record of what works, why and how to support living systems. It is rooted in respect for norms and values. First Nations remember their stories by referring to landmarks, rather than ink marks on a page. The plants, animals, rocks and rivers hold stories and act as memos for our thinking. Unlike societies who think only in abstract and record their ideas on paper in books, the Aboriginal sacred text is the land. They are its caretakers, and in ideal terms according to Rose (1996), they see some life forms ‘as family’<sup>18</sup> which makes all the difference as to how they relate to living systems. Memory can be coded in the landscape to help oral cultures to retain knowledge to enable them to survive and to thrive (Kelly 2016).

**Country**, an Aboriginal concept, refers to interconnected living rooted in integrated knowledge systems rooted in oral history, protected by law and a sense of awe and spirituality. Flannery (2010) stresses in *The Future Eaters* that the choices made on the elimination of local plants and animals will have a long-term impact on landscape. In Flannery’s (2012) Quarterly Essay on Australia’s extinction crisis, many wicked problems are raised in relation to our attitudes to stewardship. He explains

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<sup>18</sup><https://www.youtube.com/watch?v=qp3Ktlfy0Hw&app=desktop>

that we have eliminated many of the herbivores that previously fertilized the land with their manure and that introduced species often overgraze. As the land deteriorates and dries out, it becomes more vulnerable to bush fires. He then explains (2012: 54) the vital role of stewardship activities to achieve a balance between the needs of individual farmers and the collective responsibility to protect the land for future generations. Without stewardship we all become increasingly vulnerable. He criticizes the tendency to polarize green movements for narrow political agendas that privilege profit at the expense of the planet.

**Caring** is shaped by virtuous living which requires norms to guide thinking and practice. But it is also supported by measurements to ensure representation and accountability. One such way to ensure accountability is to measure the size of each household's consumption footprint. Footprints refer to the size of human impact on the environment. The Intergovernmental Panel on Climate Change (IPCC) formula shows that the excessive consumption of energy resources impacts on the size of our carbon footprint; this footprint is defined in terms of  $E$  (emissions) = population  $\times$  consumption per person  $\times$  energy efficiency  $\times$  energy emissions. This suggests that the privileged lives of some could lead to 'existential risk' for all forms of life on the planet (Bostrom 2011).

**Consumption** based on living simply and ethically and well versus **consumerism** to express status are based on very different values, and they have very different consequences for others and for the environment. **Commodification** refers to the process of treating people, plants and animals as sources of profit. Zavestoski (2002) has stressed the voluntary simplicity movements (Alexander 2010) such as post-materialism, slow living, eating local food, reducing energy usage, reusing and recycling only tend to occur when status needs have already been met. Paradoxically some of the changes become status-driven consumerism that can appear to be simple but often lead to change for the sake of appearance (Binkley 2008) and do not lead to greater levels of happiness.

The gap between rich and poor has grown wider than ever before in human history (Oxfam 2016). Now the 1% own more than the bottom 50% of people on the planet. But empirical research shows paradoxically that more equal societies do better in terms of achieving a range of social, economic and environmental indicators (Wilkinson and Pickett 2009). Higher levels of unhappiness lead to higher levels of addictive habits spanning food choices and what people tend to buy and why. When people have a sense of low status, they tend to consume status items for appearance sake and to alter the mind through drugs and food choices (Wilkinson and Pickett 2009; McIntyre-Mills 2008; McIntyre-Mills and De Vries 2011; McIntyre-Mills 2014a, b). Furthermore, addiction to meat (Donaldson and Kymlicka 2011), due to increasing population and the lack of agricultural land, is unsustainable as detailed below under opportunity costs to the next generation, and a move to vegetarianism or veganism would promote health and public wellbeing (Springmann et al. 2016).

**Consciousness** is explored in terms of the role it plays in how we think and how we value the social and environmental fabric of life. This shapes the conceptual, political and spatial landscape which in turn shapes our physical and mental wellbeing.

Can we train the mind to become more flexible and adaptable through public education and a sense of the sacred? Just as we aid thinking through mental exercise or we aid physical agility, perhaps we can work on the mind and body and increase our plasticity and flexibility across the life span.

**Complexity** refers to the number of interrelated variables facing us in our daily lives that can be viewed very differently depending on one's assumptions and values. The challenge for an education system is to enable learners to approach challenges with a raft of conceptual and practical skills that draw on diverse ways of knowing spanning the arts, sciences and spirituality.

### *D is for Democracy and Design*

This is Africa's century to show leadership in a world that *lacks* transformative leadership. Africa is rich in natural and human resources. The time is overdue to awake to the abundance and to draw on the potential. A constructivist approach to education in Africa is detailed below, adapted from Systemic Ethics for Social and Environmental Justice: Gunter Pauli (2010: 230–235) explains that natural systems do not work in linear ways. They are cyclical and abhor any forms of waste.

We know that Africa was treated as a place for extracting profit by a so-called plunderbund that colonized and divided Africa in the interests of European nation states. We also know, however, that researchers such as Frans De Waal have demonstrated that human beings evolved through our ability not merely to compete but to co-operate. Africa's legacy can be to not only teach but demonstrate a better way forward through demonstrating both the spirit of Ubuntu and what this means for regeneration of the humanity through showing how to develop a teaching curriculum that protects people and the planet.

**Democracy** began in what is now Syria as an agricultural area where co-operation and abundant food underpinned democratic decision-making (Keane 2009a, b). All democracies remain a work in progress. They require daily work, and without this constant monitoring, they deteriorate. The Occupy movement stressed the need for food security, a job and a voice to ensure that politics by the 1% for the 1% did not prevail. The narrative of competition for scarce resources has led to capitalism commodifying labour, land and life through extracting profit. The enclosure acts in industrial Britain led to privatization of common land and the commodification of life through genetic engineering and patent laws. It is time to change not only the narrative but thinking and practice through everyday life choices.

Democracy is flawed, and current forms are in need of revision, because voting is insufficient as a means to hold those in power to account. Unless people are able to have a say in framing the problem, democracy fails, because people have to vote for agenda's that are meaningless to them.

Bacchi (2009) stresses that the focus needs to be on 'what the problem is represented to be' and that voices of all need to be heard. This needs to occur in an

environment where people can speak out without fear or favour. This is what democracy is about, for example:

What is the good of making sure that fees have fallen if women are scared to walk to the library at night...? (Sesanti, 2016)

Participation in thinking through the consequences of choices in regular public engagement processes is important so that people think through the implications of their choices in the short, medium and long term.

The design of inquiring system (DIS) is a process that builds on West Churchman's work (1971, 1982) to enhance our capability to work with many different kinds of knowledge. It is a means to enable us to 'think about our thinking' and our practice and to enable us to 'join up the dots'. It applies dialogue to consider ideas with stakeholders through asking questions in order to unfold ideas and values and to sweep in the social, cultural, political, economic and environmental factors. West Churchman's student Werner Ulrich has design 12 questions which focus on what is the case and what ought to be the case, in order to guide better decisions. The stakeholders and the environment of the problem are considered carefully in the questioning process. This is vital for enabling people to think about their thinking and their practice and to move beyond 'either/or' thinking and practice to address diversity through design for decolonization.

To sum up, design needs to ensure that it matches the needs of those who are to use the design. For this to occur the people who are to be affected by the design need to have a say in the design process. All forms of communication need to be honoured in a design process. One of the considerations is that digital technology should not be over- or underused. Matching the right response in context needs to ensure that face-to-face communication and connection with others and the environment are not lost through becoming screen-focused.

Greenfield (2015) stresses in her recent book *Mind Change* that face-to-face communication in real time is needed in order to learn to read people's reactions in real time and to learn how to empathize. Importantly, Greenfield (2015: 21) cites a national trust report on 'nature-deficit disorder', a term coined to reflect the lack of contact children have with the natural world. She then describes in her chapter entitled 'Unprecedented times' how a ubiquitous screen culture is shaping our lives and reducing contact with others. Previously the shared TV screen did not have quite the same impact, because people sat around the screen and talked or shared a meal (albeit on trays). Now even that ritual which in itself limited conversation has been set aside so that family members can pursue their separate lives on their separate screens. Her research is guided by the following syllogism<sup>19</sup>:

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<sup>19</sup>Greenfield explores the implications of an excessively 'screen-oriented' daily life and what this will do to us as social beings who do not live in the everyday world. The work of Greenfield has been criticized as it is based on making sense of many interrelated variables rather than linear cause and effect research. Her approach can instead be regarded as exploratory and very important contribution to reading trends and making suggestions about future challenges. The relevance of this work for public policy and governance is central in planning for the future. Currently the social distance and power differences between service users and providers can be maximized if digital technology is used in ways that disconnect people.



the human brain adapts to the environment and the environment is changing in an unprecedented way, so the brain so the brain may also be changing in an unprecedented way. (Greenfield, 2015: xiii)

Internet usage has surged this has the potential to inform new information. Just as ‘cells that fire together wire together’ (Donald Hebb<sup>20</sup>, cited by Greenfield, 2015, p: 135) people that communicate face to face in real time learn to read facial expressions. People who have begun to lose their ability to connect with others through reading their emotions in real time and also their ability to connect with the natural world lose an appreciation that ‘no (wo) man is an island’ (to adapt John Donne’s epithet). We are dependent on others and on country. Without this face-to-face engagement in context, we cannot learn to care for one another or for the environment.<sup>21</sup> The number of people in the world who are digitally connected has risen to 40% in 2016, whereas in 1995 only 1% were connected.<sup>22</sup> But the divide between those who can afford to have not one but many means to connect and are able to afford broadband and who live in areas that are well serviced by Internet companies is deep in many parts of the world. The reality is that more than half of the population have some form of digital connectivity in South Africa.<sup>23</sup> And the numbers are growing which is in line with the international trend. In South Africa the number of people with access to the Internet and to learning online can be regarded as positive if it is used to enable learning to make sense of data and to critically review the material through thinking about the content and the context. My recent book *Planetary Passport* stresses the need to reward people who do the right thing in

<sup>20</sup> <http://www.historyofinformation.com/expanded.php?id=4361>

<sup>21</sup> Greenfield explores the implications of an excessively ‘screen-oriented’ daily life and what this will do to us as social beings who do not live in the everyday world. Excessive time spent on the Internet has implications for teaching and learning. She stresses that we need to engage critically with digital media as we have the potential to lose the capacity to engage in deep, concentrated abstract thought and to develop close empathic relationships in real time based on reading emotions and facial responses. The point Greenfield (2015: 33) is making is that ‘mind change’ is occurring based on a cluster of ideas from many disciplines and not just a single hypothesis. Similarly wellbeing is based on many interrelated ideas from different disciplines about how a changing environment is impacting on our identity and our sense of empathy and how we relate to others and the environment. Deep learning is not facilitated by using screens where a number of distracting links are created for the digital reader (2015: 45). Whereas so-called digital natives who have learned on screens may be able to do tasks and find information quickly, they do not necessarily do deep thinking about why things are the way they are. She explains as follows: “the theme of connectivity might be a good ending point for this current journey. We have seen that by connecting neurons in a unique configuration, the physical brain is personalized and shaped into an individual mind. It is these connections, the personal association between specific objects and people that give these objects and people special significance... Just as neural connectivity allows for the generation and evolving expression of a unique human mind, the hyper connectivity of cyberspace could become a powerful agent for changing that mind, both for good and ill...” (Greenfield 2015: 272).

<sup>22</sup> Estimate for July 1, 2016\*\* <http://www.internetlivestats.com/internet-users/>.

<sup>23</sup> **28,580,290**, Internet users in South Africa (2016\*), share of South Africa population, **52%** (penetration), total population, **54,978,907**, share of world Internet users, **0.8%**, Internet users in the world, **3,424,971,237**, Source: *Internet Live Stats* ([www.InternetLiveStats.com](http://www.InternetLiveStats.com)) Elaboration of data by *International Telecommunication Union (ITU)*, *World Bank*, and *United Nations Population Division*.

terms of their social, economic and environmental choices—not in terms of so-called ‘Klout’ scores (Greenfield 2015: 126) but in terms of recognition that values their contributions to protecting *wellbeing stocks*. This can be done by enabling people to reconnect with others in real time and space in safe spaces within local government organizations and approved NGOs.

The prospect of ‘Asperger-like’ behaviour is not far-fetched if we consider how much time is spent these days in front of individual (not shared) screens. If young people spend all their time learning online and communicating online, they will become less skilled in social interaction in real time. The ability to respond appropriately and with empathy is one of the ways in which humanity evolved (De Waal 2009). Finally, design for decolonization needs to foster regeneration. Sesanti (2016) stresses that the process and outcome of any redesigned or transformed university need to ensure that all voices (irrespective of gender) can be heard.

**Dualism** is based on thinking in terms of body and mind, us and them. It results in dividing self from other (including sentient beings) and from the environment. It also results in dividing thinking from practice. Ulrich and Reynolds (2010) distil the work of West Churchman’s DIS approach into 12 is/ought questions that help to shape boundary judgements when working with stakeholders and different kinds of knowledge (logic, empiricism, idealism, dialectic and pragmatism). As such it provides a guide for thinking critically and enhancing our capability to think about living systems and to consciously make decisions about how they choose to live. The DIS approach based on questioning the lines of inclusion and exclusion has implications for personal and public ethics, democracy and governance (see Ulrich and Reynolds 2010: 244).

### ***E is for Engagement with Diverse Stakeholders to Address Social, Economic and Environmental Justice***

**Engagement** with diverse stakeholders needs to address social, economic and environmental justice and extreme forms of consumption that undermine wellbeing and relationships. **Emergence refers to** the ability to escape the trap of our own thinking, to cite Vickers in Beer, 1994: 252: ‘the trap is a function of the nature of the trapped’. According to his theory of ‘recursive consciousness’, we are able to emerge from our entrapment through making connections and realizing that we have the capability to achieve transcendence as we become more conscious. One way out of the trap is to become more creative in our thinking and more open to learning from the environment, even if we do not mimic it!<sup>24</sup>

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<sup>24</sup>According to the biomimicry website: ‘Biomimicry is an approach to innovation that seeks sustainable solutions to human challenges by emulating nature’s time-tested patterns and strategies. The goal is to create products, processes, and policies—new ways of living—that are well-adapted to life on earth over the long haul. The core idea is that nature has already solved many of the problems we are grappling with. Animals, plants, and microbes are the consummate engineers. After billions of years of research and development, failures are fossils, and what surrounds us is the secret to survival’.

## ***F is Food, Friendship and Facilitation of a New Economy That Prevents the Financialization of Systems***

**Financialization** is the process whereby a monetary value prevails and shapes all decisions. ‘Knowing the price of everything and the value of nothing’ (Oscar Wilde in *Lady Windermere’s Fan*)<sup>25</sup> has become pervasive and can be said to characterize the worst aspects of capitalism. As a result of ‘mismeasuring our lives’, Stiglitz et al. (2010) stress that social and environmental wellbeing is eroded in a bid to develop profit. Instead we need to value the living systems of which we are a part and from which flow our wellbeing. **Flows** refer to the way in which human choices shape the landscape of our daily lives and need to be understood as part of the situated knowledges that are valued or discarded. What we choose to value is translated into being through our thinking and practice and reflected in ‘being, doing, having, giving and interacting’ (adapted from Neef 1991).

The scope of the new architecture for democracy and governance is to make a plea for a planetary passport to enable us to rethink boundaries and relationships at multiple levels of democracy and governance through applying multiple forms of intervention to protect living systems. The capability approach on which this approach rests is non-anthropocentric, and it provides a basis for addressing better governance to prevent discrimination against the majority of this generation and the next. Alternative ways of framing human-nature relationships in legal, ethical and spiritual terms are illustrated by the Bolivian<sup>26</sup> and Ecuadorean constitutions in line with their belief in Mother Earth or Pachamana.

Despite the fact that the rhetoric is undermined by the political reality of ‘business as usual’, it provides a first step. The next step is providing the necessary ‘planetary

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<sup>25</sup> <http://www.goodreads.com/quotes/390191-cecil-graham-what-is-a-cynic-lord-darlington-a-man>

<sup>26</sup> *The Guardian*, Sunday 10 April 2011 18.17 BST <http://www.theguardian.com/environment/2011/apr/10/bolivia-enshrines-natural-worlds-rights>. ‘Bolivia enshrines natural world’s rights with equal status for Mother Earth: Law of Mother Earth expected to prompt radical new conservation and social measures in South American nation’. The Law of Mother Earth, now agreed by politicians and grassroots social groups, redefines the country’s rich mineral deposits as ‘blessings’ and is expected to lead to radical new **conservation** and social measures to reduce pollution and control industry. The country, which has been pilloried by the USA and Britain in the UN climate talks for demanding steep carbon emission cuts, will establish 11 new rights for nature. They include the right to life and to exist, the right to continue vital cycles and processes free from human alteration, the right to pure water and clean air, the right to balance, the right not to be polluted and the right to not have cellular structure modified or genetically altered. Controversially, it will also enshrine the right of nature ‘to not be affected by mega-infrastructure and development projects that affect the balance of ecosystems and the local inhabitant communities’. ‘It makes world history. Earth is the mother of all’, said Vice President Álvaro García Linera. ‘It establishes a new relationship between man and nature, the harmony of which must be preserved as a guarantee of its regeneration’. ‘The law, which is part of a complete restructuring of the Bolivian legal system following a change of constitution in 2009, has been heavily influenced by a resurgent indigenous Andean spiritual world view which places the environment and the earth deity known as the **Pachamama** at the centre of all life. Humans are considered equal to all other entities’.

passport' that aims to inspire loyalty to the planet as well as acting as a monitoring system to protect living systems. Mbeki's inaugural speech as president of South Africa<sup>27</sup> stressed the importance of food security as a basic need:

Sleep cannot come easily when children get permanently disabled, both physically and mentally, because of lack of food. No night can be restful when millions have no jobs, and some are forced to beg, rob and murder to ensure that they and their own do not perish from hunger. Our minds will continue the restless inquiry to find out how it is possible to have a surfeit of productive wealth in one part of our common globe and intolerable poverty levels elsewhere on that common globe....

Innovation is needed to ensure Indigenous knowledge is preserved and that local seeds, Indigenous fauna and flora are included in African knowledge creation. The notion that a good meal is meat and three vegetables needs to be revised, even if it just acknowledges that Indigenous animals are better adapted to the environment than introduced species. The fact that cattle are dying of heatstroke is not an indicator only of the need to change the way in which we manage livestock; it is also necessary to think about what we eat and why. The high methane output of livestock impacts on emissions, so perhaps the wellbeing of living systems would be enhanced by eating more protein from pulses (Shiva 1989) and mushrooms (Pauli 2010).

The ability to work with many ways of seeing requires the ability to think about multiple texts and contexts and to develop a way to respect situated knowledges to the extent that the approaches do not undermine the rights of others or the environment. This can be achieved through a recognition of flows.

### *G is for Governance, Global Commons and Gender Mainstreaming*

**Governance** refers to working across conceptual and spatial boundaries to protect food, energy and water security. This is vital as a first step towards preventing poverty. Governance needs to address the big issues of the day, namely, poverty and climate change, by protect biospheres, rather than merely protecting national interests in a 'zero-sum' approach. Governance needs to be fluid, systemic and organic.

**Global commons** refers to earth, water, the air that we breathe and genetic material that is the basis of living matter.

The notion of nested overlapping governance systems that are responsive to the needs of both people and the planet are needed. The organic analogy of water provides a synecdoche for our hybrid or interconnected lives. Leadership in education to protect the global commons is as vital as policy leadership to promote diversity and gender mainstreaming for all, irrespective of stereotypes. An approach to analysis that helps to achieve this is based on Kabeer's social relations approach (see March et al. 2005), and institutional analysis provides the framework in which

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<sup>27</sup><https://www.theguardian.com/world/1999/jun/16/southafrica>

Nussbaum's capabilities approach can be analysed to ensure gender equity is achieved by institutions spanning the state, the market, civil society including the volunteer sector, the community and the family/kinship.

Just as friendship and love cannot be bought but are earned through the building of trust, so too local communities need to foster face-to-face connections and protection of the place which nurtures them and which they in turn nurture. All protection of the commons begins through recognizing our interrelatedness. So although some would say that water management can be the basis of addressing needs by measuring it, they would be correct only if the measurement processes are local, immediately transparent and not determined by; instead we need to be John Elkington's TBL.

Ulrich's systemic approach to governance—planning and decision-making—and Bacchi's questioning are the starting point for debunking control from above. According to Bollier and Helfrich (2012: xvii):

The commons is a 'discourse' which helps get us outside the market economy 'and helps us represent different more wholesome ways of being. It allows us to more clearly identify the value of inalienability—protection against the marketization of everything. Relationships with nature are not required to be economic, extractive and exploitative, they can be constructive and harmonious. For people of the global South, for whom the commons tends to be more of a lived, everyday reality than a metaphor, the language of the commons is the basis for a new vision of development....notwithstanding the longstanding smear of the commons as 'tragedy', the commons, properly understood, is in fact highly generative. It creates enormous stores of value...the commons tends to express its bounty through living flows of social and ecological activity, not fixed countable stocks of capital and inventory.

Bollier and Helfrich (2012: xii) go on to stress:

... We are commoners—creative, distinctive individuals inscribed within larger wholes.... As the corruption of market/state duopoly has intensified, our very language for identifying problems and imagining solutions has been compromised.... Such dualisms as 'public' and private and state and market and nature and culture, for example, are taken as self-evident. As heirs of Descartes, we are accustomed to differentiating 'subjective' from objective' and individual from collective as polar opposites.... Those either/or categories and the respective worlds we use have performative force.... The commons helps us recognize, elicit and strengthen these propensities. It challenges us to transcend the obsolete dualisms and mechanistic mindsets. It asks us to think about the world in more organic, holistic and long term ways....

The ontology of the commons is about the nature of reality and how it can be regenerated in the wake of the dualistic ways in which we have thought about ourselves, others and the fabric of life of which we are a part. Instead of emphasizing sustainability as a form of 'victory', we need to think of it in terms of 'interdependency' and 'relationship' (see Weber 2012, 12) and Butler's contribution in (Taylor 2010; Nussbaum 2006, 2011). To sum up, governance and democracy have to deal with three options pertaining to truth:

- One truth (monist) responses defended by grand narratives
- No truth (postmodernist) approached defended by relativism or conflict

- Mediated (cocreated) responses based on stewardship and testing out ideas with professional experts, people with lived experience of many kinds of knowledge, including an appreciation of animal knowing, which could be vital for enhancing our resilience

Held's *Global Covenant* (SD) and Shiva's on *Earth Democracy* provide a macro-level approach to protecting the global commons based on social democratic control to protect the common good and the global commons. The will to make a difference is the challenge (Held 2004: 33–34):

We may lack the will but it cannot be said that we lack the means .... What do we require to make a substantial difference to the basic wellbeing of the world's poorest? Again the statistics are available.... Required would be 6 billion per annum on basic education, 9 billion per annum for water and sanitation, 12 billion per annum for the reproductive health of women, 13 billion per annum for basic health nutrition.... These figures are substantial, but when judged against the major consumption expenditure in the US and EU they are not beyond our reach. Moreover if all the OECD agricultural subsidies were removed and spent on the world's poorest peoples this would release some 300 billion per annum .... In addition a small shift between military and aid budgets-900 billion and 50 billion a year globally would make a marked difference to the human security agenda....

The Sydney Peace Prize winner Vandana Shiva (2002) sums up the challenge for this century as one of preventing the commodification of life and stresses the need to learn from nature and across disciplinary specializations.

### *H is for Habit and Hybridity*

**Habitat** refers to the living spaces for human beings and other living systems that we share and on which we are mutually dependent in overlapping biospheres. 'Hybridity' refers to our interconnectedness and the need for better public education on understanding our shared rights and responsibilities to act as stewards of living systems of which we are a strand in the 'web of life' (Capra 1996). As human beings we have diverse origins, and we are dependent on many other forms of life (including domesticated and wild plants and animals) for our survival. Our relationships with other living systems can become increasingly detached in urban environments where people tend to forget that cities are dependent on ecological systems for survival. Three options underpin human behaviour, namely, co-operation, competition and a realization of our interconnectedness. This book argues for the latter. In the liminal spaces in which we live our shared lives, we need to find ways to live with human and biological diversity (see Donaldson and Kymlicka 2011). This involves creating opportunities to connect with others and the places where we live. Options for living need to be preserved and protected to enable (a) integrated co-located living so that human beings can live alongside other non-human animal species by protecting ecological habitat as spaces within cities and preserving (b) agricultural spaces as well as (c) conservation of separate wilderness spaces for fauna and flora. These three options support non-anthropocentric co-operation and interdependence based on recognizing the hybridity of all living systems.

### ***I is for Indigenous, Innovation, Integrated Responses and Access to Information***

**Indigenous people and indigeneity** are concepts that can empower or be used to disempower. Indigenous groups exist in different circumstances, some have political rights in the form of treaties or constitutional recognition, some have land rights (often hard won through years of litigation), and some have limited cultural rights and recognized limited political representation. Some have none of the above, some are not minority groups, but they have survived a history of colonization and prefer to see themselves as Indigenous. This is why the United Nations GA 2007, Resolution 61/295 of 13 September enables self-identification. This is certainly the case in South Africa where the majority African culture describes itself as ‘Indigenous’ not just the smaller minority groups like the San and Khoi. In South Australia leadership based on ‘speaking as country’ is a growing movement in recognition of Indigenous ways of knowing and being based on an appreciation of our interconnectedness. Innovation is the result of drawing on lived experiences to address local problems with local knowledge.

### ***J is for Justice and K Is for Knowledge Management***

**Justice** can be addressed through acknowledging the increased levels of inequality’ at a national and global through a design for social and environmental justice (Fig. 5.1).

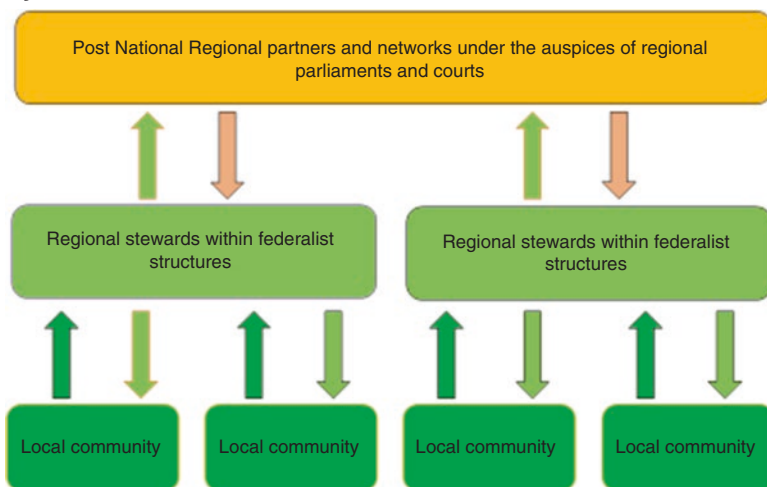
Justice can be served through better **knowledge management** to ensure that lived experience is documented shared with others. Étienne Wenger (1998) and Étienne Wenger et al. (2009) conceptualized communities of practice as a way to enable people within and beyond organizations<sup>28</sup> to form communities based on sharing ways to address an area of concern based on reciprocity. As a social anthropologist, he was aware of the anthropological research on giving and receiving. The idea that a ‘gift’ requires a return is widespread (see Marcel Mauss, 1990/1922, *The Gift*). Those who do not return information or assistance soon become more peripheral members of a situated community of practice.

Peter Senge (1990) develops a more ‘systems-oriented approach’ to learning and learning communities beyond the organizational context. He stresses the need for team learning based on specific skills that enable working across disciplines and pooling different skills.

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<sup>28</sup>Nonaka and Takeuchi (1995) centred on solving problems within the workplace and translating the tacit learnings into experiential knowledge that could give businesses a competitive edge. The quality learning circle approach in Japan enabled workers within the white goods industry of photocopy industry to rethink ways to extend their market share and thus preserve jobs.

## A way forward: laws to support social and environmental justice?



**Fig. 5.1** Architecture for social and environmental justice. Source: McIntyre-Mills (2017a, b, c: 344)

The notion that organizational culture either supports or undermines learning is increasingly relevant in positioning public, private and NGO sectors to respond to contemporary challenges.

The increasingly rigid approaches to management within organizations do not lend themselves to the creativity needed to address the current challenges.

We need to foster the ability to think about what, why and who is included or excluded. Matching the right design response to an area of concern is the challenge! This goes beyond merely thinking in terms of inputs, throughputs and outputs and thinking about the values of different stakeholders who view the same area of concern through different lenses. When the area of concern spans many interrelated variables that are perceived differently by stakeholders with strong emotional responses, it becomes increasingly challenging to find answers unless one adopts a situated approach to address the contextual needs of those who are going to be affected by a policy decision.

This is why a great deal of my research to date has been undertaken to address decision-making in terms of the principle of subsidiarity where decisions are taken by those with lived experience and (most importantly) by those who will be affected by the decisions in the short, medium and long term. More research is needed on closing the gap between Aboriginal and non-Aboriginal Australians, in order to describe and analyse how unemployment circumstances influence accessibility and affordability for housing and the likelihood of being engaged in some form of at-risk behaviour or violence. A range of social determinants of wellbeing and risk need to be explored by looking at the *Closing the Gap Report* as a context for



exploring the areas of concern raised by a purposive sample of service users and providers accessed through job clubs within the Southern Region and The Southern Domestic Violence Network. The challenge is to match public education across the life cycle to protect all age cohorts. Thus more policy research is needed to explore the life chances of socio-demographic groups by exploring the life chances of the elderly spanning the so-called Silent Generation (aged 72–92, born between 1925 and 1945), baby boomers (aged 53–71, born between 1946 and 1964), Generation X (aged 38–52, born between 1965 and 1979) and Generation Y (22–37, born between 1980 and 1995) and consider the challenges that will be faced by younger workers and the next generation who will need to address a very different set of employment conditions as members of Generation Z (aged 7–21, born between 1996 and 2010).

### ***L is for Leadership to Protect People and the Planet***

The pursuit of profit at the expense of people and the environment is a central problem for democracy and governance. Inspiration for leadership praxis to protect living systems can be drawn from leaders such as:

1. Wangari Maathai is the founder of the Green Belt Movement and Nobel Peace Prize winner and is invited to give the 3rd Mandela Lecture for her work in Kenya on protecting biodiversity. In her acceptance speech for the Nobel Prize, she discussed the importance of trees to protect the soil and the role they can play in engaging people to make small everyday changes by planting and protecting trees that in turn provide shade, prevent erosion and help to protect living systems. She tells of her life inspired by the clear river where she learned about transformation from tadpoles.
2. Thomas Piketty discusses the growing disparity between the rich and the poor and the need for greater transparency and tax accountability. Democracy and governance require new architectures on taxation and a more transparent society based on deepening democracy and better outcomes which he stressed in the 13th Mandela lecture.
3. Vandana Shiva is an ecofeminist leader who discusses seeds and water in terms of social and environmental justice. She is the winner of the Sydney Peace Prize.
4. Deborah Rose Bird is a social anthropologist who addresses the way in which colonial mindsets have resulted in the neglect of the landscape and the disrespect of Indigenous cultures. Her focus is on the need for multispecies ethnography and ways to care for country.
5. Donna Haraway whose work challenges policy boundaries by stressing that ‘we are the boundaries’ and we decide where to draw the line and what to include or exclude.

6. Gunter Pauli whose work stresses that the green economy does not protect the poor and that it is time for academics and politicians on the left to develop ways to end unemployment in a regenerated blue economy where there is no waste.
7. Martha Nussbaum is an essentialist, and although my work is about reframing, her approach to norms similarly extends the frontiers of justice to include sentient beings and those who are voiceless within current systems of government. She redraws boundaries in a bid to extend the frontiers of justice.

Currently governance and the policy that underpins it are becoming more and more conservative. It is time to do things differently if democracy is not to be further eroded.

### ***M is for Multiplier Effect of Social Engagement on Confidence, Memory Codes and Mindfulness of Multiple Methods***

Social engagement with one another to support social, economic and environmental sustainability and regeneration can be aided by weaving together the perceptions of a range of stakeholders. The role of landscape as a holder of stories or a library reminds us that our choices are written in the landscape. Mindfulness that our everyday decisions are written in the landscape is a good starting point for living ethically and well.

### ***N is for Nature, Narrative and Avoiding Narcissism***

The need to protect the natural environment by acting as stewards and to prevent 'existential risks' has been stressed by Bostrom (2011). This suggests that the privileged lives of some could lead to 'existential risk' for all forms of life on the planet (Bostrom 2011). This is evident in the different ways in which human services are provided and the way in which, for example, water and energy are consumed. For example, the Western Cape is suffering one of the worst droughts in several decades and has moved to level 3 water restrictions as the winter rains were particularly low. At the time the paper was written, the dams were at just over 20%, and no rains are expected until June/July 2017. This is the peak tourism season which adds to the water usage.<sup>29</sup> The drought has been accompanied by fires. An average of 99 fires per day raged in the Western Cape during the first half of January according to a

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<sup>29</sup>Cape Town's water usage up, despite calls to cut down <http://www.news24.com/SouthAfrica/News/cape-towns-water-usage-up-despite-calls-to-cut-down-20170111>, 2017-01-10 20:18. James de Villiers, News24: 'Dam levels are currently at 44.3%, having decreased by 5% since December 21. City of Cape Town spokesperson Priya Reddy told News24 in December that dam levels may become dangerously low...'

*Cape Argus* reporter (Latief 2016).<sup>30</sup> In a context of increasing anger concerning the lack of equity in social services, some have suggested arson; others suggest they could be the result of a combination of factors such as strong, dry winds that ignite unattended paraffin stoves in informal settlements. In the cape, for example, water insecurity is now a major challenge as dams run dry in May 2017.<sup>31</sup>

In South Africa droughts, fires and floods impact security and are linked with climate change. All public education on global citizenship ought to support understanding the notion of stewardship for current and future generations of life. A systemic approach is needed to address the IPPC formula that underpins the increased consumption in an increasingly urban way of life:  $E$  (emissions) = population × consumption per person × energy efficiency × energy emissions.

If the narrative is changed to value people and the planet, then policy needs to consider the three bases of power. Narratives can play a very important positive or negative role in transforming the way we live. The current grand narrative, namely, ‘capitalist economics’, can be changed through innovative imagination that presents alternative ways of ‘being, doing, having, giving and interacting’ (from Neef 1991). In *Planetary Passport* and *Transformation from Wall Street to Wellbeing*, an alternative narrative is posed (derived from small pilots) based on protecting local knowledge and inviting people of all ages to share lived experience on what works, why and how. Oral histories that explore themes that are of importance to local people can provide valuable sources of knowledge on how people thrive, suffer or survive in cities or in rural and remote areas (Table 5.2).

### ***O is for Opportunity Costs and P Is for Participatory Policy Design to Protect People and the Planet in Post-national Regions***

The opportunity costs of not reducing the size of our carbon footprints today is becoming more pressing, as stressed by François Gemenne (2015), director of the French Observatory for Climate Security at a workshop entitled ‘Security and Resilience in a Damaged Climate World’. The opportunity cost of not reducing our diet of meat<sup>32</sup> is one instance of associated costs, and we would enhance the health of people and the planet; according to Springmanna et al. (2016: 4146):

What we eat greatly influences our personal health and the environment we all share. Recent analyses have highlighted the likely dual health and environmental benefits of

<sup>30</sup> <http://www.iol.co.za/news/south-africa/western-cape/99-cape-fires-a-day-1970179>: ‘Cape Town—The City of Cape Town’s Fire and Rescue Service has responded to 495 fire calls since Thursday. ... which was an average of 99 incidents a day, an increase from the average of 69.5 in the first six days of the month. Of these, 428 were categorised bush, grass, and rubbish fires...’.

<sup>31</sup> <http://www.bbc.com/news/world-africa-40002770>

<sup>32</sup> <https://www.theguardian.com/environment/2016/mar/21/eat-less-meat-vegetarianism-dangerous-global-warming>

**Table 5.2** The three bases of power<sup>a</sup>

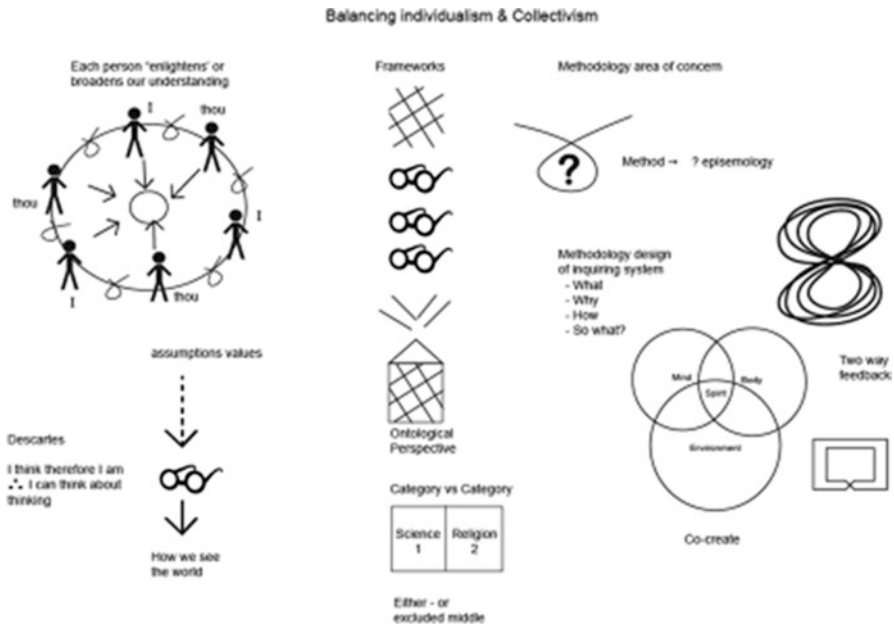
Trust	Power	Measurement
Face-to-face small subgroup, organization or community	Large organization, network or society	Abstractions need to take into account the perceptions of diverse stakeholders
Egalitarian community	Hierarchy and networks	Conceptualization extends the power based on inclusive measurements
Relationships based on reciprocity	Managed by social distance or social mobilization	Commodification for extraction of profit needs to be replaced with protection of wellbeing stocks
‘Equality matching based on reciprocity’ (Fiske 1992)	‘Authority ranking and equality matching’ (Fiske 1992)	Market pricing (Fiske 1992) needs to be replaced by wellbeing stocks
Communal sharing (Fiske 1992)	Authority based on a narrative of entitlement to enhance status, equality matching and/or the potential for violence (Fiske 1992)	Money as symbols of power ascribes value, based on measurement needs to be replaced with new symbols that value people and the planet
Stewardship to sustain a way of live	Extraction of resources based on structural violence entitlement	Extraction of profit based on structural violence and market pricing needs to be replaced by rewarding and regenerating people and the planet

<sup>a</sup>[http://www.sscnet.ucla.edu/anthro/faculty/fiske/pubs/Fiske\\_Four\\_Elementary\\_Forms\\_Sociality\\_1992.pdf](http://www.sscnet.ucla.edu/anthro/faculty/fiske/pubs/Fiske_Four_Elementary_Forms_Sociality_1992.pdf) Source: inspired by and adapted from Fiske, A. 1992. Four elementary forms of sociality

reducing the fraction of animal sourced foods in our diets. Here, we couple for the first time, to our knowledge, a region-specific global health model based on dietary and weight-related risk factors with emissions accounting and economic valuation modules to quantify the linked health and environmental consequences of dietary changes.

Policy refers to who is included and excluded in the decision-making on who gets, what, why, how and to what effect. Assumptions filter the way we see the world, which is why it is necessary to bring many diverse views to bear on an issue. Policymakers need to work with stakeholders in ways that explore their assumptions and values based on local, lived experiences of what works, why and how. This user-centric policy approach starts with the axiological assumption that local knowledge is relevant and that the intention of policy needs to privilege the perceptions of service users to the extent that their diverse ideas do not undermine the rights of others. The notion of balancing individualism and collectivism has been sketched out in McIntyre-Mills and De Vries (2011). The diagrams below explain that through participation we extend our boundaries of understanding and begin to appreciate that we are part of a living system. This becomes increasingly important in cosmopolitan city environments where people compete for resources.

Humanity has the power to shape the planet in ways that are positive or negative. In the era of the urbanized Anthropocene, we need to remember our dependency on



**Fig. 5.2** Hybrid methodologies presented conceptually: Source: McIntyre-Mills and De Vries (2011, Figure, 122, pg. 155)

nature. The ability to control based on ‘winners take all’ is problematic. The zero-sum based on ‘us them’, ‘people versus the environment’ and ‘nation state versus nation state’ makes little sense when we realize that we are part of ‘spaceship earth’ (Boulding 1966) and what we do to others we do to ourselves. This can be symbolized by means of a Möbius band which folds back in upon itself. It enables us to question the notion of boundaries by demonstrating continuity.

The systemic effects of greed are felt by current and future generations in the form of poverty and environmental degradation. If we learn to ask questions that help to extend our horizons and that help us to be serious about justice but to retain a sense of irony, then we will be able to appreciate that testing out ideas through placing them on the table for discussion is not a bad idea, provided we accept that we can be free and diverse in our opinions and assumptions to the extent that we do not undermine the rights of others to live. It is at this point, namely, to protect life, that the policy line needs to be drawn (Fig. 5.2):

Policy based on idealism is a non-consequentialist and deontological or duty-based approach and is shaped by moral law. It is a priori, because the moral law sets out one’s duty, based on *prior* decisions on what constitutes ethical behaviour. The test for the moral law is the being prepared to live with the decisions as if they were to be applied to oneself and one’s own children. The policy implication is the need to develop our human capabilities as (Nussbaum 2006) to think differently about human capabilities. This requires caring for people and the planet and becoming

less anthropocentric. Policy for representation and regeneration needs to be responsive in terms of content, context, structure and process. It needs to be guided by norms and measures that protect many ways of knowing spanning the arts, sciences and spirituality.

*Planetary passport* is a constructivist project to imagine an alternative based on a small pilot completed in Australia and one in its early stages in Indonesia that provide lessons for transformation. It refers to a new architecture for democracy and governance informed by non-anthropocentric Indigenous perspectives to promote an appreciation that protection of people and the planet requires working across national boundaries and ensuring that the social contract is extended to protect non-citizens and the environment on which we depend.

The ability to work with many ways of seeing requires the ability to think about multiple texts and contexts and to develop a way to respect situated knowledges to the extent that the approaches do not undermine the rights of others or the environment. Postcolonial, transformative education needs to foster Indigenous capabilities to protect people and biodiversity. The aim of public education is to enable people to re-evaluate economics and to become more aware of the way in which we neglect social and environmental aspects of life. The pursuit of profit at the expense of people and the environment is a central problem for democracy and governance.

Instead of valuing profit, we need to think quite differently in terms of so-called wellbeing stocks (Stiglitz et al. 2010).<sup>33</sup> Pauli (2010: 236) then goes on to explain that the costs of the linear economic model cost inputs, throughputs and outputs and externalize costs to society and nature and it does not disclose the opportunity costs to future generations of life. Sustainable local community is determined by a sustainable region in which food, energy and water supplies are considered as major determinants for wellbeing. No community can be expected to transform from a high-carbon lifestyle (or aspiring to this lifestyle) without feeling part of the design process and owning the decisions as to how resources should be used. But if young people can be enabled to tap into 'eco-facturing' in a 'cascade economy' (Pauli 2010) based on finding sources of abundance in nature and in the misdirected systems (Ackoff and Pourdehnad 2001) created by the current economy, then new

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<sup>33</sup> Stiglitz et al. (2010: 15) use a multidimensional measure of wellbeing. Arguments for and against the national, transnational and supranational organizations have been raised by idealists, pragmatists and realists. A way to bridge the divides is through expanding pragmatism to consider the consequences for current and future generations through addressing wellbeing and developing governance systems to ensure that stocks for the future are developed through limiting the way in which production processes and distribution practices benefit the minority at the expense of the majority. Instead of opting for the liberal market economy, it is possible to create a completely different economy based on an alternative approach where, for example, building materials are grown, collected, distributed and used for the production of sustainable housing, sustainable food, health care drawing on natural remedies and biomimicry in low-carbon economies.

The aim of the concept of wellbeing stocks is to enable people to re-evaluate economics and to become more aware of the way in which we neglect social and environmental aspects of life. The pursuit of profit at the expense of people and the environment is a central problem for democracy and governance.

possibilities can be created. Pauli (2010: 79) citing Peter Drucker stresses that ‘the needs of the poor are opportunities waiting for entrepreneurs’. Furthermore the contributions made by those who live simply and well need to be demonstrated and recognized in their planetary passport (McIntyre-Mills 2017a, b, c). If we are prepared to recognize opportunity, the potential for resilience and also our mutual vulnerability, it provides a basis for stewardship. We are all reliant on others and need to be able to depend on our connections with others in a cascade economy. What if we could recognize our vulnerability, and what if we could foster a sense of caring for others that recognizes our humanity and our mutuality? Instead of opting for the liberal market economy, it is possible to create a completely different economy based on an alternative approach where, for example, building materials are grown, collected, distributed and used for the production of sustainable housing, sustainable food, health care drawing on natural remedies and biomimicry in low-carbon economies.

Education policy needs to be inspired by original thinkers such as Professor Wangari Maathai (2004a, b) who stressed in her 3rd Mandela Lecture:

There are simple actions we can take. Start by planting ten trees we each need to absorb the carbon dioxide we exhale. Practice the 3R campaign (reduce, re-use, repair and re-use, which is *mottainai* in Japanese), get involved in local initiatives and volunteer your time for services in your community. Governments should prioritize technical schools and give people knowledge and skills for self-employment.

Deborah Rose Bird stresses the importance of appreciating Indigenous understandings of nature.<sup>34</sup> This approach could help us to understand what Gunter Pauli (2010) meant by the following statement:

... While we are obsessed with monetarization (to our own benefit) natural systems generate multiple revenue flows best measured in protein, drinking water, energy resources and defense systems. Nature produces benefit through the calculation of integrated benefit flow.... (Pauli 2010: 235–6)

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<sup>34</sup>To what extent is there a divide-and-rule approach? To what extent are people excluded from participation? Who are the excluded? What is the basis for their exclusion? Is ‘might’ confused with ‘right’ when making decisions? To what extent are the terms of references limited and controlled by in the interests of the entrenched power elites? See <https://www.youtube.com/watch?v=qp3Ktlfy0Hw&app=desktop> <https://www.youtube.com/watch?v=suSbvoAw0g4>.

What does Deborah Bird Rose mean by the colonization of the land and the mind?

- Caring for country? Gift of country?
- What does she mean by *multispecies ethnography*?
- What does she mean by the human/nature divide?
- What is the implication for ethics and public administration?
- What does she mean by species extinction?
- What is the relevance for current policy decisions?

Please watch and then think about responses to the questions.

- <https://m.youtube.com/watch?v=suSbvoAw0g4>
- <http://umaincertaantropologia.org/2013/08/17/the-emergence-of-multispecies-ethnography-cultural-anthropology/>
- What are the implications for human/animal habitat in South Africa?

Pauli (2010: 236) then goes on to explain that the costs of the linear economic model cost inputs, throughputs and outputs by externalizing costs to society and nature. In this way the traditional linear economic model shifts the burden of the costs (without revealing the opportunity costs) to future generations of life. See <https://www.youtube.com/watch?v=sLh-U99avso>, <https://www.youtube.com/watch?v=sLh-U99avso>.

- In many ways the visionary work has blind spots associated with gender mainstreaming within the political contexts in which he operates. In what ways are the examples of coffee production also support protein from waste appropriate in Zimbabwe? In what ways is the construction of a building based on termite construction inspirational?
- What are the implications of developing opportunities by and with people at the local level without addressing the issues of state capture?
- What are the issues associated with overcoming boycotts?
- What is the problem associated with being apolitical?
- How can the regenerative approach maintain agency whilst remaining critical? In the environment there is no waste, because what is waste for one is food for another. But let me caution that although in nature this is a way to foster diversity, because it provides multiple niches and habitats.

However, in the social context, it is necessary to take the analogy of living carefully in ways that reuse and recycle so as to support creating something worthwhile out of waste.

To enable lifelong engagement by active citizens requires action learning to address areas of perceived policy concern.

In this contribution (drawing on McIntyre-Mills 2014a, b, 2017a, b, c), the approach is developed to incorporate ‘wellbeing stocks’, a concept adapted from Stiglitz et al. (2010: 15) to refer to a multidimensional measure of wellbeing spanning:

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.

The aim of the concept ‘wellbeing stocks’ is to enable people to re-evaluate economics and to become more aware of the way in which we neglect social and environmental aspects of life. The pursuit of profit at the expense of people and the environment is a central problem for democracy and governance. Transformative education needs to address the areas of concern, namely, representation, accountability and regeneration through reconsidering relationships with others and the land. In education this can be fostered through encouraging 3 levels of learning about environmental citizenship, as follows:

### **Level 1**



- Working adequately within one paradigm but without the ability to think about the limitations of thinking in terms of only one framework

### Level 2

- Comparing citizenship and other concepts across different contexts such as across time and place

### Level 3

- Reframing citizenship and what it means to serve people and the planet based on understanding that we have three options for human behaviour, namely, competition, co-operation and a realization of interdependence

## ***Q is for Questioning and R Is for Realistic Utopianism Based on Representation and Regeneration***

Questioning the consequences of our choices for human beings and other living systems is a central concern for policymakers. When we reconsider the boundaries of what constitutes knowledge, we need to realize that the capability to design responses to areas of concern rests on our ability to ask questions based on considering ‘if-then scenarios’ so that participants think carefully about the consequences of their policy choices when they vote.

Representation, accountability and regeneration remain the greatest challenges for democracy and governance. Thomas More in his book *Utopia* suggested a universal wage. This idea, suggested many centuries ago, is beginning to find supporters in Finland and Scotland (Anthony 2017; Bregman 2017; Crace 2017), where it is understood that spending welfare funds in preventative ways makes sense at a time when more and more people are no longer in full-time employment and are unlikely to every achieve full-time employment as a result of the transformation in work. The notion that people should be paid for volunteering to support people and the planet is no longer far-fetched.

Rorty (1999) stressed that the Left needs to focus not merely on identity politics (which remain important) but that they also need to create jobs. When employment is no longer what it used to be, new forms of meaningful and valued activity need to be created. This is where the ‘being, doing, having and interacting score card’ linked with local government could play a role in the way suggested in *Planetary Passport* and *Transformation from Wall Street to Wellbeing*.

Current social and economic agendas need to focus on ways to support the current and future generations through focusing on living systems and ways to regenerate life in rural, regional and urban areas. An intersectional approach addresses structures and social demographics spanning age/gender/sexuality/culture/language.

To rescue the enlightenment from itself (McIntyre-Mills 2006), we need to remember that good questions can only be asked when conceptual systems are open so that we can listen and cocreate new narratives:

The systems approach begins first when you see the world through the eyes of another  
 .... There are no experts in the Systems Approach .... (McIntyre-Mills 2006 citing Churchman 1968)

A sense of irony is evident in West Churchman's approach which is a good starting point for not taking oneself too seriously, in order to be open to listening to others. This is not to deny the importance of values or being concerned about issues, but it does require being open to hearing the ideas of others. Values and assumptions are the very essence of what it is to be human. Churchman is playing on the notion that our assumptions and values make us human. Our values can also shape what we regard as acceptable and unacceptable. The same holds true for other human beings.<sup>35</sup>

Transformational education needs to be underpinned by participatory democracy and governance<sup>36</sup> for regeneration and job creation. Regeneration refers to feeding forward support for future generations through restoring the social and environmental fabric. Regeneration refers to nurturing young people, their community and the environment on which they depend.

The so-called rational enlightenment agenda has created a sense of entitlement and rights without a sense of responsibility by the elites who have benefited from the system. It also could make it clear which sectors of the global population are able to contribute socially, culturally, economically and environmentally through measuring their contributions and demonstrating the extent of the responsibility.

The contribution made by West Churchman (1971) remains relevant. We can be free and diverse to the extent that our freedom and diversity do not undermine the rights of others. The nation state has not protected the global commons or ensured social justice for all.

Participation through awareness and consciousness-raising (McIntyre-Mills 2010) will influence the way in which people think about boundaries. It could help them to remake connections with others and the environment through valuing the environment and engaging in healthy relationships (Wynne 1996). It is based on the notion of neural plasticity in that the brain shapes the environment and, in turn, is shaped by the environment (Bateson 1972; Beer 1994; Capra 1996; Greenfield 2000).

New designs need to foster learning that factors in the need to take living systems into account and to reconsider our place within learning systems. Human beings have controlled and determined the landscape of knowledge.<sup>37</sup> The more

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<sup>35</sup> Vogel, E., Meyer, C. and Eckard, R. 2017. <http://theconversation.com/severe-heatwaves-show-the-need-to-adapt-livestock-management-for-climate>

<sup>36</sup> It also honours the policy environment that stresses the need for a sense of ownership of a problem and the way in which it is framed. Thus the Paris Agenda, the UN Sustainable Development Goals and the Paris Climate Change Agenda are taken into account in this approach to governance. Developing the cascade economy requires addressing policy to enhance representation, accountability and regeneration through reframing governance. Instead of valuing profit, we need to think quite differently in terms of so-called wellbeing stocks (Stiglitz et al. 2010). Gunter Pauli (2010: 230–235) explains that natural systems do not work in linear ways. They are cyclical and abhor any forms of waste.

<sup>37</sup> 'What if' a curriculum for vocational learning were to apply the policy ideas of Wangari Maathai, Thomas Piketty, Vandana Shiva or Deborah Bird Rose who show leadership through reframing policy? In *Planetary Passport* (McIntyre-Mills 2017c), I argue that the global financial crisis and

powerful members of society become the custodians and determine what constitutes knowledge.

But we also need to realize that democracy needs to ensure that structures are in place to hold the powerful to account and to ensure that constitutions provide the structures that support respectful dialogue that makes the best use of different kinds of knowledge and that human knowing needs to be considered as a double-edged sword. We have shaped the planet in ways that are no longer sustainable, and it is time to appreciate that we are merely a strand within a web of living system

Policy refers to who is included and excluded in the decision-making on who gets, what, why, how and to what effect. Policy needs to be ‘tried out’/piloted through ongoing learning. Policymakers need to work with stakeholders in ways that explore their assumptions and values based on local, lived experiences of what works, why and how. This user-centric policy approach starts with the axiological assumption that local knowledge is relevant and that the intention of policy needs to privilege the perceptions of service users to the extent that their diverse ideas do not undermine the rights of others.

### *S is for Spirituality and Stewardship Informed by a Systemic View to Protect Multiple Species*

**Spirituality** refers to the sense of the sacredness of living systems and that human beings are part of a continuum of life based on an appreciation of our interdependency. A ‘systems view’ refers to the notion that human beings are a strand in the ‘web of life’ (Capra 1996). Exclusive politics will prevail for as long as people think in terms of zero-sum paradigms, rather than comprehend that they stand or fall together and that we are co-determined by the environment of which we are a part.

The concept **species** is a central concern in relation to the issue of categorization, membership, displacement and decision-making (in terms of state sovereignty, territory, colonization and its implications for human, animal and plant life). Urbanization encroaches on the wild spaces and displaces other forms of life. Relationships that are anthropocentric need to be reframed to enable regeneration and sustainable living that is non-anthropocentric. The contributions made by Donaldson and Kymlicka (2011) to animal rights through exploring our relationships with other animals need to be given centre stage in redressing current political impasse in animal rights.<sup>38</sup> Donaldson and Kymlicka (2011, 253) cite scholars who

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the environmental melt down seem to be seen as two problems—not one. Human beings cannot achieve new growth through increased extraction of profit. Instead, they need to live elegantly and well through redistribution and simpler lifestyles supported by green economies, reciprocal sharing of resources and skills in green communities, supported by energy efficient systems.

<sup>38</sup> Thus *Planetary Passport* (McIntyre-Mills 2017c) on which this paper draws makes a case for recognizing our hybridity and interconnectedness. The attitudes to animals have been shaped by the ‘us/them’ and ‘zero-sum’ approach, and it is now applied to human beings who are unwanted.

think that the collapse of habitat and food resources will occur first and then the ethical choices will change. They re-emphasize that by 2025 there will be insufficient water and land to support meat eating and that meat diets are unhealthy. Surely if all that separates us from other primates is a small percentage of the genome, then we need to respect our connections with other creatures, and we need to take seriously the contribution we should be making as stewards of the environment and other creatures by recognizing and appreciating the biodiversity of which we are a strand. We are human animals, who have rights and responsibilities to care for humanity and other species as we are one strand of a living system.

**Sustainability** refers to a sustainable local community which is determined by a sustainable region in which food, energy and water supplies are considered as major determinants for wellbeing (see McIntyre-Mills 2014a, b, 2017a, b, c and McIntyre Mills et al. 2014a, b).<sup>39</sup> This paper makes a plea for leadership to support regeneration based on a recognition of who we are and goes beyond sustainable development (Girarde 2015).<sup>40</sup> We are human animals, who have rights and responsibilities to care for humanity and other species, as we are one strand of a living system. Sustainable living extends ‘the less is more’ approach to supporting wellbeing for this generation and the next by ‘being the change’. Physical and conceptual space is considered to be integrated. Time is perceived to be constructed as ‘we are the land’.

In a place called ‘Middleville’ (a pseudonym) in South Australia, those without the means to install new technology stressed the need to provide subsidies for building codes to ensure the quality of accommodation for all (see *Planetary Passport*, McIntyre-Mills 2014a, b, 2017a, b, c). Those who rent and are unable to afford to purchase their own homes—are at a disadvantage. Few fit into the ideal of sustainable living. But the overlaps across all three include a willingness to save energy and water—driven by price, fines and user standards that are determined by the public sector. Installing energy-saving devices and expenditure on new technology is the

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<sup>39</sup> In this book we stress that no community can be expected to transform from a high-carbon lifestyle (or aspiring to this lifestyle) without feeling part of the design process and owning the decisions as to how resources should be used. Young people (Osler and Starkeyb 2005), the disabled, asylum seekers and sentient beings (Nussbaum 2006) along with future generations live ‘precarious lives’ (Butler 2005). Those perceived as different are not protected (Butler’s work stresses ‘the need to rethink the human as a site of interdependency’). She emphasizes that humanity needs to be able to ask for assistance and we need to be able to anticipate that we will be heard and that people will respond with compassion. Do we wish to live in a world where we do not want to help one another and in which we deny the pain of sentient beings? (Butler 2011) If we are prepared to recognize not our resilience, but our mutual vulnerability, it provides a basis for stewardship. We are all reliant on others and need to be able to depend on our connections with others. Held et al. (2005) proposed that the core challenges of the day are to address the vast differences in the standard of living between the rich and the poor. The problem is not only one of externalities that are not factored into calculations of the degradation to the environment; it is a way of thinking and ‘being in the world’ that shifts the extraction of profit to where labour is cheaper and where governments and citizens are less likely to complain about degradation of environment. Short-term profits are made at the expense of future generations.

<sup>40</sup> <http://www.theguardian.com/sustainable-business/blog/sustainability-unhelpful-think-regeneration>

main way in which the groups who favour business as usual adapt to rising temperatures and the rise in energy prices. Small adjustments are characterized by being prepared to make material changes if they can afford to do so. Capability to think in terms of multiple factors is vital for enhancing our human capabilities to adapt to climate change and to mitigate the worst effects—thus making us more resilient, whether we live in areas threatened by drought, flood or other dramatic climate change events.

Adaptation usually means adapting to *the effects* of climate change at the local level, which requires awareness, whereas mitigation usually means responding to *the causes* through changing policy on emissions. However, the latter requires adaptive responses to new policy and governance requirements. Adaptation is through reducing the effects of emissions through spending money or living differently, whereas responding to heat, for example, involves installing air conditioning. The weightings given to perceptions were obtained by analysing data from a matrix spanning the following snapshot of factors downloaded from the publicly accessible software in June: for example, these are the findings on 1/07/2012, but the research is ongoing and the data set continues to grow as it is extended.

There is little doubt that accelerated climate change will adversely affect food security and sustainability. My work looks at rapid levels of urbanization and the implications for living in cities (Rees and Wakernagel 2008) by comparing and contrasting attitudes in Australia and Indonesia. The threats to human security will increase (Flannery 2005; Pretty 2013; Stern 2007; Stiglitz et al. 2010)—particularly if we continue to consume in rapidly urbanizing cities at current rates (Davies & World Institute 2008)—resulting in significant impacts on the size of our ecological footprints.

The impact of climate change has been underestimated (Lovelock 2009; Rockström et al. 2009), and local solutions have been overlooked. The aim of the public policy and administration research is to explore the following hypothesis: The greater the level of public participation, the greater the understanding of UN development goals. It addresses the UN Sustainable Development Goals and targets through building the strategic capacity of people to understand ecological citizenship rights and responsibilities and the implications for self-managing their ecological footprints with reference to personal decisions about food, energy and water choices as they relate to human security. The emphasis (in line with the UN) is to address healthy lives and promote wellbeing for all at all ages through inclusive and equitable public education through promoting lifelong learning opportunities for all to address gender equality and to empower all women and girls. It strives to address ways to ensure access to affordable, reliable, sustainable and modern energy for all in environments that are inclusive, safe, resilient and sustainable.

The emphasis is on the most marginalized and focusing on ways to protect the poor and the affected communities, focusing on women, youth, local and marginalized communities to understand mitigation and adaptation processes.

**Social contract** refers to protection of citizens within the boundaries of a nation state. According to the United Nations High Commissioner for Refugees, Guterres (UNHCR 2014), for the first time since the Second World War, the global figure for displaced persons has now passed 50 million, and, by 2050, this figure could be as

high as 150 million (Rusbridger 2015, 13). And yet the needs of the displaced are not addressed through the current architectures of democracy, governance and education. Surely it is time to reframe the social contract and to support public education to enable people to join up the dots.

**Systems view** refers to the notion that human beings are a strand in the ‘web of life’ (Capra 1996). Paradoxically the production of electricity from coal, gas and oil is ineffective as it uses too much water and it produces too many emissions; according to Waughray (2017):

This is why the World Economic Forum [belatedly] encourages a systems approach to solving environment and economic problems—a strategy Flannery that brings together all the right people across government, civil society and business....to jointly explore and resolve these food-energy—water, climate growth conundrums....

### *T is for Transformation*

Transformation in worldviews is needed to move away from us/them dualism, because dualism results in a ‘zero-sum approach’ that is expressed as competition across species, classes or sovereign states. Social and environmental justice needs to be based on a recognition that we are part of one web of life, that we are interdependent and that all sentient beings have rights. As stewards, human beings have the additional responsibility to care for the land on which we all depend.

The threat of unemployment as a result of lack of relevant skills is one that needs to be addressed through enhancing the ability of people to design responses to areas of concern.

Refugees face xenophobic responses in South Africa and elsewhere. All people require representation and justice, not only the citizens of nation states. Migration is likely to increase with climate change, but this is likely to be within and across national borders. The way forward is to prevent the need for migration as a result of worsening droughts and floods. This requires not only adaptation to the consequences but mitigation of the consequences.

The policy proposal for the South African context is to develop more educational institutions that focus on teaching design skills from primary to secondary and tertiary level based on the blue economy and biomimicry in ways that draw on the lived experience of the learners. In rural and regional areas, the local plant materials, for example, could be used for developing a range of products spanning pharmaceuticals, cosmetics, cleaning agents, building materials, fabrics, plant dyes, paper and biodegradable plastics, to name but a few examples. In urban developed areas, the blue economy could be used to recycle and reuse materials for building sustainable housing powered by sustainable energy and supplied with carefully collected rainwater to support indigenous plants wherever possible in the urban environment. Kirstenbosch Gardens have provided an area dedicated to plants that can be used for medicinal purposes to inspire members of the public. The opportunities for more



Fig. 5.3 Educational signs on plants can help to inspire creativity

public education to protect natural wellbeing stocks need to be encouraged; here are just a few examples:

Kirstenbosch provides plant information on fresh ‘iboza’ leaves for coughs, ‘sour figs’ for pregnant women and ‘aloes’ for stomach aches and a range of skin disorders, whilst natural grasses and clay can be used for affordable, sustainable housing, utensils and clothing. The potential for research and development are highlighted along with the need to protect the natural resources for all South Africans (Fig. 5.3).

I propose that an additional subject on critical systemic thinking and practice from early childhood to secondary and tertiary level schools is developed supported by online materials and trained teachers able to foster praxis, along with apprenticeships from the age of 16, ongoing education until 18 and then full-time employment opportunities linked with a series of education and vocational hubs spanning rural, regional and urban areas.

**Transformative**<sup>41</sup> education for South Africa needs to be based on critical heuristics and pragmatic action learning to address practical areas of concern based on questioning and an ‘ecological mindset’ (Bateson 1972). This means working to

<sup>41</sup>Transformative approaches (Mertens et al. 2013; Mertens 2016) refer to assumptions about power, the value of indigenous knowledge, the need to make life chances and the lack of life chances visible and the need to develop trusting relationships that are responsive to complex needs. Some steps can be made towards protecting the commons by addressing so-called wellbeing stocks (a concept developed by Stiglitz et al. 2010:15) to refer to a multidimensional measure of wellbeing spanning: ‘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’.

achieve transformation from level 1 learning based on thinking in terms of a specific paradigm to level 2 learning based on making comparisons to level 3 learning that fosters thinking creatively and making changes to protect and regenerate the environment. The process for education of this type is based on listening and thinking in terms of the short, medium and long term. Worldviews need to be transformed through the will to identify with *others* and the *environment*. Habitat refers to the *living spaces* for *human* beings and other *living webs* (Capra 1996) on which we are mutually dependent in overlapping biospheres.

Praxis to protect wellbeing stocks can be fostered through ongoing engagement that is rewarded at the local level. The greater the level of participation in decision-making, the greater the level of understanding and greater the level of support for policies that support social, economic and environmental wellbeing—but online engagement is meaningless unless it is linked with contracting, positive and negative rewards at the local level. A planetary passport can be used to enhance distributive, decentralized democracy and governance through engaging people to think through the implications of their choices in ‘if-then scenarios’ in terms of thinking about what they have, what they need, what they are prepared to add or discard from their lives, what the barriers are and what local resources can be used to support and protect social, economic and environmental wellbeing stocks. This is an active form of democracy which goes beyond merely voting without thinking about the consequences of decisions in the short, medium and long term.<sup>42</sup>

### *U is for Ukama for Universal Wage and Vocational Education*

Increased urbanization and education based on the ‘misdirected system’ (Ackoff and Pourdenand 2001) of neoliberal economies simply focus on doing the wrong thing right. It is estimated that with 65% of the South African population living in cities,<sup>43</sup> this will cause an increased sense of disconnection from the land which poses a threat, in terms of how we respond to others and the environment. In the most immediate sense, it poses a threat for food security (Battersby and Crush 2014; Crush and Fayne 2011; Frayne et al. 2014). Vertical democracy through elections has resulted in the election of elites who then lose connections with the people and

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<sup>42</sup>Source: McIntyre-Mills, et al. 2014a, b pg57 to address haves, needs, what people are prepared to change (by adding or discarding material and non-material factors), turning points for the better and worse, barriers and resources. [https://archive.org/download/pathway\\_DEMO\\_1](https://archive.org/download/pathway_DEMO_1) pathways to wellbeing.

<sup>43</sup>Urbanization poses a systemic threat to quality of life and has implications for policy. Food deserts are the likely scenario if more emphasis is not placed on balance, greening cities and supporting small farmers. It has been wrongly assumed that growth in the economy will sustain a growing population. During my sabbatical I attended workshops or held conversations with colleagues at Living Hope, Embrace Dignity and Africa Tikkum in Cape Town. The concerns they raised were for food security and how it relates to educational and employment opportunities for all especially young people.



the land. So the future lies in participatory democracy and more direct interventions for regeneration.<sup>44</sup>

Regeneration needs to be based on African perspectives of being a person through other people and through appreciating our dependency on all living systems. This is a sense of stewardship that honours living systems. In a context where people are not fully occupied in employment, they will need to be paid a social wage linked with volunteering to protect people and the planet. The social and environmental impact bond could be suggested as a way forward to protect and regenerate the planet. Casualization and unemployment are increasing globally. In Australia 30% of the workforce was casualized (Megalogenis 2016). This casual workforce is employed in multiple jobs—all of which can be of a short-term nature. The result is that people are unable to save for the deposit on a home or for their retirement. In this context people become less able to think about others and the environment. The powerful elites are doing little to protect the social and environmental fabric.

The problem in South Africa is that debt is being used to bolster education. The 2008 financial crisis has been blamed by Mogajane based in the SA Treasury. The spending cannot be maintained as current levels of SA debt are at 48% of the GDP (Mogajane, cited by Van Wyk 2017).<sup>45</sup> New forms of funding are needed. The future for South Africa lies in developing learning organizations and learning communities where people feel that they have a right to a voice and where they are *rewarded through a universal wage that enables them to undertake vocational training and to volunteer for the public good*. Learners need to be paid through a fund to families if under the age of 18 whilst engaged in primary, secondary, tertiary or vocational learning. Access to the fund could be gained through registering to give or receive support through local government.

Bregman's (2017) *Utopia for Realists* stresses that Nixon almost passed an act to end poverty in the USA but that he was persuaded that a similar initiative in Britain had failed, but further research shows that Chadwick had decided that the policy was doomed before the research began. Other more recent trials in Canada have been successful but did not gain political support for wider trials. Now Finland and Scotland are trying out the concept. Each local variant needs to be studied to find out what works in context.

According to a proposed model for South Africa, everyone (outside the highest income bracket) would be given a wage, but of course the usual taxes would be applied, and transparency for each person and each business and public sector entity

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<sup>44</sup>The first-time regeneration has been used in the SA context is perhaps by Pixley Ka Seme who provided some of the founding ideas for the organization that was the precursor to the ANC, namely, the South African National Congress. <http://www.sahistory.org.za/people/pixley-ka-isaka-seme>.

<sup>45</sup>But the issue is exacerbated by national debt and the need to draw money from other public spending needed at the provincial level for housing and infrastructure. It is also exacerbated by the debt which each student who has a loan from the National Financial Aid Scheme will have to repay. The likelihood of defaulting students is high, and this will lead to the end of the current system of education.

would be monitored by the tax office to ensure that companies pay tax and that everyone has a registered and audited account.

People and companies will be invited to set up and contribute to social and environmental impact bonds that could offset their tax. Philanthropy would also be a tax deduction, based on giving both time as volunteers or material assets. Auditing to ensure the appropriate management of wellbeing stocks would be vital to ensure that individual and collective needs are addressed:

- The software application addresses the following: what people have, what they need, what they are prepared to add or discard, turning points for the better or worse, barriers and links to local services.
- The software measures social, economic and environmental dimensions in terms of being, doing, having, giving and interacting and enables tracking and mapping the patterns of contributions over time.
- This enables service users and providers to work together to address needs and to protect wellbeing stocks. It can also be used to alert governments on areas of need through providing large data sets on carefully managed data.

A mix of funding options for this social wage needs to be derived from tax, philanthropy and private sector funding to provide a universal income to all. This of course could only be implemented through an overhaul of the tax system to ensure complete transparency in management of resources in South Africa and the rest of the region.

Thus people need to be rewarded for participating everyday actions that protect people and the planet. Policy to support vocational educational pathways supported by a range of initiatives from Ubuntu inspired co-operatives and public-private partnerships in the form of impact bonds, to ensure that taxes are used to pay a social wage to all those who do not have a regular form of income. This could ensure a better quality of life for all South Africans.

Tertiary higher education is a focus of attention, but primary and secondary schools are also in crisis as a result of the number of students who cannot be accommodated by existing schools. A new policy narrative could help to address this. Tertiary education needs to be expanded beyond university education to address the vocational and educational training needs of people. Instead of channelling all students into universities, more training and apprenticeships need to be created spanning rural, regional and urban areas. Learning on the job would enable students to earn a living. If the private and NGO sectors were rewarded through a universal wage and tax incentives, then more training options and more creativity could be fostered. Instead of trying to make a failing economy work, nation states need to:

- Draw on the inspiration of the ‘blue economy’ approach of Gunter Pauli (2010)<sup>46</sup> and find ways to find sources of natural abundance in the natural and urban environment
- Reaffirm their interconnectedness within overlapping regions

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<sup>46</sup><https://m.youtube.com/watch?v=fIMvwi6jR8o>

Every South African should have a wage linked with social and environmental impact bonds for volunteering and regenerating the community and environmental fabric. All these ideas have been spelled out in the past by Thomas More, but various forms of social wage are gaining policy interest as unemployment and casualization increase (Bregman 2017; Crace 2017). If we are in any doubt as to whether this is worthwhile, consider the opportunity costs of ‘business as usual’ to the social and environmental fabric in Africa. The current state of the nation can be summed up by the following statistics. A quarter of the population is unemployed if the discouraged job seekers are included. Thus the South African Institute for Race Relations figure of 34.9% underestimates the full extent of unemployment. And According to Van Wyk (2017):

The unemployment figures put South Africa on a par with countries such as Greece, Senegal, DRC and Lesotho. And unemployment is four or five times greater than in Brics partners Brazil (7.6%), China (4.1%), Russia (5.2%), and India (4.9%).

Van Wyk adds furthermore that ‘half of the unemployed in South Africa are aged 15–24’ and ‘85.8% of the unemployed are black’. ‘More than half of the population’ are ‘without piped, clean water’, and ‘more than a third don’t have access to flush or chemical toilets’ (Van Wyk (2017) cites SAIRR report), and she goes on to stress that ‘20% do not live in a formal home’. Formal and informal housing need more clarification as the rural housing using sustainable materials such as clay and thatch are more appropriate in many ways and could be upgraded with appropriate technology that supports the environment. As detailed below the blue economy and biomimicry agenda could be explored to take into account the employment and training needs of the population.

### **Potential of Dynamic Interactive Policymaking Based on Lived Experiences**

A dynamic case work approach to build community networks and early warning is needed to alert service providers that people are at risk through working with job clubs and by using a whole of community approach to identifying risks through assessing early warning signals that are identified through a dynamic analysis of social determinants.

The policy responsiveness could be facilitated by a customized informatics analysis tool to address complex social, economic and environmental (housing/community/shared habitat) needs based on research to date (McIntyre-Mills et al. 2014a, b; McIntyre-Mills 2017a, b, c).

The analysis could identify the unemployment pathways that drive inequalities across the generations and the impact unemployment has on ‘at-risk’ behaviours and general determinants of wellbeing. By studying unemployment as the independent variable, we will consider the impact it has systemically on the growing gaps between rich and poor and shine a light on the sources of risks to wellbeing across the community. This approach applies a dynamic casework approach to build community networks and early warning alerts that people are at risk through working

with job clubs by using a whole of community approach to identifying risks through assessing early warning signals that identified through a dynamic analysis of social determinants. Policy needs to scope out the issues that need to be addressed, describe and analyse how unemployment circumstances influence (B) accessibility and (C) affordability for housing and (D) the likelihood of an erosion in personal wellbeing combined with risk taking as a result of exclusion and poverty. A range of social determinants of wellbeing and risk will need to be explored by looking at the *socio-demographic data and employment opportunities* as a context for exploring the areas of concern.

### ***V is for Values and the Virtue-Based Approach and Recognition of the Value of Diversity ‘No’ to Violence***

It is based on the qualities of thinking and practice that make up or constitute an ethical life. It is based on the work of Aristotle. He believed that inner virtue was the result of careful thinking and that eudaimonia (pronounced you-dye-monia) (see O’Grady 2005: 154) was the goal of reasoning and that it would lead to happiness of the individual and society. Aristotle stressed the importance of phronesis or matching the right knowledge to an issue based on (a) experiential wisdom, (b) an appreciation of the many different kinds of knowledge and (c) the ability to apply the right knowledge to an issue based on dialogue. The work of Aristotle stresses the importance of narrative and context for understanding and decision-making. The challenge posed by theorists, feminists and critical theorists is who decides on what constitutes knowledge and its implications for ethical decision-making. Each of these needs to be understood in detail (see Preston et al. 2002). The organizational response to a problem may be to respond to the effects, rather than the causes of the problem. A crime prevention approach needs to begin by protecting the fabric of life and ensuring that people can live a life worth living. According to Smith (2015),<sup>47</sup> South Africa has a murder rate of 49 per day:

South Africa’s murder rate of 33 per 100,000 is more than five times higher than the 2013 worldwide average of 6.2 per 100,000. The murder rate among young black men in some communities is 300 to 400 per 100,000. But the answer, some believe, is unusually straightforward .... Ostentatious wealth and brutal poverty often sit cheek-by-jowl in the geography of what has been called “post-apartheid apartheid”.

West Churchman (1971) talks about the need to consider the so-called ‘environment of the problem’. So when considering institutionalized bullying and violence within public, private and volunteer sectors, it is necessary to consider the wider structural context of violence and the way it plays out at a personal, interpersonal and inter-species level.

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<sup>47</sup> <https://www.theguardian.com/world/2015/oct/01/south-africa-violent-crime-murders-increase-inequality>

### **Virtue-Based Approach**

It is based on the qualities of thinking and practice that make up or constitute an ethical life. It is based on the work of Aristotle. He believed that inner virtue was the result of careful thinking and that eudaimonia (pronounced you-dye-monia) (see O’Grady 2005: 154) was the goal of reasoning and that it would lead to happiness of the individual and society. Aristotle stressed the importance of phronesis or matching the right knowledge to an issue based on (a) experiential wisdom, (b) an appreciation of the many different kinds of knowledge and (c) the ability to apply the right knowledge to an issue based on dialogue. The work of Aristotle stresses the importance of narrative and context for understanding and decision-making. The challenge posed by theorists, feminists and critical theorists is who decides on what constitutes knowledge and its implications for ethical decision-making. Each of these needs to be understood in detail (see Preston et al. (2002) for *A framework for Public Sector Ethics*). We can be free and diverse to the extent that our freedom and diversity do not undermine the rights of others. The nation state has not protected the global commons or ensured social justice for all.

### ***W is for Wicked Problems and Wellbeing***

Wicked problems comprise many, interrelated variables that are perceived differently by different stakeholders (Rittel and Webber 1984; Flood and Carson 1993).

*Transformation from Wall Street to Wellbeing* (McIntyre-Mills et al. 2014a, b) argues that social, economic and environmental accounting could be assisted by means of participation to make this so-called triple bottom line accountability viable across the boundaries of nation states. Thus the participatory action research addresses the challenge posed by the Earth Charter: ‘Everyone shares responsibility for the present and future wellbeing of the human family and the larger living world’ (cited by Hayden 2010: 368).

The challenge is to move beyond the rhetoric of **cosmopolitan citizenship** and to address both justice and the need for the nation state to be held to account by an Earth Charter that is supported by overlapping regional institutions (supported by inclusive regional research institutions, policies, the rule of law including parliaments and courts).

### ***X is for Xenophobia and Z Is for Zero Waste***

Education needs to foster more than tolerance of diversity and instead a sense of appreciation for difference based on hospitality and a sense of justice, by drawing on the spirit of Ubuntu. The zero waste approach is based on a systemic approach to recognizing sources of abundance through reusing, repurposing and recycling, in order to regenerate living systems and an alternative architecture for governance

(McIntyre-Mills 2014a, b, 2017a, b). It is an optimistic approach that supports the notion of working in ways that find sources of abundance in waste and that turn a throw-away mentality into a regenerative mentality where diversity is valued and protected and where dumping on the scrap heap is frowned upon. Instead in a cascade economy (according to Pauli 2010), one person's waste is another person's opportunity to regenerate, recycle or re-create material. Gunter Pauli's (2010) visionary ideas about 101 ways to create jobs could be extended in a South African curriculum by drawing on examples of projects using gender analysis, mainstreaming, participatory action research and engagement processes to enhance representation, accountability and the regeneration of social, economic and environmental resources. **Zero-sum approach** is expressed as competition across species, classes or sovereign states which needs to be set aside in recognition that we are part of one web of life, that we are interdependent and that all sentient beings have rights. As stewards, human beings have the additional responsibility to care for the land on which we all depend.

**Zero waste approach** is based on a systemic approach to recognizing sources of abundance through reusing, repurposing and recycling, in order to regenerate living systems. Our current structures and approaches are inadequate. Exclusive politics will prevail for as long as people think in terms of zero-sum paradigms, rather than comprehend that they stand or fall together and that we are co-determined by the environment of which we are a part.

## **Conclusion: Food, Energy or Water Security is under Threat in a City Environment**

The theme of regeneration is central to this volume as is the notion of intergenerational cohorts.

Harper (2013) has stressed as a core thesis of her book that population is changing at different rates in different parts of the world. In South Africa the rate of growth is 2.4, whilst in other parts of Africa, it is 3–4 times this rate. Needless to say, the movement from places with high fertility and high mortality rates to places with lower fertility and lower mortality rates is a trend within the African continent where people migrate from DRC and Zimbabwe to South Africa in search of work. They also travel from North Africa to Europe in search of employment and a better life. The numbers of displaced people arriving in Europe are augmented by those fleeing Syria and conflict.

The population change is below replacement levels in many parts of Europe where the population profile is one of low fertility and low mortality. Therefore, population change needs to be viewed in terms of ballooning and shrinking populations. Added to this the life chances of young people need to be understood in different parts of the world.

Critical systemic practice is more important than ever in order to foster agency that is informed by a critical and systemic approach to our being in the world.

The filters of values need to be factored in as do the social, political, cultural, and economic lenses of different stakeholders.<sup>48</sup> In approaching the blue economy, we need to take all the factors into account. By focusing on an environmental flow and biomimicry, much can be gleaned, but it does remain important to address complex social justice aspects as well.

Much of my work to date has focused on mitigation and adaptation to climate change and has addressed what works, why and how from the point of view of different stakeholders. The rate of urbanisation has risen as a result of climate change and the difficulties of making ends meet in rural areas. Initially this book intended to address the so-called Dick Whittington syndrome that has become increasingly relevant by asking the questions:

- Do people get ‘lost’ in the city when searching for a job and finding (like Dick Whittington) that the streets are not paved with gold?
- Do people at least find opportunity to connect with others? Some of these opportunities are positive, and some are negative. Whilst some find jobs and become increasingly open to other worldviews in city environments, others become under- or unemployed and in the process become increasingly closed to other worldviews. These are two sides of the same coin.

What happens to the people who are left behind in the rural areas or who find that their regional city areas have become rust belts as factories move away and shopping malls empty and neighbourhoods have more and more empty homes with boarded up windows?

Alongside 99% who are struggling to survive or becoming increasingly stressed as members of the shrinking middle class are the 1% who own the majority of the world’s wealth. They own the media and shape the political agendas to protect their own interests. The populist responses demonstrated by the populist votes in the UK and USA illustrate the disappointments felt by those who feel ‘let down’ by the previous governments. The questions this book strives to answer are how to address the sense of loss that the disenchanting feel and how to restore social and environmental justice for all age groups.

Can this be done by restoring faith through full employment and a fair distribution of resources locally, nationally and internationally? The case is made that fairness and a sense of fairness is the cornerstone for transformation. In *Planetary Passport* (McIntyre-Mill 2017c), I made the case that Stanford researchers found that primates responded negatively to unfair rewards for tasks and that basic empathy and an understanding of justice can be found across human beings and other animals. A means to get off the carousel that only functions to benefit the few at the

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<sup>48</sup>The points made by Rorty (1999) about the academic *Cultural Left* failing to *engage in practical action* speak to current issues and stress the need for both *praxis and pragmatism*. But entrepreneurial action without critical awareness is equally problematic. When Pauli talks about the air-conditioned buildings in Zimbabwe the political context of authoritarianism and control of opportunities cannot be left out of the picture. When coffee production and waste are used for growing mushrooms, this is a success story, as is the marketing of the coffee that needed to be achieved through finding a way to break sanctions. Nevertheless, an analysis of power dynamics locally and globally needs to be addressed too.

expense of the many is needed. Examples of transformative practice are explored in this volume with the hope that it will provide seeds for improving public policy and governance.

An example of complexity is as follows. You are required to feed many, diverse people who have survived a natural disaster. They are in temporary accommodation. You have a bag of fruit. The fruit can be distributed to each person. If you have only ten apples and ten people, the decisions are quite simple. One apple is given to each person.

If you have a bag comprising hard and soft fruit and dried and fresh fruit, then the decisions become more complex. Fresh fruit needs to be eaten first and dried fruit later. Types of soft and hard fresh fruit can be shared on the basis of taste and appropriateness to people's needs. Unfortunately, the complexity of the decision extends beyond the distribution of food to many other social, economic and environmental factors.

As policymakers, managers and those involved in planning and implementing better decisions, we need to make the right choices based on ethical representation, accountability, sustainability and regeneration for current and future generations.

The variables that we need to consider span social, economic and environmental factors. The limitations in water supply in times of drought need to be addressed by making immediate decisions but also need to be addressed by medium- and long-term decisions.

### ***Ways to Enhance Representation, Accountability, Regeneration and Sustainability***

The chapter has aimed to:

- Honour the policy environment that stresses the need for a sense of ownership of a problem and the way in which it is framed. It extends the work of Bacchi (2009) by suggesting the need for user-centric policy design based on the perceptions of what works, why and how.
- Outline a human development approach to enhancing capability based on multiple mixed methods approach that is non-linear and participatory.
- Suggest ways to enhance the quality of education through fostering support for diverse educational pathways so that the insights and brilliance of people with lived experience can be fostered and rewarded. Traditional art and culture need to flourish alongside protection of natural heritage from the invisible plant bacteria to the visible biodiversity that makes South Africa one of the most beautiful places on the planet.



## Further References on Key Concepts and Self-Reflection

The following references on leaders and leadership could be helpful for transformative praxis:

### *Leader 1: Wangari Maathai, Green Belt Project: Planting Trees in Kenya and Key Points from 3rd Mandela Lecture (2005)*

She is a Nobel Prize lecturer who addresses the importance of planting trees and protecting water as a habitat for all living systems including tadpoles and frogs. Their presence is a systemic indicator that the system is healthy. See the videos:

- Prof Wangari Maathai 3rd Nelson Mandela Annual Lecture 2005.wmv—YouTube
- [https://m.youtube.com/watch?v=dZap\\_QlwlKw](https://m.youtube.com/watch?v=dZap_QlwlKw)
- I will be a hummingbird—Wangari Maathai <https://m.youtube.com/watch?v=niZiUZef3-M>.
- The life and times of Prof. Wangari Maathai <https://www.youtube.com/watch?v=IGMW6YWjMxw>.
- <https://m.youtube.com/watch?v=AmVSDkJ4jYw>.
- What does it mean to be a humming bird today in South Africa? What are the implications of Wangari Maathai's approach?
- Do you think they are still relevant in South Africa?

### *Leader 2: Piketty, Key Points from 13th Mandela Lecture (2015)*

- His focus is on the need for transparency and a revision of democracy and governance. What are the implications of Piketty's recent Mandela lecture? In what ways is it different from Maathai's approach? In what ways is the message the same?
- What is his argument? How does it relate to the notion of republican citizenship?
- The standard bearer of democracy in France was not the flag but a tree, but in fact it did not address real change, according to Piketty. Andrew Dobson thinks it succeeded in raising awareness of nature and our dependency on the land because peasants know what it means to starve.
- The issue is that growth in profits of the wealthy (around 5 or 6%) exceeds growth of GDP around 2–3%.
- The French Revolution addressed rights and opportunity, but it did not result in taxation to redistribute wealth—taxation in France occurred after UK introduced tax.

- Democracy and governance require new architectures on taxation and a more transparent society based on deepening democracy and better outcomes.

### ***Leader 3: Vandana Shiva on Seeds and Leadership***

- Vandana Shiva (India) an ecofeminist leader who discusses seeds and water in terms of social and environmental justice. See <https://m.youtube.com/watch?v=fX5jsq74fAo>.
- <https://m.youtube.com/watch?v=fM8TLXjpWk4>.
- What does Vandana Shiva mean by her thesis that the seed will be the spinning wheel for addressing the commodification of life?
- What is the implication for ethics and public administration?
- What does she mean by species extinction?
- What is the relevance for current policy decisions?

### ***Leader 4: Deborah Rose Bird on Indigenous and Western understandings of nature***

See <https://www.youtube.com/watch?v=qp3Ktlfy0Hw&app=desktop> <https://www.youtube.com/watch?v=suSbvoAw0g4>.

What does Deborah Bird Rose mean by the ‘colonization of the land and the mind’, ‘Caring for country’ and ‘gift of country’?

- What does she mean by *multispecies ethnography*?
- What does she mean by the human/nature divide?
- What is the implication for ethics and public administration?
- What does she mean by species extinction?
- What is the relevance for current policy decisions?
- Please watch and then think about responses to the questions.
- <https://m.youtube.com/watch?v=suSbvoAw0g4>.
- <http://umaincertaantropologia.org/2013/08/17/the-emergence-of-multispecies-ethnography-cultural-anthropology/>.
- What are the implications for human/animal habitat in South Africa?

### ***Leader 5: Gunter Pauli on New Economics***

#### **What Does Pauli Mean by the Following Statement?**

... While we are obsessed with monetarization (to our own benefit) natural systems generate multiple revenue flows best measured in protein, drinking water, energy resources and defense systems. Nature produces benefit through the calculation of integrated benefit flow.... (Pauli 2010: 235–6)

Pauli (2010: 236) then goes on to explain that the costs of the linear economic model cost inputs, throughputs and outputs and externalize costs to society and nature and it does not disclose the opportunity costs to future generations of life (see <https://www.youtube.com/watch?v=sLh-U99avso>, <https://www.youtube.com/watch?v=sLh-U99avso>).

In many ways the visionary work has blind spots associated with gender mainstreaming within the political contexts in which he operates. In what ways are the examples of coffee production that also supports protein from waste appropriate in Zimbabwe? In what ways is the construction of a building based on termite construction inspirational? What are the implications of developing opportunities by and with people at the local level without addressing the issues of state capture? What are the issues associated with overcoming boycotts? What is the problem associated with being apolitical? How can the regenerative approach maintain agency whilst remaining critical?

### ***Leader 6: Donna Haraway on Reframing Boundaries***

Some of the challenges need to be addressed within very specific contexts. Haraway stresses that all knowledge is situated and that we need to develop specific responses by appreciating the many factors that shape life chances within context. How we make sense of the world is shaped by our life experiences. Being aware that we are indeed the boundaries, because we can make and remake the boundaries through our policy decisions, is an important starting point for design. A great deal of the writing by Haraway critiques the notion of essentialism and instead stresses that being boundary creators frees people from the limitations of categories and recognizes our hybrid relationships with others including living systems of which we are a part. Her work is very different from Martha Nussbaum's work, because Nussbaum is normative in prescribing the conditions for human rights. I think that whilst their approaches are different, both have much to offer in terms of providing guidelines for protecting people and the environment. She analysed the oppositional logic of scientific and sociological narratives to explore the way in which we make sense of the world in terms of us/them, west/east, animal/human and machine/human. Her mission was to demonstrate that we can make choices about how we draw and redraw these boundaries. She mentions the following domains for boundary work in her discussion of biopolitics and the relevance to species and rights (Haraway 1991, 1992):

Empirical studies in so-called real space—studies of rights of primates, for example, by Jane Goodall	Outer space where primates and dogs are used for the purpose of exploring boundaries for military purposes
Inner space use of primates to experiment on immune systems within laboratory conditions	Virtual space that draws on the experiments to create simulations

## ***Leader 7: Martha Nussbaum on Capabilities to Enhance the Life Chances of Sentient Beings***

Nussbaum discusses the essential capabilities that are needed by sentient beings to live a life worth living. She takes the initiative to design and construct the essential conditions. She is not suggesting that people should be limited, she is making a case for extending rights beyond the human, and in many ways she is reframing in the way that Haraway advocates when Nussbaum (2006) wrote *Frontiers of Justice* and discussed the current limitations of social contract theory to protect those who fall outside the boundaries of the nation state or outside the parameters of state protection as they are non-citizens. These include asylum seekers, those who have lost citizenship because they are labelled criminal and ‘other’, the disabled, and she importantly extends protection to all sentient beings and the need to protect the environment on which we all depend. In this way she introduces protection of habitat for all living systems, although she does not specifically spell out our hybrid interdependency.

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# Chapter 6

## Losing Millennials in the City: Reflection on Contemporary Issues



Natacha Tracy

**Abstract** The chapter explores the policy context that has shaped the life chances of the socio-demographic group called Millennials. The focus of the chapter is on the growing numbers of young people who have found their voice through online platforms where they address the many problems that will affect their lives far more than those of the people making the decisions.

**Keywords** Millennials · Unemployment · Political awareness

### Introduction and Statement of the Problem

The chapter explores the policy context that has shaped the life chances of the socio-demographic group called Millennials. The focus of the chapter is on the growing numbers of young people who have found their voice through online platforms where they address the many problems that will affect their lives far more than those of the people making the decisions.

They are increasingly dissatisfied with their lives, and their expectations for the future are grim, with access to their own long-term housing or employment opportunities becoming scarcer for those without already wealthy parents. Millennials are defined by the Pew Research Centre as those born in the 20 years between 1980 and 2000 who came of age in the new millennium. They grew up and into adulthood with the digital technology that surrounds their lives. In the USA, they now outnumber the baby boomers.

Global surveys of Millennials have tended to find connections between them with the same desires for an exciting future, but there is a stark difference between the expectations of obtaining that future. Both are measuring their expectations against that of their parents. For the developing nations of the world, technology and globalization seem to offer improvements, and for those in the developed world, these appear to have taken them to an uncertain future. They are both aiming for

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stability and opportunity, however with limited power to influence the policies that will bring this about. In the USA, there are now 92 million Millennials, making them the largest generation ahead of the baby boomers, at 77 million. The average student loan debit for the class of 2016 was \$37,172, with student loan debits already totalling to \$1.31 trillion and defaults at 11.2% and delinquencies in the billions of dollars, this creates a generation who may never see financial security. With a falling job market, acquiring this much debt so early in life will affect many other choices they have to make, such as setting up their own homes, forming stable relationships and having children, all of which are becoming increasingly delayed (Keeter and Taylor 2009; Friedman 2017).

This is mirrored across the western world, with the education that may allow entry to the job market being priced out of the reach of many. Even if a degree is achieved, there is no certainty of a job. In Australia in 2008, only 41.7% of recent graduates were in full-time employment. This is despite an ageing population.<sup>1</sup>

Millennials are entering adulthood, and accessing the rights and duties are supposed to go with it, from voting for the first time to worrying about getting a job. They largely have grown up with personal computers, mobile phones and other devices. They are also those who are currently being impacted hardest by the global recession, the inequality of income and the austerity measures brought in to 'fix' the problem and who will live to see the worsening effects of climate change. They have a great deal to be angry and to challenge the world about and should be forming the new guard of political leaders. However, they seem to be frequently accused of neglecting their duties—of failing to vote or take part in the accepted means of politics and of being inexperienced politicians who when compared with their elders are found wanting, although it should be noted that when young people do take to the streets, they are often punished (Anti Iraq War Protests in the UK lead to disciplinary action from schools) (Banaji 2008; Farthing 2010; Martin 2012).

They are seemingly not participating in the traditional political process, and older age groups appear to have more success in organizing to have their voices heard. So where are the Millennials and why are they not joining lobby groups like NGOs and trying to take control of the social justice agenda for their futures? Is this a problem of the NGOs being unwelcoming or failing to adapt to the lives of potential recruits? Would more online engagement be helpful and how can these movements be channelled and valued by NGOs and governments to the same extent as a street protest. Or is it that there simply is no longer a need for a formal organization and hierarchical structure (Earl 2014).

The online world is certainly opening up opportunities for creating communities of protest and change. This can be seen from examples such as the Arab Spring, the Occupy movement and other movements that claim public spaces, where it was an important tool for mobilizing individuals to push for change. It created a loose umbrella to come under with safety in numbers. The Occupy movement had a global reach in challenging the status quo of capitalism, because capitalism is global.

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<sup>1</sup> <http://www.abc.net.au/news/2016-09-29/uni-graduate-job-prospects-in-decline/7890562>.

While the end result of these movements is unclear, this does not mean that the Occupy method is a failure, because revolution is itself a risky proposition (Beaumont 2011; Bakardjieva 2015; Gerbaudo and Treré 2015; Kavada 2015).

This leads to the obvious question of where are the Millennials politically? The most common answer is online, but is this an assumption? Certainly there is a lot of activity by Millennials online. However, just starting an online campaign is not enough to engage them. A poorly developed campaign will not attract support, even if it has flashy graphics. Many that are designed by Millennials for Millennials are simple and direct and do not patronize their audience, they are not trying to be cool or assuming what it already knows or does not know (Coleman 2008).

There needs to be research to examine the disconnection between Millennials and the forces that create social change. The former lead very different lives from their parents—they have grown up with a financial crisis, high youth unemployment,<sup>2</sup> increased work insecurity, rising house prices and therefore falling home ownership rates as well as a dearth of affordable, long-term rentals.<sup>3</sup> On the positive side, they are more likely to have friends who were born in a non-European country, have a university education, have travelled overseas and have access to technology. This gives them a changing set of social justice priorities and of ways they want to tackle them. While NGOs were previously the main organizers of actions such as letter writing or street demonstrations, these are no longer the most obvious forms of protest for a Millennial (Ryan et al. 1998; Earl 2006; Earl et al. 2013). NGOs and political parties need young members to remain relevant on the global stage. In the USA, Millennials have just become the biggest generation—outnumbering the baby boomers; in the Middle East, there are vast numbers of disaffected young people who see few prospects without mass protest. In Australia, the numbers are not so stark, with a bigger ageing population; however, many of the ‘intergenerational’ issues that the government talks about in its budget measures will have the biggest negative impact on young people and the least impact on pensioners. So what is best practice for attracting and retaining vibrant new members for NGOs? How and what are various groups doing or not doing?

There are a growing number of statistics that show that younger Australians, for example, are having a tough time negotiating the world that their parents and grandparents have built. In Australia, only 30% of those under 30 expect their lives to be better than their parents, employment rates for recent graduates have fallen and the jobs they are getting are more likely to be part time and not in their field of study. This is in a time when Australia’s economy has been one of the stronger performers; what happens if the economy weakens? The demographics of the workforce are changing, with more women joining and seeking to build careers, which means that

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<sup>2</sup> OECD employment data from 2016 shows youth unemployment varies greatly from Greece with 47.4% and Spain with 44.5% to the UK with 13%, Australia with 12.7% and the USA with 10.4% and Germany and Mexico with 7% and 7.7%. <https://data.oecd.org/unemp/youth-unemployment-rate.htm>.

<sup>3</sup> <http://www.pewsocialtrends.org/2016/05/24/for-first-time-in-modern-era-living-with-parents-edges-out-other-living-arrangements-for-18-to-34-year-olds/>.

there is a need for affordable childcare and greater flexibility in hours. Multiculturalism is taken for granted, as is the challenge of gender and sexual norms, and they are more likely to use social media to connect with friends internationally, while the expectation of being able to join the dream of home ownership is falling. They see very limited action by mainstream (increasingly conservative) elected governments on the issue of climate change, which they know will have a much greater impact on them and on future generations than on their elders (Broido 2004).

However, in many western countries including the UK, Australia and the USA, membership of political parties is falling. While voting (compulsory in Australia) remains high, enrolling to vote is declining. While this could be blamed on a trust deficit, NGOs too seem to be struggling with finding new long-term recruits, and recent street protests have tended to be small. The question that needs to be addressed is what is and can be done to bring Millennials into the activist world so that their social justice concerns and issues are addressed and given the attention they require (Dermody and Hanmer-Lloyd 2004; Martin 2012).

Rorty's arguments about the need to abandon identity politics in favour of more traditional left wing policies clearly have some resonance with Millennials, as can be seen in the popularity of Jeremy Corbyn and Bernie Sanders. Just as the right wing is nostalgic for simpler times so too are parts of the left wing. Both are looking back to a time of jobs and growth. Some Millennials are attracted to talk of a time of stability and wages growth and certainly of lesser inequality than we face now. This ignores, however, all those who are not white males (Lott 1998; Rorty 1999; Freeman 2016). White males have seen the increasing loss of their blue-collar jobs, and in their search for answers, many voted for Trump, although in fact their jobs were often lost to mechanization rather than immigration. For them there are feelings of still being lost, undervalued and the anger of constantly justifying their existence with politicians who are not interested in their desires and values. Generally, in contrast, urban Millennials are more tolerant of difference than their parents, having grown up in more diverse neighbourhoods, but their desire for political and social policies that reflect this are being lost in a competing crowd of noise.

The literature is increasingly rejecting the notion that Millennials are apolitical, seeing them as in fact merely rejecting traditional politics. The rejection of political parties is being explained as connected to a growing distrust of politicians and the entire political process that appears rigged against them. To quote the 2002 episode of *The Wire*, 'The game is rigged, but you cannot lose if you do not play'. When they have chosen to 'play the game' such as the UK protests against the Iraq war where millions took to the streets, they were punished by a school system that did not embrace their right to take part in this kind of action.

The conclusion that could be made was that it was not the right kind of action, through the right channels for the right cause. There is research to back up this pattern in Australia as well—with increasing levels of what Rhys Farthing calls antipolitics and Martin compares to Dalton's Good Citizen theory (Farthing 2010; Martin 2012). Good works and having a recognizable impact on the world around them have become more important than becoming part of an established political party. But this rejection of politics has not translated either into an increased membership of NGOs.

It is more likely to produce an online digital community of individuals who form looser coalitions of information networks to try and bring about change. A # (hashtag) is a way of connecting posts across platforms through a searchable phrase. A Facebook profile picture can now be a way of building a community across the globe.

This all suggests that a top-down approach to developing connections, where Millennials are asked to join an existing organization rather than creating their own, is going to face difficulties. Many Millennials have learnt about influencing social movements from creating petitions and such like to try and influence the entertainment industry—and while many of them have no connection to what an NGO or a political party might do—calls for more female characters in video games or against a white actor being cast in a role that originated as non-white are clearly not so different (Earl and Schussman 2008).

The rise of the narrative of global Islamic terrorism (real and perceived) and of the global economic crisis should not be underestimated. Just as the Great Depression influenced their great grandparents so too the uncertainty and fear that these narratives have produced affect the distinctive generation of Millennials. They are more likely to trust friends and friends' recommendations than traditional sources of information because these latter are seen as having hidden agendas. However, this leaves people vulnerable to the problems created by either fake news or to campaigns like the Invisible Children campaign of Kony2012, which went viral because it was easy to share (Beckett and Fenyoe 2012). A video shared by a friend was more interesting and trusted than a report from a more established source. This can have a somewhat positive influence with increased, if misdirected, compassion for child soldiers or a negative one from an IS video creating a radicalized suicide bomber.

This is why online campaigns can be so appealing—friends recommend them, there is a flow of communication back and forth, questions can be openly asked and answered and while some of them are slick, many are rough and 'hand-made'. There is also the option to drop in and out of campaigns as interest rises or wanes. The freedom to pick and choose is important, to react as things happen, as anger builds up. The biggest advantage online campaigning can offer sometimes is the ability to react quickly and globally to an emotional issue. In the past it could take too long to be able to respond to some of the injustices people wanted to target. It allows people to create their own campaigns, through petition warehousing sites, about something small or large but always deeply personal.

While the online world has many advantages in terms of connectivity and creating a global public sphere, there are words of caution for NGOs. Its very openness can make it a risky space for individual activists in repressive regimes, although less so for movements with limited centralized leadership. It can also be difficult to identify the location of an activist and it can be subject to hoaxes. It is also vulnerable in that while the web itself is an open space, connecting to it is still controlled by companies, and most of the popular sites people use are for profit which means access could be restricted at any time (Deschamps and McNutt 2014).<sup>4</sup>

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<sup>4</sup>China is an exception to this with a closed web system that needs bypassing.

One of the problems with increased use of digital activism and campaigning is that it was initially very impersonal because the message was being sent to multiple people at the same time. Andrea Vromen's study of the highly successful campaigning of GetUp! Move On and other web-based groups was that they developed a set of language styles that mimicked a friendly informal conversation and set up means for allowing members to feel involved in the decision-making process. They conduct semi-regular surveys asking about policy priorities and encourage their membership to crowd fund individual campaigns with small donations (Vromen and Coleman 2011).

Vromen's more recent work has focused on the growth of a professional activist class—where skills are traded between organizations. Vromen and Hwang and Powell (Hwang and Powell 2009; Vromen 2015) examine the growing professionalism of the activists from NGOs, as many positions become paid jobs rather than volunteer roles, bringing in management styles from the business world. This is at the opposite pole to the increasing resources provided by the online world for amateurs to create a movement from their bedrooms. Earl and Coleman (Coleman 2008; Earl 2014) examined a number of contrasting e-movement websites, from those run to connect students with MPs to those run by the students for students and largely bypassing traditional establishments.

The Internet was seen as a vehicle for achieving multiple goals: doing something about the issues, meeting new people, generating networks, and gaining experience 'for the future'. It was also perceived as a very important tool for identifying causes, learning more, responding to issues, and integrating participation into everyday life. (Collin 2008: 533)

Platforms like Twitter # Hashtag might require no traditional leadership or sustained membership to spread globally and create social change, but that does not mean that if used well, they cannot be an effective tool for an NGO (Earl and Kimport 2011). NGOs can participate but are no longer necessary to create social change; the system they are working in has changed and the strategy for doing so must be creative and engaging.

Professional media training and connections to traditional media are no longer as relevant for this kind of activism; they are being emancipated and have their own access to the public sphere<sup>5</sup> (Ryan et al. 1998; Earl and Kimport 2011; Earl 2014); however, for a respected NGO to join on a Hashtag # or to engage with it can give power and reach to both groups. It can also provide valuable information to an NGO. The Red Cross and other disaster relief organizations are using crowd-sourced information to determine where there is greatest need of their services. Médecins Sans Frontières (MSF) and others successfully use websites to release reports and call for donations (Van Leuven and Joye 2014). Amnesty International allows people to sign petitions, read reports and send letters, all online. Van Leuven

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<sup>5</sup>(Bakardjieva 2015, Jochai Benkler; David Buckingham; Andy Carvin; Peter Dahlgren; Cathy Davidson; Michael Delli Carpini; Constance Flanagan; Lew Friedland; Ed Gragert; Raji Hunjan; Mimi Ito; Henry Jenkins; Barry Joseph; Ulises Mejias; Diana Owen; Lee Rainie; Richard Rogers Lonnie Sherrod; Zephyr Teachout; Larry Johnson, organizer, New Media Consortium Rachel Smith, facilitator, NMC September 29 - October 13, 2006).

and Joye (2014) examined news reports in Belgium and found that respected organizations like MSF could shape an agenda, both through press releases being used as the basis for reporting and also as experts to be asked for comment. This transparency and accountability provides an opportunity for a feedback loop from a wide variety of sources from within the NGO world and from both its membership and the general public.

Bimber and Flanagan's earlier work (Bimber et al. 2005) set the scene for this reconceptualizing examination of the collective action that produces social change (although it was written in a world before Twitter):

We advance a model that reconsiders two foundational aspects of collective action: (a) the binary choice to participate or not and (b) the role of formal organization. We argue that traditional collective action theory represents an important subset of a broader range of theoretical possibilities—a subset that applies under certain conditions that were ubiquitous historically but that are no longer universally present when collective action occurs. Based on this, we reframe collective action as a set of communication processes involving the crossing of boundaries between private and public life. (Bimber et al. 2005: 366)

Certainly Twitter and Facebook are a blending of private and public, personal and political, and they are becoming more and more so as the boundaries largely disappear. This points the way, although this theory did not envisage the personal/private activism of websites like Everyday Sexism, which is a space for anonymously sharing stories of sexism, and is both deeply personal and highly political. Phillipa Collin (2008) conducted in-depth interviews with a small group of Australian young people using Henrik Bang's theory of the Everyday Makers and Expert Citizens, with the former being those engaged with NGOs and other organizations and the latter those who preferred to be free agents and organize their own activism. This could be seen as a very similar approach to the Supersize, Social Change 2.0. The Internet was seen as a vehicle for achieving multiple goals: doing something about the issues, meeting new people, generating networks, and gaining experience 'for the future'. It was also perceived as a very important tool for identifying causes, learning more, responding to issues and integrating participation into everyday life (Collin 2008). Her research found, like many others, that Millennials had a preference for engaging on their own terms as the Everyday Makers—something NGOs have to keep in mind if they are to engage a new generation of members. Forums and comments sections were popular because they could be accessed day and night and could allow engagement with people from around the world. There was no need to wait for your turn to speak in a meeting, with people who may or may not appreciate your comments. They also wanted an equal share in power for driving the activism and were not keen on just being told by an expert what to do or how to act. Ray Farthing (2010) continued on this line of enquiry finding that political parties, with their old-school activism centred around voting, was failing to engage with young people who wanted something different. They were organizing boycotts and other actions on Facebook but saw limited value in enrolling to vote. He called them *radically unpolitical*. They cared and were strongly engaged with social change, but not through traditional means. He talks about how much the world has changed for this generation, as their expectations and lived experience are so different to their parents and grandparents.



Issues that young people are increasingly actualizing include sustainability, equality and global poverty. Young people find themselves asking, 'How can global environmental destruction be resolved? How can people address the need for sustainable growth in cities? How can one love and live, with the threat of AIDS?' (Beck 2011: 158). Beck (2011) suggests that these reflect fundamentally new political agendas that young people are questioning and living. These new agendas have two key features; firstly, they increasingly demand smaller, intensive, personal actions, and, secondly, they transcend national borders and are almost unmanageable on a global level. While these may be old issues, young people have framed them as new questions with new responses.

## New Process for Organizing

This means that they are more focused on issues and have less loyalty to organizations. This is what the online world is particularly good at facilitating—people can be members of multiple groups without the transactional and time costs previous generations would have faced. The devices that allow participation are getting smaller and more mobile all the time. These questions and answers can also be framed in international ways, with responses from around the globe, in ways that only used to be accessible to a small minority who could travel to conferences as delegates.

The special edition of *Information, Communication & Society* on social media and protest identities, edited by Paolo Gerbaudo and Emiliano Treré, seeks to examine the current state of activism and how the sense of collective identity is built through social media protests. The use of hashtags #, memes, changing a Facebook profile picture and other online symbols connects people who might otherwise never meet, and these are shared on various social media sites, to show a membership in a movement no matter how ephemeral it might be (Gerbaudo and Treré 2015). Maria Bakardjieva further examines the social media cloud and asks whether something so fluid and undefined can be political, exploring how a sense of collective identity is created by the activists engaged within it (Bakardjieva 2015). This all implies that NGOs must work much harder to be relevant to their audience and more receptive to their views and needs; otherwise, they can be bypassed completely.

NGOs would, could and should be helping to provide spaces where the lost can find themselves, but they are failing to connect their volunteers into developing online communities of practice (Wenger et al. 2009; Druckenmiller and Mittleman 2015). Much of their work has been to supersize existing practices to reach larger numbers of people rather than taking advantage of the Web 2.0 functions. A website with easy to access petitions and reports could have a big impact on activism. This could be an effective tool at spreading information, but it does not necessarily build a longer-term relationship. Twitter is often used by NGOs to reach out, fan the flame of an issue and then announce when and where an action will take place. Email-based activism has a longer history with many NGOs seeing it as a way to connect

with people who are too busy or geographically diverse to connect in person. They have developed a very community-based language that is intended to make people feel like everyone is a friend (Bimber et al. 2009).

While this is a useful tool, it fails to take into account that the new ground zero for information and activism for Millennials is Twitter and other fast moving conversation sites. They are using Twitter, Snapchat, Periscope and whatever the next social media app will be for good or bad. These have been invaluable during protests against the G20 or during #BlackLivesMatter protests. They provide live two-way communications reporting on events, sharing information about police locations or what the local media were saying. The presidency of Donald Trump will see here a major form of jousting between both sides, although for how long Trump will be allowed control of the @POTUS account remains to be seen. If this is the kind of action Millennials are taking part in, does this put the future of some NGOs at risk? Are the rules of the public sphere changing? If rather than joining a protest NGO, they form a digital community of practice, without a membership list and the ability to join in as and when they have the time, then what is the need for a more formal group? The example of the Arab Spring or the Occupy movement fits this structure. While the success of these movements is debatable, they do show a potential way future movements may organize. It is very difficult to arrest the leaders of a group if they do not exist (Beaumont 2011; Kavada 2015).

On the 12th of July 2016, Katie Loewy @SweetestCyanide tweeted:

I'm not saying that David Bowie was holding the fabric of the universe together, but \*gestures broadly at everything\*

To many, this summed up 2016 with its apparent mix of celebrity deaths and apparently earth-shattering political choices.

## Examples of How New Processes Changed the Political Context

### *Brexit*

When the UK narrowly voted to leave the European Union in 2016, it came as a shock to much of its millennial population. To them the advantages of being European were obvious—they had plans for working or studying in another country, the solutions to climate change clearly came from collective action, and the Human Rights Court was a good thing ensuring the implementation of progressive values such as gay marriage. In a world where the stability of long-term employment and all that came with it has been replaced with short-term flexibility, this was supposed to lead to more international opportunities, more adventures. However, Brexit leaves Millennials without either—it will not restore the lost, stable full-time employment their parents and grandparents enjoyed, and it cuts them off from the ability to live exciting lives traveling the world. British Millennials were already

highly pessimistic about their futures in 2014 when the IPSO MORI survey found only 22% of those under 30 are expected to have lives better than their parents. The most surprising thing about the Brexit vote is that many of those who called for it and campaigned for it did not expect or want to win. A narrow loss would have suited their ambitions far more than trying to sort out the messy processes of actually leaving the EU. Many of the leaders of the Leave Movement either quit or failed to make significant leadership challenges once they achieved their aims. Nigel Farage almost instantly stepped down from being a leader of UKIP, and Boris Johnson never entered the race to be Prime Minister.

### *The Election of Trump*

The election of Donald Trump, after 8 years of Barack Obama, came as a shock to many who had been expecting to see the first black president followed by the first woman president. However, Millennials who had enthusiastically supported Obama were less impressed by the choice for replacement. Bernie Sanders, with his appeals to the past and a less neo-liberal agenda, attracted a devoted following, but not enough to become the nominee. Hillary Clinton, while actually very progressive in many ways, had long associations with neo-liberalism and was plagued by a series of overblown scandals. For those who felt that they had been burned by globalization and wanted to destroy the current system, Donald Trump gave the appearance of understanding. His call for a return to the better, greater days of the 1950s appealed to an older, whiter, rural generation for whom diversity is uncommon, who had felt more secure and powerful before the introduction of political correctness and antisexual harassment legislation. For urban Millennials, diversity is something they take for granted; they see it as what enriches their lives. These two generations are now in complete opposition to each other, and, given both sides would see compromise as a fundamental betrayal, it is hard to see a way forward without one side accepting their beliefs are wrong. However, it would be mistaken to assume that just because the right wing has won this round, they have won the war. Demographically they are declining and moves such as the dismantling of the Affordable Care Act, which is popular when not called Obamacare, will hurt their voter base. Well-paid manufacturing jobs cannot return to America because they largely no longer exist—with robots having fundamentally changed the traditional manufacturing processes (Jericho 2016).<sup>6</sup>

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<sup>6</sup><https://www.theguardian.com/us-news/healthcare>.

## Analysis and Conclusion

The current neo-liberal system is clearly struggling to function for more than a small percentage of the population, and even they will be affected by issues that cannot be solved by money alone, like climate change. A 2017 Oxfam report showed that just eight men in the world owned the equivalent wealth of the poorest 50% of the global population. The rise of Trump and Brexit provides examples of a rejection of an unpleasant reality, but the left is also primarily looking to the past with the rise of both Bernie Sanders and Jeremy Corbyn. Where are the millennial leaders? Where even is the next Barack Obama—the names being suggested for the 2020 presidential election are mostly in their late 60s now. How have Millennials allowed themselves to be so disempowered? Or are they? The next few years as these political developments grow will show if and how they will fight back. At the moment, there is no clear pathway to change. There are arguments that street protests are proving ineffective and disenchanting—millions protested against the Iraq war and it had limited impact on the choices of decision-makers.

Both these political developments have felt like they are the old power of the rural world asserting a last gasp of power onto a society that has changed too fast for them to keep up with. In America millions more people voted for Hillary Clinton, but the Electoral College allowed the votes of rural America to count for more than those in urban areas and for many to feel that the Trump presidency had been imposed on them.

Why is rural America and rust belt America so different to urban America? Those with access to hope and a future in the city are open to other ideas, whereas those who are angry and without hope are lost or striving to leave the rural areas in search of a dream. Why is one so open and globally focused and the other so inward looking. In theory both have access to the same information and both participate in a global economy. But one is inward looking—deeply religious and suspicious of anything that questions those beliefs. This can even mean reading different books, seeing different movies—with the recent rise in youth fiction and its challenging themes, Harry Potter, The Hunger Games, passing them by. Recent studies have found that reading fiction is surprisingly important for developing imagination and empathy for those with different lives. As economies change and the cost of production falls, Millennials are rethinking what is important and how they want to experience the world. Ethical concerns become more valued, and the nonmonetary costs to the environment and society are given greater weight than profits.

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**Part III**  
**Key Concerns Relating to Migration to the**  
**City and Strategies to Prevent the Risks of**  
**Trafficking to Women and Children**

## Chapter 7

# Alam Endah: Rural Camelot in West Java—A Case Study of Empowerment and Integrated Rural Development



Janet McIntyre-Mills, Yvonne Corcoran-Nantes, Ida Widianingsih, and Rudolf Wirawan

**Abstract** The chapter highlights the way in which a West Javan village succeeds in creating job opportunities in line with the recent policy initiative of President Jokowi which states that each village should develop an enterprise. The business council in the village, largely patriarchal, and the success of the enterprise are underwritten by the voluntary work of women and young people organized through the local *pesantren* (A *pesantren* is a secondary-level Islamic boarding school). The village acts as an example for the region which faces many challenges. The chapter details power dynamics and the important enabling role of the *pesantren* in the survival strategies of the local community. The disadvantage generated by the local patriarchal and hierarchical social structure is also explored. The chapter analyses the findings from research conducted in West Java as part of transformative research led by the following: Centre for Decentralization and Participatory Development Research, Universitas Padjadjaran (UnPad) led by Widianingsih located in Bandung, West Java, in collaboration with Flinders University (Resilience Institute, Humanities and Social Sciences, Business Government and Law) located in South Australia. The universities in turn collaborate with the Indonesian Diaspora. The Diaspora network is closely supported by Pak Rudolf Wirawan of Wirasoft (Who has been working at IBM full-time for more than 10 years). We use transformative mixed methods praxis to address the problem of land loss, urbanization and vulnerability.

**Keywords** Rural development · Gender · Empowerment · Vocational training · Integrated development · One village one enterprise

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## Introduction

The aim of the research outlined in this chapter and the next is to explore the life chances of rural people living in the Cibodas, Cianjur and Ciwidey region of West Java. This case study is an extension of research undertaken as part of a project called: ‘Living Virtuously and Well’ which comprised a pilot study based on focus groups in the region.<sup>1</sup>

This chapter focuses on a case study of one village within this wider region and demonstrates how not to get ‘lost in the city’. It identifies opportunities for sustainable living within the region. But it also underscores the fact that the success of the ventures in this study is supported by strong community networks and perhaps most importantly the voluntary work of both the young people and the women living in the community. The focus on wicked problems addresses themes raised by the Mixed Methods International Research Association task force report as reported by Mertens et al. (2016). The paper explores examples of how research can support communities to address the risks associated with human trafficking in an ecologically rich region. Social, economic and environmental resilience strategies around commercial plantations, communal and household gardens are explored in the next chapter. Examples of productive and reproductive labour, double and triple workload, decision-making, value chain challenges and responses through gender mainstreaming and community empowerment are discussed. We use qualitative focus groups with key stakeholders, in-depth interviews, ethnographic insights of the leader of Indonesian Women’s Empowerment (PKK) and the analysis of publically available statistical data. This informs improved policy development as well as offering suggestions for moving towards the enhancement of governance opportunities for women including greater social inclusion in key decision-making roles.

The meaning of Alam Endah, the name of the village, is ‘natural beauty,’ and most of the participants in the focus group and interviews stressed how much the village, nestled on the side of the mountains, meant to the residents. Nearby there are tourist attractions which provide a commercial outlet for the enterprise endeavours of the village community. First, there is the volcano named *Kawah Putih* (White Crater) and is regarded with awe by the locals because when birds flew over, they dropped from the sky because of the sulphur fumes. Nevertheless, the White Crater has not erupted in 200 years and is a very popular location to visit for local eco-tourists, while the volcanic soil has made the entire region a productive food basket. Second is the deer sanctuary which is visited regularly by busloads of tourists from Bandung, thanks to the new road built by the Jokowi government now making the area a popular weekend retreat. The mountain on which the park rests is called *Patuha* Mountain or ‘Grandfather Mountain’ and is regarded as an important spiritual presence protecting the area (Figs. 7.1, 7.2, and 7.3).

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<sup>1</sup>The research, entitled ‘Living Virtuously and Well’, has ethics approval from the Human Ethics Committee at Flinders University. Ethics approval number 7213.



Fig. 7.1 Raising awareness to conserve and protect the forest



Fig. 7.2 Feeding deer provides a tourism attraction and ensures the sustainability of the deer



**Fig. 7.3** Visiting the crater and viewing the landscape raises people's awareness of the importance of the natural environment and the vulnerability of human beings

Important within this socio-geographic scenario is an identifiable potential for increased weekend trade through eco-tourism which has led to a concomitant rise in commercial economic returns and property values in the region. This is an example of how sustainable rural urban linkages can be achieved through the development of local infrastructure (such as road construction to connect rural and regional city hubs) can create marketable opportunities in which agribusiness and tourism create a sustainable commercial future for the entire population. In the case of Alam Endah, the majority of the population have no desire to leave because it is one of the most prosperous communities in the area. It is also a very beautiful place with a strong sense of community.

### **Area of Concern: Prospering of Value Chain Through Social Capital**

The entrepreneurial endeavours of Alam Endah arose out of the 2014 presidential decree which required all villages to establish local government sponsored economic activities owned and run by the local authority for the benefit of the community. This presented a challenge to all villages but most especially those with limited natural resources. This was not a problem for the village of Alam Endah which rose to the challenge establishing many local enterprises and developed community

infrastructure through successful fundraising. In line with the Presidential Decree 140/KEP 10 DESA, the head of the village council appointed a management committee to oversee the enterprise. Fundraising within the village over a few months helped to fund the building of a new road and a large local mosque which cost 500 million rupiah. Alam Endah is based in Rancabali Subdistrict, Bandung District, West Java Province.<sup>2</sup> It is one of the most resource-rich agricultural areas due to its volcanic soil and provides us with a case study of successful rural development. Administratively, the village is divided into 112 neighbourhood groups and 30 villages consisting of 6887 households of 22,000 people in an area which covers 505.6 hectares. Alam Endah relies on agriculture with 95% of the inhabitants working as farmers. Apart from the agriculture sector, eco-tourism can be supported further through visiting places of interests such as the tea and coffee plantations, the waterfalls, hot springs and strawberry farms. This case study demonstrates that it is possible to develop local agricultural industry not centred on rice production such as the production of berries, a range of vegetables, coffee, tea and bamboo.<sup>3</sup> While in the past there was an emphasis on bamboo production, the head of the village informed us that the bamboo gardens also included the production of coffee to provide biodiversity. Moreover, the expansion of local enterprise has led to a heavy dependence on active productive inputs and organization of women increasing earning potential and self-employment in an environment within which women's agricultural labour on the family farm goes unrecognized and unpaid. This has held female labour within the rural community in situations such as land loss and declining economic opportunities has, elsewhere drive young women especially into the cities to seek paid employment and placed them in circumstances vulnerable to trafficking and exploitation.

The potential for bamboo to be used as a source of income for farmers (along with providing a renewable energy source) is detailed in a submission to the South African government<sup>4</sup> and discussed in terms of the role that the One Village, many enterprise could provide opportunities in an extension of markets and possible solutions to the energy crisis in South Africa.

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<sup>2</sup>Many people still regard the village as part of Ciwidey despite the fact that it was already considered a separate community in 1979 and by 2001 in view of a sizeable population increase it definitively split from Ciwidey.

<sup>3</sup>In 2013 in Indonesia, there are 72 million 944 thousand villages, and there are 32000 villages in the eastern part of Indonesia. Of these 43% of the poor villages are in eastern Indonesia have limited support. This is one of the reasons for introducing the Ministry for Village and less developed regions. In 2013, 63% of the poorest of the poor are farmers, and they make up 28.6 million farmers. Another point raised by Ida is that food insecurity in many parts of Indonesia is linked with the inability to grow rice.

<sup>4</sup>Submission on Climate Change Bill Food, energy and water security – mapping the production and consumption cycle - [https://archive.org/details/WirasoftAndFlindersClimateChangeInSouthAfricaV4.0\\_201808](https://archive.org/details/WirasoftAndFlindersClimateChangeInSouthAfricaV4.0_201808).

## Research Approach

The fieldwork was possible because it was facilitated by Dr. IW, a PhD graduate of Flinders University, who also runs her own Participatory Engagement Institute as part of Padjadjaran University. The role of Dr. IW as facilitator enabled entry to the village as she speaks Sundanese and her grandfather built the local mosque. She has continued to serve her community. She is the only one from the village who went to university and now serves her community through extending networks of solidarity to help the local people. Her personal connection to the region began when she founded a Green Belt Movement as a young woman to support environmental preservation. Despite moving away from the region, Dr. IW has sustained her commitment to the area and its agricultural development by continuing to farm in the Cianjur region.

The rapid fieldwork appraisal, on which this article is based, was built on qualitative focus groups, observation, interviews and the analysis of secondary quantitative data. The field visit conducted on 17 Dec 2018 is an extension of a series of visits linked with the UnPad centre for decentralization and participatory development research for a project called 'Living Virtuously and Well': mitigation and adaptation to climate change detailed in the next chapter. It also extends the pilot detailed in McIntyre-Mills (2017).

As a facilitator, Dr. IW was able to ask the village secretary and village leader to host the meetings in the local community hall linked with the clinic. The focus group was attended by men and women including local farmers and business representatives. The participants included the following stakeholders: head of the village, secretary of the village, woman council member, women activists, head of neighbourhood, farmer representatives, health volunteers, youth group representatives and marketing manager.

The focus group discussion was divided into four groups spanning women and women activists, farmers and young people, business and a separate interview with the one and only female leader.

The research team was led by Ida Widianingsih (IW) who with the help of her students enabled the team to interview the village and help with the translations from Bahasa, the language in which most of the interviews were conducted. Donna Mertens (DM) interviewed the farmers and some of the young people. Janet McIntyre (JM) interviewed the women, while Yvonne Corcoran Nantes (YCN) interviewed the one and only elected woman leader. Pak Rudolf Wirawan (RW) interviewed the men.

The focus group discussions were preceded by a welcome from the head of the village, who gave an overview of their activities and development initiatives for our benefit. The proceedings were carefully translated for those not fluent in Bahasa. The business strategy for Alam Endah is communal. It has one co-operative linked with the pesantren. The community is required to develop one cash crop per village. To this end, they have planted three million seeds of coffee. From the point of view of the village marketing leader, there are three main sources of empowerment,

namely, business management, clean water and waste management. Previously, they burned the waste or threw it out into the river. But this has changed since the introduction of a new recycling project detailed below. The Cibodas River and Cigadog River are used for farm irrigation, and they also dig wells for household consumption. Springs provide another source of free water managed by the Ministry of Forests.

Electricity is provided to each home by the government, and it costs on average 100–200,000 rupiah for the average home.

## **Urbanization, Rural-Urban Linkage, Loss of Land and Displacement**

### ***Representation and Accountability to Young People and Women in Co-operatives***

The role of women in the community is clearly traditional. Early marriages at 14 and 15 are less common today according to women in JM's focus group. Women were asked whether the girls continued education from primary to secondary level or whether they dropped out at a particular level. [Up to 2016, it was 9 years compulsory schooling; now it is 12 years] They said that girls could continue their education but they would still need to carry out all their other household activities. The role of women in the village was described as 'carrying a double or triple burden'. For example, the marketing manager of the village-owned enterprise earns about 40 dollars a month, but he is also farmer and has a shop. The fulfilment of the three roles is achieved through the support of his wife who serves in the shop and works in the fields and in the home garden. This involves productive albeit unpaid work. The village manager also has extra responsibility to address the water service, waste management and community empowerment kiosk. Much of the work to support these roles is supported by his wife and the volunteer labour of women. Thus, JM discovered that male leadership positions in politics and commerce were underwritten by women's unpaid labour without which men would be bereft of the necessary support to occupy leadership positions or undertake more than one commercial venture.

### ***Who Decides What Is the Issue and What Is It Represented to Be (WPRB)?***

Bacchi's *WPRB approach* (2009, 2010) was applied to an analysis of the qualitative data. The lack of representation of women was evident, and when analysed using Kabeer and Subrahmanian's (1996, cited in March et al. 1999; Kabeer, 2012; Moser,

1993) institutional analysis of the relationships across domestic households, community neighbourhoods, the local government council and market opportunities, it is clear that:

- Women do the majority of unpaid productive work within the household frequently assisted by their, usually, female children.
- Women are happy to work collectively as they can see the advantage of knowing what is happening in the neighbourhood.
- Only one woman has been elected to the 11-member village council, while women are the principal fundraisers; they are not involved in the decision-making processes with respect to the allocation of resources and funding.
- Business and marketing is controlled by the council where women have only one representative and apparently little or no input.

While women clearly had little participation in decision-making in the village, the tasks of the women's group involved campaigns and active direct community engagement with the women of the village. The head of the group emphasized that they were principally concerned with women's and children's health but most especially the question of reproductive health. This involves auditing the local clinic facilities and delivery of services, checking kindergartens, they also visit pregnant women in their homes to see how they are and what they might need. Members of the women's group emphasized that the primary health concern was water and sanitation-related disease. This required active prevention through regular auditing of good hygiene practices and the provision of better infrastructure. The second concern was the inappropriate use of indigenous Sundanese approaches for addressing infertility and women's reproductive health. They conceded that some indigenous Sundanese cures are successful but that ethnic infertility treatments needed to be avoided. The women's group argued that auditing facilities and services both inside the clinic and the outside community was fundamentally important to adequately addressing infant health and wellbeing through the clinic. In this way, the group was able to ensure the careful regulation of local health services and the attendance of women and their children at the clinic.

Moreover, since the clinic was so central to community life, it was the ideal location for the rollout of the waste management and recycling scheme established by the village. The clinic provides regular immunization of infants and children as well as undertaking the regular checkups on the village children to ensure that they reach the appropriate clinical bench marks. Consequently, because it was mostly women who would take their children to the community centre, it was they who formed the majority of the membership of the 'Cadre Posyandu' (integrated service force). As such, they managed a system of integrated preventative health care which includes waste management. Access to the clinic was enabled through a points system linked to the management of recycling. Whereby handing over household waste for recycling awarded points to the women on a visible chart on display in the clinic. The clinic provides a free service to all women who bring recycled waste to the clinic. In this system, they would also get green, yellow or red dots on their clinic card to show how well they integrate public health into their service delivery. The individual and public health commitment is thus very well

represented in this example and offered clear incentives to all members of the community. Ironically although the members of the committee stressed the importance and success of recycling, the observable overflow of rubbish in the clinic kitchen did not go unnoticed behind the scenes. Clearly, the processing of recyclable materials was still presenting challenges, even in the clinic kitchen.

The participants in the focus group discussions [FGD] emphasized that they valued tradition and the strong community links with Alam Endah and that they ‘love the area and the beautiful land’. They stressed that although some families had sold their land, the guaranteed high prices had enabled them to buy much larger plots of land, albeit in less strategic places, to expand agricultural production and be more productive farmers. Overall, they stressed that they were happy with the management by the enterprise committee. It was unlikely that they would offer an alternative opinion given the manager of the village committee was part of the FGD.

They stressed that they liked getting higher prices for their goods as a result of the organization, but they did not like not having the control of all their activities without having much of a say or ‘influence’ over decisions. They stressed that their main concern was that outsiders with bigger business interests were coming into the area.

### *Education and Vocational Training*

The *pesantren* provides training for all the children of the village free of charge. Primary and secondary education is free for the first 9 years. After that, they are required to pay for higher education.

The potential for building vocational educational training as an extension of the *pesantren* is clearly a possibility with the support of the Minister of Education through UIN. Young people in the community are fully engaged in helping the family businesses as well as community projects, and as such, they are responsible for sorting rubbish and helping with the packaging of farm produce. They spend much of their time engaged in community activities associated with the mosque, and training is at present undertaken by the *pesantren* which provides free education. Young people undertake the design of the packaging and labels for local products and produce which they also make.

Clearly, the potential exists to remunerate work within the co-operatives which is presently undertaken by volunteers the majority of whom are women and children. This would acknowledge and reward their contribution financially or through a points system for their work in the community. Moreover, this would facilitate monitoring from below with respect to social, economic and environmental accounting and accountability.

At the moment, the social capital contribution of young people is very high, but if they move, they lose it. They need to be able to have some share that recognizes the volunteering. In 2015, the Bandung District introduced a new program called ‘Reduce, Reuse and Recycle Project’. By 2020, all the waste will have a value added as energy or another form.



Local government training is provided to manage waste and not to pollute the river. The village government has land, and the young people are asked to help the company for free every Friday—they are given a small contribution of about 2 cents to take the rubbish to a temporary waste processing centre. The youth group collects the rubbish. They employ six people to sort the rubbish into organic and inorganic waste for compost. They collect 12–17 tons of waste every week, and every 3 months, they make 3 tons of organic fertilizer. But it does not last long because of the high demand of farmers.

### *Gender, Fundraising and Decision-Making*

The downside of the model is the high dependency on unpaid productive female labour in the home, on the farms and in the community whereby women at times work 24/7 even in the opinion of the men in their households. They plant the crops, remove the weeds and spend time selling in the kiosks or shops, they then return home to work in their home gardens, and they follow these tasks by doing most of the household chores. Women are virtually solely responsible for fundraising. Examples of superlative fundraising capacity were given to Ida whereby the community of a nearby village raised money for a new mosque in a matter of weeks demonstrating the strong social capital within the village communities.

In Alam Endah, the leader of the women's group, Haretarti, confirmed that women do all the fundraising. When asked what the men do and whether they have specific projects (given the clear gender division of labour within the village), at first, she stated that: 'Men believed they did enough work'. On further exploring this issue, Haretarti was a little more reticent and chose to justify men's less than full participation. Men, she argued, were the principal farmers and did things that women 'did not do'; as such it was left to women to undertake the project work. But when we asked about the work women contribute as farmers, producing and processing food for the family and looking after children, she conceded that women did such work but it was not 'paid' work as such. Both male and female participants in the FGD were much less reticent in confirming that women worked alongside men on the farms and confirmed there were women who also undertook paid work outside of the home when farming activities brought in 'insufficient income for the family to survive on'. However, it was clear that in the village, remunerated work acquired higher status than that from which income was not derived. Women's productive unpaid work on the farm, the production of subsistence crops for family consumption, represented a significant input to family wellbeing. In terms of the various explanations with respect to the existing division of labour financial input was given higher status and women who were not paid for their input on the farm and in the home (despite the pivotal nature of their contribution) remained acknowledged but unrewarded.

In considering the formal division of labour within the village, women as pivotal unpaid productive workers became the leading volunteers and 'entrepreneurs' in the

community. Moreover, women's central involvement in community-based projects such as the waste management and recycling led to an unbroken nexus of gender-specific community engagement which found women 'naturally' leading fundraising efforts in and for the community. Thus, women are the ones involved in producing goods for sale to raise funds for the village. They were split into different skill groups, one group responsible for baking sweets, cakes and biscuits—baked goods in general—and another making dolls and soft toys. The latter group, for example, make deer-related soft toys and goods, e.g. small plush deer, deer hoods, etc. These were produced for the local tourist market at the deer park. Each project group has a leader based on their recognized skills or willingness to lead. For example, Haretarti heads up the baked goods with a female businesswoman, Ms Nur, who heads up the dolls and soft toy group. Together, they sell at the local regular markets and set up kiosks in tourist spots and so on. Involvement and the nature of the task performed by each group member are dependent on their skills—some may be good with money or selling so they take on those tasks. All of the women we spoke to enjoyed being involved in the fundraising because it's sociable and it builds community. However, when asked how much money they raised, Haretarti stated they had no idea—they just knew that it went to the village. Thus, women had no control or say with respect to the decision-making concerning the money earned by their contributed labour. Men did not have that problem with respect to income-generating activities they engaged in outside of their core work commitments. When we asked women's leader Haretarti about the 'men's projects,' she spoke of men growing strawberries and other berries and selling them at tourist spots. These activities were not intended to raise money for the village but for the individual men themselves.

In all practical respects, the women of the village have the knowledge required to identify things such as needs, difficulties and measures for cooperation and division of labour especially among women. This gives a 'ghosted' influential position which serves as a pathway to empowerment within a highly patriarchal traditional set of gender relations demarcated and manifested within village politics. The women's group leader, and sole female member of the village council, also found ways to exercise authority. While she argued her duties are determined by and involved with the legal strictures of the village constitution, she always made sure they are sufficiently flexible to facilitate her work with the women's group overseeing the general conditions in the village. This she stated provided a means to exert influence (albeit within the existing patriarchal structures). For Haretarti, it was women's empowerment that was important in the links between the project and community work and empowerment. She stated that she is working towards enabling more women to be formally elected to the council in order to facilitate real empowerment in decision-making. Previously, women had not been given the opportunity to be involved, but now the women were currently working strategically towards having a greater voice in public decision-making and more control over the way funds are allocated and spent. Women's predominance in fundraising activities seemed to be a strategic development enabling women to have a greater voice in public decision-making in the long term as well as greater control over the way village funds are allocated and spent. Furthermore, women may not have control over land; they remain committed

to their ascribed roles in the community principally knowledge with respect to the health and wellbeing of all members of the community through their data collection on health, water management and refuse management.

## Risks and Opportunities of the Co-op System

Once people are part of a co-op, they are at the mercy of the leadership. If they are wise and fair, then everyone prospers. If not, then they risk being exploited. As farmers, they need to be able to control and own their personal source of income, namely, land. The diversification of agricultural activities, and the stabilization of the environment and landscape was important to this end. The farmers in the FGD that were interviewed emphasized that they planted bamboo and coffee as well as berries to generate income. En route we saw landslides near the road where bamboo had been cleared away. Thus, planting bamboo was also important to stabilize the land and to protect villages and crops. Moreover, the products manufactured from bamboo include the following: furniture, building material and antibacterial clothing, such as socks and underwear that provide a market for bamboo cultivation. According to the FGD participants, strawberry production also needed further development which included appropriate packaging and marketing. At the present time, it is young students at the *pesantren* which assisted in strawberry packaging. A co-operative system was still in the early stage of development in the community, and as yet there was no proper accountability structure in place. Clearly, there was adequate opportunity to extend all of these activities as part of a formal agricultural business training opportunity.

A further concern is that the current village marketing and business committee are not sufficiently transparent with respect to its activities, and as such this limits accountability. This was evident in our discussions with both women and men farmers. One of our teams was able to consult the village documentation from meetings which reported that the funds were allocated as follows: water management received 7–10 million IDR per month, business development received 2 million IDR per month, maintenance received 30 million IDR, village government receives 30 million IDR, neighbourhood co-ordinators receive 30 million IDR, and management receives 10 million IDR. Bearing in mind that the funds to undertake projects within the village enterprise are primarily raised by the women's group, in the long term, there will likely be considerable pressure for open accountability giving them full knowledge about how much money they raise and how it is applied.

The village enterprise is called 'BUMDes Alenda' or Badan Usaha Milik Desa meaning village-owned enterprises (established by Village Regulation no 4 of 2013). Water service management has top priority as fundamental to the wellbeing of the community, and up to now 1000 homes have been linked to the water system which constitutes just under one sixth of the village. This leaves 6887 homes still to be plumbed into the system. The cost of water is 10,100 IDR per cubic metre which compared to water sullied in urban areas is inexpensive, for example, every family

uses about 14 m<sup>3</sup> of water which would cost 15,000 IDR. Compared to the cost of water in urban areas, this is very cheap; according to an Indonesian member of the team, in Bandung Municipality, the cost could be as much as 200,000 IDR for the same level of consumption. Sanitation management is undertaken by each household whereby each family usually builds a septic tank and the majority of households have their own toilet.

Conversations with the community after the FGD focused on discovering ways to add value to agribusiness by working with the *pesantren* and extending vocational educational training by building an institution to support the community. Alam Endah certainly seems a model village with respect to retaining if not growing its population rather than losing it to urbanization and income-generating opportunities in the city.

## Potential Pitfalls: Land Loss and Corruption

### *Risk of Losing Land: Government Land Such as Tea Plantations Being Bought by Private Sector*

The risk of being bought out by big business and then losing land is a major concern. This occurred in a nearby area whereby the local government-owned tea plantation was taken over by a Chinese-owned business. The tea pickers who had worked for many generations on the plantation were then rendered both unemployed and landless. The tea pickers and their families lost access to their place of work along with their personal plots that needed to be accessed via the tea plantation. Previous generations had worked for the same tea plantation their entire working life and on retirement received a grant that enabled them to buy a plot of land.

Moreover, these families also lost access to the lake nearby and the source of income they generated by rowing boats for tourists to access the beauty spots. The local waterfall was also declared to be on private property, whereas previously, it was accessible by way of the government-owned tea plantation.

The political decision to sell the land was clearly made at a senior level without informing people of their rights. All landless people in Indonesia are entitled to land under a scheme announced by President Jokowi, but the tea pickers were unaware of their rights. The new neo-liberal economics of short-term contracts in a 'for-profit' private business was however imposed with the full knowledge of someone senior in West Java government.

An Indonesian academic, who is part of our team and indigenous to the region, had at that time tried to find members of the dispossessed families in order to inform them of their rights, but by then, many had already moved to the city in search of employment. Ida Widianingsih notes that:

This is a very 'political dance'. An Indonesian state company ran the company and it was possibly going bankrupt. They decided to sell land to the investor.....This is unusual to sell

a state owned enterprise to a private owner. They turned it into a tourism spot and the pickers were the victims of the decision. In the past retirees received 80 million as a pension so that the pickers could buy their own farm and survive. These pickers left with nothing and the new owners imposed new contracts on the people who work there. The pickers and their families had lived there since the eighteenth century. The new business was imposed on the locals who had voted for the Golkar and the tea company. And now the present generation suffers. They had worked as pickers for many generations and all their skills and devotion had been to the tea plantation and now they are destitute as a result of the transition. How did they manage to go bankrupt? It is an excellent business. People suffer and no longer can afford to retire in the area. The pickers earned 50c per kilo per day. This is about 3–5 Australian dollars per day. They did not pay for housing or for schooling. When they reached the pension age they used to receive a payout. Normally they used to stay on the land or nearby.

Displacement and loss could be averted if more emphasis was placed on educating rural and urban residents of their rights in terms of the Indonesian constitution and current policy. This will also help to address the concerns raised in the next chapter where young people are at risk of trafficking when they face land loss and destitution and the process of proletarianization renders them vulnerable to predatory ‘job offers’ in factories or as domestic workers where the conditions of employment are not closely governed and can be a front for trafficking in some instances. Land loss does not need to be inevitable if people are made aware of their rights to land as per the Presidential decree. As the case study in this chapter demonstrates, it is possible to develop a successful village enterprise system whereby communities have the potential to be self-supporting and potentially profitable. This opens up economic prospects for the next generation of farming families to remain on the land and part of a broader rural project to retain if not expand its resident population.

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# Chapter 8

## Freeing the Luwaks and Escaping the Iron Cage: Vignettes on Surviving in the Anthropocene by Joining Up the Social, Economic and Environmental Policy Dots—An Application of Critical Systemic Thinking to Areas of Concern



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**Abstract** This chapter suggests alternative approaches (alternative to ‘business as usual’) which build on the capabilities of young people at risk of leaving the land premised on a non-anthropocentric approach that fosters sustainable development through job creation. Non-anthropocentrism refers to the approach where human beings appreciate that they share one habitat with other living systems. Binary oppositional thinking results in anthropocentric policy and governance practices that do not protect the habitat of living systems and that frame development in terms of profit by the minority elites at the expense of the majority within this generation and the next. This transformational research is based on the assumptions of gender mainstreaming (Presidential Instruction No. 9/2000 on gender mainstreaming) and the capabilities approach (Nussbaum, *Creating capabilities: The human development approach*, Harvard University Press, London, 2011) that protects the right to a decent quality of life for all sentient beings. The paper develops non-anthropocentric options for socially and environmentally just development inspired by Gunter Pauli’s approach, but with greater emphasis on local participation, in line with the Paris Agenda on Development and Shiva (*Making peace with the earth*, Fernwood Publishing, Winipeg, 2012; *Monocultures of the mind: Perspectives on biodiversity*

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and biotechnology, Third World Network, Penang, 2012) which emphasizes the need for local people to participate in decision-making to support biodiversity and protect the Earth. The research is relevant and timely as it strives to not only merely address the UN Sustainable Development Goals but also to regenerate opportunities for women and the environment by providing them with a practical, life-enhancing opportunity that will reduce their vulnerability to poverty and prevent human trafficking and inhumane incarceration of civet cats. The case study using multiple mixed methods and a participatory design with the women provides a valuable means to assess their training needs.

**Keywords** Systemic challenges · Indigenous collective knowing · Ecosystem governance · Anthropocene

### **Cibodas and Cimanggu is Part of Bandung District. Cianjur is Different District, Both Located in West Java Province**

This chapter extends the work detailed in *Balancing individualism and collectivism* and *Planetary Passport* to address the issue of outmigration from rural Cianjur in West Java to Bandung and other major urban centres. The aim of the project is to enable rural educational hubs as an educational focus for social and environmental justice.

The goal is to raise awareness and to create a way to raise the profile of the joint initiative to create employment opportunities. For example, microfinance was raised through donation and purchase of the civet collar to be placed on caged civets to enable them to be released into the wild. The tracking device could also be used to protect the creatures from poachers and to track illegal loggers, who are often involved in animal poaching and trafficking.

Human trafficking often occurs as a direct result of rural to urban migration. Through trafficking young women are lured to work in Bandung in textile factories and coffee shops, because the local agricultural activities do not generate sufficient income to support their education or consumption needs in an increasingly financialized economy. The temptation to sell land and rice paddies results in being forced to sell one's labour. The aim is to address the sustainable development goals to end poverty and to protect the environment by enabling job creation for young people at risk of being trafficked from Cianjur. As the environment becomes degraded, people are becoming increasingly vulnerable to exploitation. Nearby Bandung is known as the trafficking centre for prostitution. Offers of jobs in the city are often linked with the garment industry and hotel waitressing (Cook 2006; IOM 2006<sup>1</sup>).

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<sup>1</sup>Cook, S, 2006 ASEAN and trafficking in persons: using data as a tool to combat trafficking in persons. The document addresses the Declaration against trafficking in Women and Children and the ASEAN Declaration against Transnational Crime and the ASEAN 2020 Vision. It cites the UN Trafficking Protocol.

The creation of jobs protects young people who are at risk of trafficking. The rural area Cianjur, a food production area with a population of 570.991 and an unemployment rate of 11.43% and a poverty rate of 5.63%, indicates that having access to land helps to prevent the poverty experienced when land is lost.

Cianjur is the rural rice-growing area close to Bandung and is a more relevant site for agricultural production. This region is a neglected area that borders the ocean. Despite its agricultural potential, it is one of the poorest areas, particularly in the southern area of West Java. Rice, coffee, and vegetables are produced here. The interviews in Cianjur required travelling en route through villages named after the type of work for which the village is known. One is named for stone masonry, another for marble mining and another for pottery, for example. Most areas continue to farm rice in between a growing number of light and heavy industry combined with small shops (*warungs*) selling food, gas, water in bottles and larger containers for varying prices. The villagers use a combination of bikes and horse taxis to hawk their goods.

In Cianjur, West Java, the social, economic and environmental indicators of being at risk as a result of loss of land are linked with a lack of skills or health problems associated with water- and sanitation-related diseases or poverty-related diseases, such as TB.

The chapter makes the case that in Cianjur, development needs to restore, regenerate and respect indigenous Sundanese approaches that foster biodiversity. The focus for socio-environmental development requires protecting the environment for both human and animal security<sup>2</sup>:

Today land is being further concentrated in the hands of the wealthy. As we travelled from *Cibodas*, my interpreter pointed to a large poster of an investor who I was told was linked with powerful overseas investors (including Donald Trump) and was now running for office.<sup>3</sup> Then they pointed out a new housing development in *Jatinangor* where once small farmers earned a living from rice production. The increasing loss of land to commercial groups and the moneyed classes is making the rural poor increasingly vulnerable. Once they have sold their land, they often buy TVs or other consumer items, and when the money has ran out, they are more vulnerable than before they lost their land, which provides a means

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<sup>2</sup>Drawing on Hofstede et al. (2010), we need to consider the *consequences* of different cultural values for more non-anthropocentric approaches to social, economic and environmental governance. Current ideals of democracy and governance are in need of reform because we face convergent social, economic and environmental challenges such as poverty and climate change resulting in a growing gap between rich and poor and increased levels of unemployment. Droughts, floods, fires and natural disasters are now perennial which has exacerbated water and food insecurity. The project approach here is to work with diverse people in Indonesia to explore the way in which they think about what constitutes food, conditions of production, storage and consumption and the rights and responsibilities as stewards of living systems of which we are a strand.

<sup>3</sup>It may be true that the majority of the GDP is produced by a small section of society, but in fact if you look at Pareto's work on the 20/80 principle, he found that the most productive 20% land produced 80 % of the food.



of production. At this point they become not just members of the poor landed class but instead members of the lumpenproletariat.

In *Cianjur*, more people are interested in finding other sources of income outside agriculture, and the risk of out migration is much higher. In a focus group discussion (FGD 2017), the participants stressed that working conditions in local government need to take into consideration the fact that working women need to undertake domestic chores before arriving at work. Thus more flexible working hours may enable more women to combine productive unpaid work at home in their gardens and paid employment in government offices. Moreover, one of the elderly farmers stressed that he believed the decline in agriculture would continue unless something was done to make agriculture more attractive to the younger generation as a viable income-generating economic activity. Declining markets for agricultural produce are certainly an issue, but this seemed to be more of a problem in *Cianjur* than in nearby Alam Endah. This group stressed that in *Cianjur* young people preferred to earn a living as a pedicab driver or hawker in the city which was considered a better option when compared to low-income labour in a rice field. As a result, many agricultural plots were not even being planted.

The initial fieldwork was undertaken in 2016 as part of a research project entitled: Living Virtuously and Well.<sup>4</sup> This was addressed in a workshop that followed on the three subgroups of approximately 20 in each comprised the event. The total number of participants in the focus groups was 60. The focus groups were facilitated by Ida Widianingsih together with student facilitators (Table 8.1).

This was linked with an event ran by the Universitas Padjadjaran (Unpad) which also runs a training programme for all village members, and places were offered to 50 people per village, namely, places for 600 trainees to be subsidized by West Java Provincial Government. Each trainee would receive the equivalent of 50 dollars on completion plus a certificate. Accommodation and food would be provided during the training. The programme has successfully assisted startups and training programmes over the last 3 years at UNPAD. The aim of the training is to add value to the agricultural products by providing training and support.<sup>5</sup>

A third focus group discussion in *Cianjur* focused on the challenges facing young people. One of the key issues raised was the way in which the Internet is misused and the potential for exposure to trafficking and pornography needed to be addressed to protect children and young people. The FGD said that better co-ordination of services is needed. They also emphasized the important role of the police in supporting and protecting young people and the need for the nature of that role to be explored. The lack of hospitals was highlighted as a fundamental challenge to the local community. While there are clinics and traditional healers, they should be encouraged to work with the biomedical system and to be registered to ensure that they are compliant with current medical standards.

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<sup>4</sup>The research, entitled 'Living Virtuously and Well,' has ethics approval from the Social and Behavioural Research Ethics Committee at Flinders University. Ethics approval number 7213.

<sup>5</sup>The data collection was held alongside some of the promotional activities by UnPad.

**Table 8.1** Design for pilot research

Participant type/group	Population pool	Numbers to be approached	Expected/required no.
Pilot	40 postgrads The participants include staff and students who will be recruited via the research office through a general letter sent to all students and not directly via classroom contexts	40	30
Focus groups	The first in Jakarta with a population of 1.898.537. It has a low unemployment rate of 2.4%. It will be conducted in their urbanized area of Depok City at the University of Indonesia	Purposive judgmental sampling	60 A purposive sample spanning FG1 public sector (20), FG2 private sector (20) and FG3 (20) NGOs
Interview	As above	Purposive judgmental sampling	10
Focus groups	The second in Jatinangor, a suburban area that is becoming increasingly affected by loss of land as urban sprawl extends, with a population of 4407. The poverty rate is 11.85% with an unemployment rate of 6.5%	Purposive network sample of participants at the local government level will be invited through the Ministry of Education and Ministry of Religion and through the West Java Provincial Council 10 in-depth interviews	50 A purposive sample spanning public sector (20), FG2 private sector (20) and FG3 (20) NGOs
Interview	As above	Purposive judgmental sampling	10
FGD	A third case study with residents from Cianjur, a food production area		60 A purposive sample spanning public, private and volunteer groups
Interview	As above	Purposive judgmental sampling	10 Campus one of the university leaders facilitated the fieldwork and we visited Jatinangor Campus of

McIntyre-Mills (2017a, b, c:193)

The financialization of the economy has increased the vulnerability of young people to trafficking. Although young people do not starve, they aspire to increase their disposable income, in order to purchase consumer goods or to pay the educational fees of a family member. In the focus group discussions, they contrasted the potential of earning 150 dollars a day selling food as a hawker in the city with the earning of about 5 dollars a day from agriculture. Clearly, there is little comparison

between the disposable incomes generated by the former when compared to the latter.

The challenge, therefore, is to find ways to develop income generation opportunities by adding value to agricultural products or creating something out of nothing as a way to create a viable income. This provides independence and it can be done through thinking differently about the local environment.

In the rural area of *Cianjur*,<sup>6</sup> I was told by the leader of the PKK, a women's group, that trafficking was becoming more of an issue in the region. She held a leadership role and was married to a local government official<sup>7</sup> and expressed concern about the extent to which parents encouraged their daughters to take on domestic jobs offered by prospectors (pimps) acting for traffickers. Moreover, the number of young women returning from Malaysia and from Saudi Arabia (pregnant) and then having unwanted babies has resulted in midwives facing the prospect of finding homes for these children. Another participant commented that her sister (a midwife) had fostered three abandoned children by women who had worked in Saudi Arabia.<sup>8</sup> She stressed that:

The tourist areas up in the hills are more vulnerable but the traffickers are extending their networks even here.

The vulnerability of young people (male and female) has resulted in Bandung and Jakarta, for example, being unsafe for children who are not accompanied on their way to and from school. As one informant stated, 'These days' children cannot walk to and from school without an adult'. My informant explained this was because they were at risk of assault or perhaps trafficking. Indonesia has become more conservative in relation to sex workers, but the protection of women and young people who are the victims of trafficking needs to be given a great deal more attention in public policy. According to UNICEF,<sup>9</sup> in 2008 there were nearly 14,000 child victims of sexual exploitation in six tourist destination provinces. Furthermore, an ECPAT

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<sup>6</sup> <https://www.statsmonkey.com/sunburst/23644-cianjur-regency-population-statistics-by-gender-jawa-barat-indonesia-stats.php>.

<sup>7</sup> Interview carried out in 2016 by Janet McIntyre-Mills.

<sup>8</sup> The chapter is based on the findings of the Indonesian Research Consortium set up in December 2015 as a result of a symposium hosted by the Universitas Nasional. The research is on regional security associated with food, energy and water in increasingly urbanized West Java. It commenced on 20 September 2016 and a symposium and focus group discussion was held in December 2017. The aim of the research is to address the UN Sustainable Development Goals at the local government level and to explore the local knowledge and indigenous ways to live 'virtuously and well'. Three universities are currently involved in the research, namely, Universitas Nasional, University of Indonesia and Universitas Padjadjaran. They helped with the case studies in urbanized Depok, suburban Jatinangor and rural Cianjur. The research has Australian Research Council Ethics Committee Approval (7213). Connected with this research, these universities will support me in setting up a regional conference (linked with *Journal of Mixed Methods Research*) which we aim to host in 2017. Connected with this research, we seek to set up Cotutelle arrangements so that our small pilot can be extended. We also invite others to join the network and to support the initiative.

<sup>9</sup> UNICEF Indonesia's fact sheet *Children in Indonesia: Sexual Exploitation* (2010).

International Indonesia Report in 2010 revealed there were nearly 40,000–70,000 children victims of sexual exploitation in Indonesia, 21,000 of them involved in prostitution in Java.

Technology and social media unfortunately make prostitution easier amongst underaged persons. In 2013, Indonesia was disturbed by the discovery of prostitutes aged 11 years old being sold on social media. Facebook was used to attract clients, showing that social media also provides potential platforms for crime, including child prostitution. However, it appears that the government becomes obsessed about censorship only when it involves ‘homosexuality’. While it is surprising that similar treatment is not applied to ‘heterosexual’ or general social media outfits, the rationale behind this censorship also exposes a number of vague definitions and principles in most Indonesian laws.<sup>10</sup>

Meanwhile the activities of red light bars and Karaoke singers nearby Mount Kemukus are being monitored as they are perceived to pose a problem due to the nature of their activities near a holy site in Central Java whereby:

Central Java Governor Ganjar Pranowo closed down dimly lit bars and karaoke shops at Mount Kemukus, while dozens of sex workers were removed from the Mount Kemukus area. (Adi 2016)

This is a tourism destination where according to Adi (2016) people seek blessings at the tomb of Samudra who is thought to be the last Majapahit king. Adi explains that the Sragen Integrated Licenses and Investment Agency stressed that:

all night time venues, including cafes and karaoke parlours have been illegal since 2014, adding that his agency never gave permission to any of these activities... This is in line with recent moves to control prostitution and a new act to clamp down on pre and extra marital relationships by Judges in 2016.

This reflects the legal and policy ambivalence with respect to public sexual activity and paid sexual services which complicates the question of control of the same on social media and as such offers few barriers to trafficking across the Indonesian diaspora.<sup>11</sup>

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<sup>10</sup> See <http://www.thejakartapost.com/news/2016/11/05/leave-students-alone-activists.html>.

‘Students must not be the target of discriminatory policies set by the State University of Gorontalo (UNG) as they need to study in a safe and supporting environment regardless of their sexual orientation, activists say. A coalition of 16 NGOs have lambasted UNG rector Syamsu Qamar Badu for issuing a campus policy that monitors and forces lesbian, gay, bisexual and transgender (LGBT) students back to “normalcy”. In an article entitled “Double standards: The defining of homosexuality as pornographic in Indonesia”, Hendri Yulius (Jakarta Post 2016) explains the extent of the hypocrisy that does not control heterosexual predators as well as homosexual predators’.

<sup>11</sup> See Riswanda, Corcoran-Nantes & McIntyre-Mills ‘Re-framing prostitution in Indonesia: a critical systemic approach’. in *Systemic Practice and Action Research*, 29:3.

## The Systemic Links Across Land Degradation, Land Loss, Proletarianization and Trafficking

The production of rice<sup>12</sup> is a focus in Indonesia, but as detailed in the previous chapter, it is possible to develop many other viable agribusinesses and that protecting forest habitat helps to protect the microclimate. This could become increasingly important with climate change:

Central Statistics Agency (BPS) released the temporary figure for rice, corn and soybean productions in West Java... ‘Rice, corn and soybean production in 2015 dropped due to El-Nino,’ West Java BPS head Bachdi Ruswana said at his office in Bandung on Tuesday, March 1, 2016. Bachdi explained that last year’s El-Nino had caused drought and, therefore, reducing the amount of harvested crops. However, Bachdi said West Java’s productivity of the three commodities was better than other provinces since the productivity increased. The BPS released the estimation figure for dry unhusked rice (GKG) production in 2015 at 11,373 million tons, which dropped by 2.33 percent when compared to that in 2014. Bachdi added that the condition was caused by a decrease in harvested land size by 6.17 percent or 271,000 tons of GKG. The BPS released that the temporary harvested land size for rice was 1.857 million hectares, decreasing by 122,173 hectares compared to that in 2014.

Although the harvested land size decreased in West Java, Bachdi added, the rice productivity in 2015 increased by 4.08 percent to 61.22 quintals per hectare when compared to the previous year. Nino had also caused cord production in West Java to drop by 8.32 percent. The BPS announced that the temporary figure for West Java’s corn production stood at 959,900 tons, decreasing by 87,000 tons.

‘The cause was a decrease in harvested land size by 11.19 percent. However, the productivity increased by 3.34 percent,’ Bachdi said, adding that the total harvested land size for corn in 2015 stood at 126,800 hectares. Bachdi also revealed that El Nino had caused West Java’s soybean production plummeted by 14.46 percent. The temporary figure in 2015 stood at 98,900 tons. The soybean harvested land size also decreased by 14.16 percent to 60,100 hectares.

The BPS recorded that West Java’s rice production has been decreasing from 12.08 million tons in 2013 to 11.64 million tons in 2014. In 2015, the estimated figure showed that West Java’s rice production would continue to decrease.

As a result of discussions with colleagues who understand the importance of bamboo, it is so pervasive that it is not always recognized as a core crop with the potential to enable communities to access resilient building materials, fast-growing biofuels as well as animal fodder. The potential role in addressing the production and consumption cycle<sup>13</sup> is important in the Indonesian context and has been

<sup>12</sup>Wednesday, 02 March 2016 | 09:56 WIB, West Java’s Rice Production Hampered by El Nino <http://en.tempo.co/read/news/2016/03/02/055749814/West-Javas-Rice-Production-Hampered-by-El-Nino> Zoom Out Zoom In Normal Downloaded 26 April 2018.

<sup>13</sup>The systemic focus of the chapter builds on the body of work developed in the Contemporary Systems Series (McIntyre-Mills et al. 2017a, b; McIntyre-Mills 2017b). It is based in on ‘being mindful’ of the need to design policy that supports living systems (Wadsworth 2010). Ecological citizenship needs to ensure that the requisite variety (Ashby’s Rule 1956) is extended beyond consideration of anthropocentric systems to non-anthropocentric living systems, to ensure that stewards protect habitat. The research seeks a better balance across social, cultural, political, economic and environmental interspecies concerns to ensure a sustainable future for current and future generations. In line with the Paris Declaration (2005), public administration needs to be framed together with co-researchers with local lived experience.

recognized by the participants linked with Alam Endah development project (see Wirawan slides for Hanoi conference and Venture Institute Symposium, Adelaide, 2018).<sup>14</sup> The potential for bamboo is highlighted by the symbol of the *angklung* which originates from West Java and is culturally significant because it demonstrates how each person can make a contribution to a harmony by playing one note in a co-ordinated manner.

The potential for other places that face a similar challenge, such as South Africa, has been stressed in a joint submission made to the South African government (Wirawan and McIntyre-Mills 2019) in which the benefits of closed cycle energy from biofuels were explained.<sup>15</sup> The potential to find fast-growing local crops to augment locally grown bamboo needs to be explored as a viable option for rural people who wish to improve their incomes.

The potential for a range of cash crops to be grown together with bamboo was stressed. Rice growing is a recognized staple crop that can be augmented by other cash crops to encourage people not to leave the land (Figs. 8.1 and 8.2).



**Fig. 8.1** Protecting rice fields and agriculture through gender mainstreaming learning and leadership could ensure that displacement to the cities is avoided by vulnerable women and children

<sup>14</sup>Wirawan, R. Alamendah - Submission of paper to Hanoi Sustainability Forum <https://archive.org/details/HANOIFORUM2018TowardsSustainableDevelopment-ClimateChangeResponseForSustainabilityAndSecurity.V3.0>.

<sup>15</sup>Submission on Climate Change Bill Food, energy and water security – mapping the production and consumption cycle – [https://archive.org/details/WirasoftwareAndFlindersClimateChangeInSouthAfricaV4.0\\_201808](https://archive.org/details/WirasoftwareAndFlindersClimateChangeInSouthAfricaV4.0_201808).



**Fig. 8.2** Rice paddies provide staple food for villagers

The point was also made that the bamboo is an under-recognized cash crop that ought not to be cleared, because it leads to erosion and landslides. The potential for these lessons to be applied in South Africa was underlined in the submission to the South African government in response to the call to comment which went out on 8 June 2018 to address the Climate Change Bill.<sup>16</sup>

As farming becomes less important and as land is lost to other commercial activities, people become more vulnerable to trafficking. This is known as ‘non-procedural migration’, and it has become a recognized problem in Indonesia that is currently being addressed by means of a ‘one-stop shop approach’ to provide advice to those taking up employment offers (Mutadha 2018).

Contextual narratives on the life chances of young people in Cibodas provide in-depth insights for planning and policy making. Narratives provide relevant contextual understanding of the life chances of women, in order to address their diverse needs and to create development opportunities as identified with Indonesian Diaspora network, for example:

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<sup>16</sup>Climate Change Bill 2018 [www.environment.gov.za](http://www.environment.gov.za) see submission at: [https://archive.org/details/WirasoftAndFlindersClimateChangeInSouthAfricaV4.0\\_201808](https://archive.org/details/WirasoftAndFlindersClimateChangeInSouthAfricaV4.0_201808).

Luwaks (civet cats which help to produce Luwak coffee) and their habitat could provide development opportunities for the women who undertake the training.

The fertilization of the land by free-ranging Civet cats (known as Luwaks) is a synecdoche for the need to protect environmental approaches that protect living systems. The civet cats need to roam freely and to choose the ripe coffee berries in the wild and to fertilize the forest.

Usually they are caged so their droppings can be easily collected and used for making the high-priced coffee. By not caging the civet cat, an industry can be created where ecotourism is linked with the collection of the berries which can be regarded as an activity combined with a guided tour of the forests.

Women are uniquely placed to identify potential issues and problems that a transformative development programme might face in view of their special relationship with the local community, the environment and the ethnic context in which it will take place. Hence, the analysis needs to explore the diverse ways in which the problems are framed and through the 'user-centric' perspectives of women on what works, why, how, and conversely what is less effective and how the training programme could be improved.

What is needed is decision-making<sup>17</sup> that helps to identify needs while addressing ways to mitigate and adapt to climate change through supporting agriculture.<sup>18</sup>

### *Addressing the UN Sustainable Development Goals in Indonesia*

At the invitation of the University of Indonesia, I was asked to represent them at the UN SDG working group in Jakarta in 2016. The discussion on recyclable and biodegradable products caused some controversy, and many thought that the two routes for packaging were confused and that more government subsidy should be given to the production of biodegradable packaging.

A Malaysian bioplastics researcher mentored Tessa Tissues based on his own work at Tirta Marta.<sup>19</sup> He developed the first company to make wrapping and packaging out of cassava and tapioca plants. The Malaysian businessman stressed that a

<sup>17</sup>It tests the principal of subsidiarity and Ashby's rule of Requisite Variety. The software is designed and extended by Denise de Vries and Natasun Binchai. Details can be found at <https://wellbeing.csem.flinders.edu.au/657> and now <http://wirasoft.com/pathways-to-wellbeing/>. The log in is user name = test, code = test.

<sup>18</sup><http://www.thejakartapost.com/news/2016/11/04/climate-smart-agriculture-not-oxymoron.html>.

<sup>19</sup>Sugianto Tandio, CEO PT. Tirta Marta—*Social Entrepreneur* dari *World Economic Forum*—From Zero to Hero—*The journey towards biodegradable plastic (ecoplas)*, Bong Edison, Business and Operation Director, President Director PT. Graha Kerindo Utama (Tessa Tissue)—Market Trends for environmental products.



decade ago he was in Bali and his father spotted a plastic wrapper with his company logo lying on the beach. He and his son committed company funds to produce biodegradable plastic which takes 2 years rather than 500–10,000 years to degrade.

The reliance on plastic was stressed as unavoidable by the Malaysian and Indonesian companies who stressed that food loss would be greater without plastic. I commented that if people ate local food and minimized the food miles, this could help.

Jakarta has 99% of its plastic shopping bags made out of biodegradable plastic. But *The Jakarta Post* reports that consumers are now allowed to purchase plastic bags (Ribka 2016)<sup>20</sup>:

‘Rp 200 (15 US cents) per bag might seem like nothing but I do think it has an impact on reducing plastic waste’, a university student informed the Jakarta Post.

‘the government’s call to reduce waste was followed up by a ministry circular requiring retailers to charge Rp200 per plastic bag during a trial period from Feb 21 until May. The circular’s policy was enforced in 23 cities. In June, the ministry announced the trial would continue until it issued a regulation in July and expanded the coverage to 514 cities and regencies, however no regulations have been issued...’

‘Retailers will continue giving free bags until the ministry issues a regulation’.

Ribka describes how the Indonesian Consumers Foundation shows consumer acceptance and that the majority of customers (87.1%) use their own bags when shopping.

Inaplas...estimates that plastic bag production dropped 25 to 35 % in the first half owing to the pay for plastic policy...

The packaging of some food in biodegradable plastic packages has not yet reduced the amount of waste which is dumped in the river. Waste adds to the risk of flooding. The challenge facing the current governor is to move the small urban villages along this river where the water is rising to higher levels than previously due to higher run-off and more dumping associated with higher levels of migration into Jakarta. In Jakarta people tend to buy food en route to and from work so in fact they provide work opportunities for street traders, and this is one way of reducing the need to package food in plastic.

Others at the workshop stressed the need to protect agricultural areas abutting Jakarta to ensure food security. They stressed that land was being lost to development and forests are being chopped down to provide for food. So pristine habitat which also protected Jakarta from flooding is being lost to agriculture and production resulting in worse run-off and flooding into the Ciliwung River.

The wellbeing of individual citizens cannot be protected unless the global commons is protected. The exploitation of sentient beings (workers and animals) and the environment for profit is no longer sustainable. The way in which diverse people understand the implications of urbanization, loss of territory, loss of species and the

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<sup>20</sup> ‘In 2015 alone, the country produced 64 million tons of waste, with plastic shopping bags accounting for 14 % of the trash, according to data from the Environment and Forestry Ministry. The governments call to reduce waste was followed up by a ministry circular.’

implications for living systems of which we are a strand (Rose 1996, 2005; Atkinson 2002; Shiva 1988, 1989, 2012; Haraway 1991, 1992, 2010) needs to be addressed.

### ***Normalization, Evictions and Cleaning Up: A Selective Policy Response***

Ibu Inez Sapento (I.S.), a colleague and fellow researcher, collected me from the airport, Terminal 1 outside the Solo Coffee shop in 2016 where I recalled the work of Sudarmo (2008)<sup>21</sup> on the traders in Solo and how he earned some of the funds to support his studies by running a small store selling chickens. His work on informal traders in Solo tracked the challenges of people living on entrepreneurial earnings who faced evictions by a bureaucracy that paradoxically wanted to beatify the city but was reliant on the levies from the traders to subsidize their salaries.

The plan of moving people from the city centre to the periphery was fiercely resisted because unless the traders remained near the centre, they would lose passing trade and their incomes would diminish. According to Sudarmo's (2008) research, vehicle mechanics were told that their spare parts and machinery were both an eyesore and caused noise. Those engaged in activities that were regarded as morally reprehensible were also advised to move away from the city centre.

For the purposes of this section, I focus on the 'zero waste approach' which is based on a systemic approach to recognizing sources of abundance through reusing, repurposing and recycling, in order to regenerate living systems. Our current structures and approaches are inadequate. Exclusive politics will prevail for as long as people think in terms of zero-sum paradigms, rather than comprehending that they stand or fall together and that we are co-determined by the environment of which we are a part. In the environment there is no waste, because what is waste for one is food for another. But let me caution that although in nature this is a way to foster diversity, because it provides multiple niches and habitats. But in the social context, it is necessary to take the analogy of living carefully in ways that reuse and recycle so as to support creating something worthwhile out of waste.

Mishra (2016) in an article about his essay on the 'Age of Anger' stresses:

The problem for these critics of Enlightenment rationalism, as Robert Musil defined it, was not that we "have too much intellect and too little soul", but that we have "too little intellect in matters of the soul". We suffer even more from this problem today as we struggle to make sense of the outbreaks of political irrationalism. Committed to seeing the individual self as a rational actor, we fail to see that it is a deeply unstable entity, constantly shaped and reshaped in its interplay with shifting social and cultural conditions. In our own time, amid what Hannah Arendt described as a "tremendous increase in mutual hatred and a somewhat universal irritability of everybody against everybody else", this fragile self has become particularly vulnerable to resentment.

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<sup>21</sup> Sudarmo 2008. 'Governance of solo street vendors: a critical analysis based on empirical research'. Principal Supervisor.

In Indonesia the United Nations Protection of Rights Working group has stressed that the rights of the disabled have received attention but the Wahid Institute stresses that abuses to religious freedoms could undermine the Pancasila notion of religious diversity and faith (Jong 2016).<sup>22</sup>

Thus the challenges faced by the most marginalized in cities are likely to grow as urban development strives to meet the needs of the urban elites. At first the citizens in Jakarta did not resist the recent removals.<sup>23</sup>

The social fabric was important for their survival. I discussed this point with colleagues and was assured that the removal was essential for the protection from flooding. Indra Budiari (2016)<sup>24</sup> comments:

NGO Kota Kita has stressed that Jakarta is becoming a divided city and that the removals from Bukit Duri was indicative of this trend towards top down decision making.

I returned to Indonesia after 3 weeks of research in August and early September to attend a conference in Solo and an Alumni conference in Jogjakarta. At that stage there was rioting in Jakarta.<sup>25</sup>

The violence in Jakarta during November against Ahok did not surprise me, because Ahok moved people as a result of recent floods. The local people resented his removals and the way they were being used to foster his political agenda, namely, to clear out the slums as a precursor to his political election campaign. Politically, when the time was right, the marginalized found a way to accuse him of being 'anti-Muslim and blasphemous'. This gave the necessary focus for venting their hostility towards his decisions and also an opportunity to try to discredit any attempt to use his position as mayor as a stepping stone to higher office (the presidency) in the next round of elections.

Sudarmo's research (2008) on informal traders in Solo detailed the challenges of people living on entrepreneurial earnings who faced evictions by a bureaucracy that paradoxically wanted to beautify the city but were at the same time reliant on the levies from the traders to subsidize their salaries. The plan of moving people from the centre to the periphery was resisted in Solo because unless the traders remained near the centre they missed passing trade. Menders of vehicles were told that their spare parts and machinery were both an eyesore and caused noise.

<sup>22</sup> Jong, H.N 2016. UN to grill RI on rising rights abuses Jakarta Post Thursday 29 September.

<sup>23</sup> Some said they would challenge the evictions in the courts. Most have found alternative accommodation and will strive to maintain the bonds they developed in the urban villages in Jakarta.

<sup>24</sup> <http://www.thejakartapost.com/news/2016/10/04/public-participation-needed-create-livable-city-all.html>. Accessed 29 October.

<sup>25</sup> The reason for the rioting was cited as being a comment made by the mayor who is a Chinese Christian: [http://www.japantimes.co.jp/news/2016/11/05/asia-pacific/political-meddling-instigated-deadly-jakarta-riots-indonesian-president-says/#article\\_history](http://www.japantimes.co.jp/news/2016/11/05/asia-pacific/political-meddling-instigated-deadly-jakarta-riots-indonesian-president-says/#article_history) ... President Joko 'Jokowi' Widodo said the riot showed 'political actors have taken advantage of the situation'. He did not identify any individual as responsible, but earlier in the week, former President Susilo Bambang Yudhoyono went on national television to say he supported plans for the massive protest (<http://www.thejakartapost.com/news/2016/11/03/more-muslim-groups-to-join-anti-ahok-rally.html>).

## Enhancing the Capability to Balance Individualism and Collectivism

It can be argued that the difference between the natural system and the human capability system is that people do have choices and have the capability as individual and collective agents to shape the future. The capability to be destroyers of sociocultural, political, economic and environmental systems or creators is based on will and on values.

This remains an area that is vitally important and it cannot be glossed over. Even though natural resources are limited, human beings have the capability to envisage a different future, but dreams need to be practical: people need to reuse and regenerate resources so as to eliminate waste. Pauli stresses that he does not see carbon as a problem as it can be used as a resource. Instead our wasteful, linear thinking is the problem. Economic performance is determined by the capabilities to maintain the cyclical ecological system or cascade economy. In a cascade economy, production and consumption are efficient and effective in order to minimize waste of people and resources.

The copy of *The Jakarta Post* that I had read on the plane en route to Jakarta in 2017 was filled with reports of the forced removal of people from areas designated as unsafe, while in Jakarta urban villages were being removed in the interest of flood control<sup>26</sup> and urban renewal. The following section draws on this article. Some claimed that their deeds to the land on which they built gave them permission from the time of Dutch colonialism.

Later research on a number of other articles from *The Jakarta Post*<sup>27</sup> stressed that Jokowi had promised that they would not be moved. Critics have stressed that the governor Ahok has ignored human rights in his hurry to complete projects prior to the next round of elections in 2017. The Ciliwung River restoration programme is a project under the Public Works and Public Housing Ministry. It used the State budget for a so-called normalization project.<sup>28</sup>

The normalization project (along with a strong social movement of more than 200,000 in mass rallies and a court case succeeded in removing Ahok)<sup>29</sup> has resulted in many of those who were previously threatened with eviction being able to remain in their homes. Ahok (with an ethnic Chinese background) was labelled a 'Christian'

<sup>26</sup> Accessed 3 October <http://www.worldbank.org/en/news/video/2012/01/17/rehabilitating-jakarta-waterways-to-mitigate-flood-risk>.

<sup>27</sup> News Desk, *The Jakarta Post*, Evicted Bukit Duri residents to build temporary shelter, <http://www.thejakartapost.com/news/2017/11/20/evicted-bukit-duri-residents-to-build-temporary-shelter.html>.

Winda A. Charmila Forced evictions remain rampant in Jakarta: LBH Jakarta <http://www.thejakartapost.com/news/2017/04/13/forced-evictions-remain-rampant-in-jakarta-lbh-jakarta.html>.

<sup>28</sup> Agnes Anya <http://www.thejakartapost.com/news/2017/02/17/river-normalization-best-way-to-mitigate-floods-ahok.html> River normalization best way to mitigate floods: Ahok reported by JakartaFri, February 17, 2017 06:34 pm.

<sup>29</sup> <https://edition.cnn.com/2016/12/02/asia/jakarta-indonesia-protest-ahok/index.html>.

who had blasphemed the Koran. This provided a way to justify rallying support against his unpopular policies to displace people from their homes as part of his urban renewal and flood response programme.

Jong (2016) stressed in a newspaper article<sup>30</sup> that human rights abuses were rising and that customary land or land that required proof of ownership that had been issued by the Dutch was being lost to people in the area known as Bukit Duri. People had lived there all their lives. This is one of many villages lost as a result of the removals. The same newspaper article cites the work of the Rujak Centre for Urban Studies on evictions.

Most of the Indonesian academics with whom I spoke (following the reading and engagement on the secondary reports on the so-called normalization project) considered this an inevitable move given the flooding and stressed that the alternative housing could meet their needs. In fact the removals have resulted in protests and the removal of Ahok in a series of successful court cases to retain the right to remain in their villages. Rather than moving to low-cost housing, solutions need to be found to enable flooding to be mitigated through better clearance of waste and through flood proof infrastructure. At the very least, people need to stay together.<sup>31</sup>

I returned to Indonesia to attend a conference in Solo and an Alumni conference in Jogjakarta. I was not surprised that there was rioting in Jakarta. The reason for the rioting was cited as being caused by a comment made by the Ahok, the mayor who is a Chinese Christian<sup>32</sup> and who was at the time running an election campaign to be considered the next Indonesian president. This was reported in the media in 2016 as follows:

...Indonesia's president blamed political meddling for violence in the capital ...Clashes broke out between police and hard-core protesters who refused to disperse following night-fall. Police fired tear gas and water cannons and protesters set alight three police vehicles and piles of rubbish left behind from the protest, which drew tens of thousands of people...

The accusation of blasphemy against Ahok, an ethnic Chinese and minority Christian who is an ally of the president, has galvanized his political opponents in the Muslim-majority nation of 250 million, and given ... hardliners a national stage. Ahok, who is seeking a second term as Jakarta governor, is popular with the city's middle class...who doesn't tolerate corruption and articulates a vision of making the chaotic, dysfunctional city more like clean, orderly and efficient Singapore. But the anti-corruption stance has made him enemies, and the evictions of thousands of the city's poorest people to make way for urban improvement have stoked anger and resentment and played to a stereotype of Chinese as exploiters of Indonesia's poor Muslim masses. ....

<sup>30</sup>Jong, H.N.2016. UN to grill RI on rising rights abuses Jakarta Post Thursday 29 September.

<sup>31</sup>The removals of long-standing largely Muslim community from District 6 on the slopes of Table Mountain provide another example of an unsuccessful displacement of people. In this instance, it was also argued that the housing was unsafe and that the area needed to be 'improved'.

<sup>32</sup>[http://www.japantimes.co.jp/news/2016/11/05/asia-pacific/political-meddling-instigated-deadly-jakarta-riots-indonesian-president-says/#article\\_history](http://www.japantimes.co.jp/news/2016/11/05/asia-pacific/political-meddling-instigated-deadly-jakarta-riots-indonesian-president-says/#article_history).

Since the court case and imprisonment of Ahok, local people have also won several cases to remain in their villages or to retain their traditional or customary land.

The different discourses of development were clear in conversations on the notion of what constitutes appropriate policy to address climate change and the life chances of the most marginalized. In an interview Inez Sapento (I.S.) stressed that collectivism and decision-making ‘from above’ have been the way Indonesia has operated and ‘the way to get things done’. But she conceded that giving a voice to the voiceless is important.

Clearly the balance between top-down city planning and bottom-up participatory design was readjusted through the political protests. Challenges faced by the most marginalized in cities are likely to grow as urban development strives to meet the needs of the urban elites. In Jakarta, the citizens did not resist the recent removals although some said they would challenge the evictions in the courts. Most people have found alternative accommodation and will strive to maintain the bonds they developed in the urban villages in Jakarta.

## **Survival in the City While Maintaining Links with the Land**

Ironically striving to make a living making bread to survive may be unnecessary if people made better use of the natural environment and ensured that, for example, bamboo crops are used productively to earn an income for small farmers who may then be less likely to lose their land by selling it to developers. Those who move off the land lose the potential to make a living from regenerative resources. Instead Ibu Inez gave examples of entrepreneurship in Jakarta City that enables people to survive in the informal sector. I.S. shared a vignette about ‘Lucky Star’ bread makers who come from the regions to Jakarta to survive by making bread in a factory where they also rent rooms:

They sell bread to those who survive on the streets and who live on one or two slices of bread a day. A group of women have started the Lucky Star food co-op to make bread in the city. This is a way to create an opportunity as bread is a less usual food product in Jakarta. The women come from the rural areas.

The very poor always survive said Ibu Inez with irony (Fig. 8.3):

They know how to, it is the middle class and the rich who will have a problem! They sell food and make do with very little. I never have to go out to shop, they come and sell food to me close to where I live.

For those working in the city, easy access to fast foods becomes a way of life for workers and a means of survival for food vendors. According to one of my informants from Universitas Nasional (UNAS):

Every week or so I travel to Bogor to clean up the house and the garden with helpers. We work all day. I am also a commuter but I rent here near to Depok. So we are all commuters.

**Fig. 8.3** Green beans and vegetables on display. Author's photograph of colleague from UNAS. Visit to warungs and street traders near Universitas Nasional



Deane, a young colleague who is about to travel to Thailand to study for her PhD, told how she prefers to live outside Depok in Bogor where she commutes each day at around 6 am or after 8 pm to avoid the traffic. Her father or brother brings her to campus. She prefers living there as it is peaceful and quiet. She stressed: 'It is an area that sustains some agriculture including tea plantations, rice paddies and some other crops ...so much better to live there than in Jakarta'.

This sentiment was echoed by another academic who confirmed that when she worked in Jakarta she became depressed by the noise, and because she grew up in a village, she said that she also decided to live in Depok and to commute each day. 'The cost of living there is much lower and I could rent a decent place. So even though I had to commute, it was better!'

A graduate researcher at UNAS with a scholarship to study Informatics at a Thai university reflected (as a participant) on her hopes as a researcher. She was looking forward to studying and living elsewhere. We talked about food choices as we ate lunch together. One of my colleagues stressed that rice was making her fat because she combined it with drinking coffee that was served with too much sugar and that this was becoming the 'Javanese way'. It is the combinations that are wrong.

I shared my recent exposure to the documentary on sugar made by a researcher concerned about the impact of sugar on the diet of Aboriginal Australians.<sup>33</sup> People are eating sugar that affects the fat levels and vulnerability to liver disease. Damon Gameau documents his experience of living as a result of the effects of a high sugar diet. In Indonesia I reflected on the changes I had experienced from 2003 when I first started visiting. The number of sweet treats and fast foods is replacing spiced cakes wrapped in leaves. Now these traditional snacks were being replaced by Western packaged foods.

The food hawkers are increasingly affected by city ‘clean ups’ announced by those keen to earn votes by declaring that they will remove the informal sector workers, despite the informal sector being necessary for survival. This argument has been made clearly by Sudarmo (2008) in his thesis on the informal sector in Solo. He conducted the fieldwork and documented the way in which the local bureaucrats financed their own government salaries from the fines and licenses which the informal sector paid into government coffers.

### **Vignette 1: Peddling for Survival**

The people displaced from the rural areas are creating village style interaction within the vast city of Jakarta.

Atina (2016) coined the notion of ‘bicycle baristas’ discussed the legal context in which the traders operate:

A 2015 gubernatorial decree on mobile street vendors, which prohibits peddlers from trading ‘near public facilities’, serves as the legal basis for stopping street vendors and seizing their belongings.

Over 2000 peddlers are reported to live in Parapatan Nari, Kwitang and mostly come from Madura. Arbi described how peddlers live a precarious existence trying to avoid prosecution and the confiscation of their goods. Sometimes a bribe will enable them to keep their bicycle. Often they have no choice but to go into debt to buy another. ...Despite the low cost peddlers can earn more than 3.1 million Rupiahs which is the minimum wage.

The informal sector work is facilitated by the bicycle that connects people at the neighbourhood level. Just as the ringing of an ice-cream bell in the 1950s evoked nostalgia for a ‘Never Never’ land of childhood—‘a gentler era’ where safe neighbourhoods were places where people had time to connect with one another—so the ringing of the bicycle bells by the odong-odong calls children and their parents out of their homes to listen to songs, share stories and spend time just enjoying time together. The following vignette explains the way in which the bicycle is used to earn a living by creating entertainment for children and their families.

<sup>33</sup> <https://www.theguardian.com/film/2015/mar/03/that-sugar-film-how-60-days-eating-health-food-led-fatty-liver-disease>. I mentioned the decline in food standards in remote parts of Australia.



**Vignette 2: Odong-Odong<sup>34</sup>—Rural Migrants Innovative Use of Bicycles for Neighbourhood Entertainment, by Inez Saptanno<sup>35</sup>**

Odong-odong is an adapted bicycle ride for small children. Similar in principle to a carousel, it relies on a modified bicycle so when it is pedalled, the children move up and down. The informal sector workers travel through the suburbs (*kampungs*), and they invite families to ‘treat their children to a ride’. The activity is reminiscent of their villages (*desa*) in Indonesia. The odong-odong provides entertainment to children and their carers who come out to watch, listen to the songs and chat with neighbours. The rides evoke an earlier era of village life in the suburbs of Jakarta whereby informal sector workers used their bicycles as a means to earn a living.

The idea of conducting research on the rural-urban migrants in Jakarta began with my observation of the phenomena of *odong-odong* in the suburbs around South Jakarta since 2007. After some preliminary library research on *odong-odong*, I came to an assumption that *odong-odong* is a local and global phenomena for several reasons. Firstly, the technology and characters of the *odong-odong* represent that diversity. For instance, the body of an *odong-odong* can be taken from a bicycle, motorcycle or car that is modified according to the economic means of the owners. Such strategy also includes the use of a tape recorder and batteries. The caricatures of the ride represent current popular culture. Secondly, the riders and owners of *odong-odong* are the rural-urban migrants who build their lives in Jakarta and yet retain their connections to their hometowns. These people continue to find inspiration from local as well as global condition. Thirdly, it is a fact that *odong-odong* are mostly located in the *kampungs*, where many rural-urban migrants make their homes (Fig. 8.4).

D. from Ciamis, Bandung, has been an *odong-odong* rider for 2 years. He’s married but left his family back in his *desa* (*hometown*). He used to work on his parents’ rice fields, but his ambition to have his own business led him to follow Haji<sup>36</sup> Umar, a native Jakartan and one of the owners of the *odong-odong* business in Jakarta, who owns three such vehicles. Dedi earns around IDR 80,000 per day<sup>37</sup> of which IDR 20.000 should be turned over to Haji

<sup>34</sup>These field notes supported the research for a paper Inez Sapento submitted to the 1st International Conference on Civic Place 2010, a joint conference of the University of British Columbia and University of Indonesia. The title of my paper is *Rural-Urban Migrants in the Politics of Odong-Odong: Connectionism and the (Re-)production of Locality*. After my abstract was accepted with notes from two reviewers, I began collecting data and did a short fieldwork trip from March–July 2010 in South and Central Jakarta.

<sup>35</sup>*Universitas Nasional*.

<sup>36</sup>Haji: the title given to a Muslim who has been to Mecca as a pilgrim – someone who has undertaken the holy journey or ‘Hajj’.

<sup>37</sup>Indonesian Rupiah.



Fig. 8.4 Photo by I.S.: An *odong-odong* rider in Mampang Street. 19 March 2010

Umar. D. informed me that an *odong-odong* vehicle costs around IDR 1.500.000. He said the particular *odong-odong* he rides is of the latest model in terms of the characters, a couple of spotted-brown dolphins and a couple of motorcycles.

The ride never fails to attract children and their mothers in the *kampungs* that he passes. For each ride accompanied by three songs, the mothers or their housemaids (*pembantus*) have to pay IDR 1.000. So, while the children are enjoying the rides, the women are busy chatting or feeding their children. D. meanwhile sat at his saddle and peddled for as long as the mothers would pay him. He told me that often children have to queue when they want to ride a particular character. Some children like to ride the motorcycles, while others are not concerned with respect to which caricature they ride. Dedi seldom stayed in one place; thus he continued moving around the small alleys in the *kampung*. He usually begins from home early around 07:00 o'clock and finishes before *Maghrib*, which is a particular Moslem's prayer time around 6–7 PM Indonesian time or normally dusk.

One evening I saw an *odong-odong* rider in Warung Buncit Street and I stopped him to ask about his home base. Even though I already told him that I was a researcher, the rider did not seem to believe me for he quickly gave me directions. It was in front of JMC (Jakarta Medical Center) Hospital, and he added that he was already married with one child. At first, I was not sure and didn't get what he meant, but then I realized that he might think that I was a

'bad' woman in disguise as a researcher! Aware that there was no point of disabusing him of that notion, I thanked him and decided to check the area. True to his word, the base was indeed in front of JMC. A shop owner told me to go to one of the big houses because the owner of the *odong-odong* group lived there. Apparently, Ibu Tuti, the *odong-odong* owner, rented the second floor of a two-storey house. After climbing a steep staircase to the second floor, I met Jaka, one of the riders who invited me in the house through the window; he said it was a short cut and then went to the other window that led to the owner's quarters, to inform someone there if she would meet me. Unfortunately, Jaka said she was resting and could not be disturbed. So, there I was in the sparse living room with only a television set at the far end watched by two people, a woman and a man, and some *odong-odong* toys in another corner. Not knowing what to do next, I just sat at the panel of the window looking around, while Jaka accompanied me. Fortunately, he didn't mind my asking him questions, so without planning to interview him, I did just that. Jaka said that these days, *odong-odong* was not as popular as before and riders could earn only around IDR 40,000 to IDR 60,000 per day.

Jaka who had ridden his *odong-odong* that morning reported that he already got IDR 20,000, *sepi banget lagian masih sekolah kan anak2* (because business is not good or very quiet, especially during schooldays). From his daily earning, he had to pay his boss IDR 26,000, for his room which he shared with his wife and daughter, food and drinks, *pas2an dah* (not too much, just enough). Luckily, he does not have to pay for the damage to his vehicle, *kadang2 titip bengkel* (got free help from mechanics).

Jaka is a Sundanese from Pelabuhan Ratu, Sukabumi, and he came to Jakarta because he said it is very difficult to get a job that paid enough to cover his family's daily needs. Jaka came from a village where most of the villagers are farmers. When I asked him how many times rice was planted, Jaka looked a little confused, but his wife who appeared from behind me informed me hesitantly, *kalo padi dua kali, tergantung airnya* (twice, depending on the rain). He added later that he never worked as a farmer and that he did not complete primary school education. The reason he never became a farmer was because he did not have any land, and so for him and his wife, work meant going to Jakarta. Jaka explained further that working as *odong-odong* rider could not guarantee that he would have money every day. He said further that he had to rent a room for IDR 300,000/month and therefore should be able to save IDR 10,000 per day to pay the monthly rent. His wife said that it was hard for the family to survive especially because their youngest child likes to ask for money to buy snacks.

Jaka said that in the coming month, he would send his wife and daughter back to the village because he found it too hard to support them here in Jakarta. His wife said that the 300,000 for the house could be saved for their other needs. Jaka and his wife have two children, the oldest is in Junior High

School and the youngest has not started school yet. 'That's why we manage to send them back to our hometown, because school is free. We just have to re-enrol them'. Jaka emphasized that it was too hard for him to bring his wife and children to live in Jakarta because he couldn't afford to feed them. But if he lives alone in Jakarta, he believes he's able to survive. 'If I live alone, I can manage the money more easily, I can save IDR 20,000 a day, IDR 15,000 for food as I don't smoke and eat no snacks. If I have children here, I have to give them pocket money'. Jaka explained that he lived in the house together with his boss, but he had to pay everything for himself, the rent and his food. He believed that he could save around IDR 600,000 if he could earn IDR 20,000 a day, so he could give his wife at least IDR 250,000/month. He argued that driving *odong-odong* was an unpredictable job so he could never estimate how much he would earn a day or a month. He said he had no other choice but to continue working as an *odong-odong* rider even though he would like to find alternative work if he had the chance. When he was selling curtains, he used to walk around the *kampung* to sell them. 'I walked around and when people bought curtains I fitted them. Selling curtains was better during the Ramadhan fasting month'.

Jaka could survive in Jakarta because he accepted his lot in life although he would prefer a better job. But he believed his minimum formal education could not support him, so he just accepted whatever job he could get. For him an income of 200 or 150 a day driving an *odong-odong* is considered good because he never got more than that. He believed that if he owned a land, it would be better to work in the village than working as an *odong-odong* rider, even though in the village, he only had a house made of bamboo. The small plot of land he inherited from his parents had only been large enough to build a small house. Now he was worried about the condition of the house because of the problems of termites. Jaka said that his parents only owned a small piece of land which was rented so they have to divide the harvest.

When I asked him about the other riders, Jaka said he did not know them well. This is indicative of the fact that there is little co-operation amongst those who work in this area. The man at the far end corner of the room said he was also an *odong-odong* rider, but he knew very little of him. He only knew that the man was Javanese. When I turned to the man and asked his name, he responded immediately saying that his name was Muhammad M. from Banjarnegara. He has lived in Jakarta Barat for 20 years, and he's not only working as an *odong-odong* rider but also has another job. When I asked him the price of one *odong-odong*, Jaka said he did not know because he was only a driver and the *odong-odong* was owned by his boss. Together they made a living providing entertainment for birthday parties and special events. This enabled him to afford to pay the rental on some rooms for his family in Jakarta (Fig. 8.5).



Fig. 8.5 Photo by I.S.: Mampang Street, South Jakarta, 19 July 2010

On the way to meet another *odong-odong* owner, I.S. met Olai, who stationed his vehicle behind a mosque. The stern-looking man from Sumatra was busy cycling the vehicle so the toys could move up and down. When I.S. met him, there were two passengers accompanied by the children's mother. However, when I.S. started asking him questions, Olai continued to sit in his saddle, and he paid attention to the children who enjoyed the ride and did not want to get down even though the songs had finished. He informed me that he worked for Ibu T. for 2 years. When I.S. asked him how a man from Sumatra landed up in Jakarta working in the informal sector, he explained that it was quite a good job for him because he could earn around IDR 70,000 at that time. He had been living in Jakarta for 20 years and did not have another side job. Before working as an *odong-odong* rider, he worked in an automotive company. While we talked the *odong-odongs* cheerful music played in the background. The women who put their children on the vehicle stayed with them and waited until they had finished the ride. One woman put her 2-year-old daughter on the vehicle while feeding her. She said that her daughter would eat the whole portion up when she was in an *odong-odong* and so it would be easier for the mother. *Dia suka bebek ya*. Some other children cried when the ride ended.

Following the directions given by Jaka and Olai the researcher went to see P. arijan. His house was easily recognized as there were several *odong-odong* in front of his house. Apparently it was the house of his mother-in-law, and

after explaining my intention, his brother-in-law escorted me to the pavilion at the side of the house where he and his family lived. At that time he was asleep, but he was happy to be interviewed. After a short chat, he gave me his name-card which stated his job Head of Administration at a local university.

After settling down in his small and neat living room, he mentioned that the Dean of the Faculty knew him well enough to invite him to the wedding of one of her children. He informed me that he was from Central Java, but his wife was a native Jakartan.

He told me that his first *odong-odong* cost IDR 3,300,000. After that he began to buy more *odong-odong*. Skilled in drawing, he also painted his own *odong-odong* and worked to improve them. At the moment he already has around 11 *odong-odong* ridden by people from Jakarta and West, Central and East Java. He said that the idea for the caricatures of the rides came from the toys in the mall. For him, it is good to bring them to children at home, and some of his regular customers order his *odong-odong* via cell phone.

Usually, the riders will start around 07:00 in the morning, return around 12:00 for lunch and then leave returning at 19:00 in the evening. Each driver is expected to pay him IDR 25,000 a day. Parijan said that during the rainy season, some drivers are not able to afford that much, but he accepted less in that period believing that there will be other better days. He said he was proud of his business because he could help some drivers buying their own motorcycles. He helped them by checking their houses and then becoming their guarantor. So far two of his drivers already owned motorcycles. For the most part his fellow employees were previously unemployed, but after they got the job as *odong-odong* drivers, they were able to save some money. For him the ability to earn enough to save is the key to survival in the city. He also conducted meetings with his drivers to find out if they had any problems.

When he realized the benefits of being in business, he began to cooperate with the drivers to set up other businesses, such as selling *small goods*. Many of his drivers planted or grew food in their hometown, mostly in Sukabumi, with P.'s money who later would sell the produce in Jakarta. He also made use of one of the rooms in his mother-in-law's house for some of his drivers to stay. He is very proud of giving them somewhere to live and put a television in. P.'s wife also helped him to run the business. So far he said the income is good; if a driver paid him IDR 25,000 a day, then he could get around IDR 250,000 a day. When I asked him about the future prospect of this business, he said that he believed the business would continue as there were always children around, especially in the *kampung*. He argued later that even though *odong-odong* is more popular in the *kampung*, there were also communities in some housing complex who used their services. Parijan sometimes received bookings to hire the *odong-odong* for special occasions. Parijan bought most of his *odong-odong* from R. He believed that it was the best place and the most popular because many other people bought their *odong-odong* there. He

had a good relationship with the owner and would like to buy more *odong-odong* from him in the future.

Following the directions from Jaka and Parijan, I went to Percetakan Negara Street. On arriving there, I saw two *odong-odong* in front of a small disordered store. The man who waits on the vehicles is S., a native of Pelabuhan Ratu, Sukabumi. When I asked him who owns the shop, he said the owner has his own place in K. Street, not very far from the store. He referred to the furry creatures as his preferred rides. Even though his group produced all kinds of *odong-odong*, he considered the windmill type dangerous for children and that it took longer time to make them.

With the help of Sanip, the researcher, IS. finally found the house of Mulyadi. It was easily spotted. Some *odong-odong* were parked in front of the house. Fortunately, when I.S. arrived, R. was talking to his daughter in front of the house, while his pregnant wife sat inside the house. After introducing herself he immediately invited her to sit in front of the veranda where he sells food daily. He explained that he made each ride from odds and ends that he had found. Another informal sector worker described R. as a wild man when he was young who liked to drink and used to have a musical group. But all that changed when he got married. It took him 3 years to buy and assemble his first *odong-odong* and this is how he now makes a living.

### **Vignette 3: Solo City and Jogjakarta, by Janet McIntyre-Mills**

Solo is a centre of radical thought and also the home of Indonesia's sultanate. The historical feud within the family resulted in a formal separation and the formation of two rival sultanates. One is based in Surakarta and the other one in Jogjakarta. Ironically the rivalry within each of the separate sultanate families continues.

In Solo one brother remains within the palace and the other resides outside the palace. They are not on speaking terms. In Jogjakarta the current sultan has suggested that his daughter become the next sultan. This gender sensitivity is not shared by some in the family who are hoping to succeed as male successors. Jokowi, the president of Indonesia, was born in Solo City and lived in a shack. His family were in the furniture business, and he received an education at Gadjah Mada University before developing his career as a businessman and later was elected mayor of Jakarta.<sup>38</sup>

Solo has had a history of riots since 1998. Some of it has been triggered by poverty resulting in food and energy insecurity. The violence has been orchestrated

<sup>38</sup><http://www.insideindonesia.org/review-jokowi-from-solo-to-jakarta-and-beyond>.

against non-Muslims, such as Chinese Indonesians. The potential for state-sponsored violence remains a scar for many. It is thought that the Habibie government allowed the violence against Chinese Indonesians because they were perceived to be not only 'other' but wealthier (see Melissa Pandika who reflects on this violence).<sup>39</sup> The violence was remembered by Dr. Loo in his presentation in which he recalled sleeping with his shoes on, because he feared for his life.

The sultan played a role in moderating passions after the 1998 riot which was seen to be fanned by the military. Rice and oil or access to energy remain important basics as well as access to affordable, safe water in many parts of Indonesia.

En route to Jogjakarta from Solo my mentor, who has a home in Jogjakarta (but works at a Universitas Sebelas) told me that the current sultan has decided that his daughter should be made sultana (in waiting) of Jogjakarta. This is not a popular decision and many of the other family members compete to take her place. Also some of the locals say that her business interests in maintaining the Water Castle<sup>40</sup> as an entertainment park have impacted on the water security<sup>41</sup> of people living in the villages from where the water is tapped.

I was invited to give a paper on representation and accountability at the Third International Conference on Social and Political Sciences held at Universitas Sebelas-Maret in Solo in 2017. The conference in Solo addressed current political concerns in Indonesia particularly with regard to political engagement of those who feel marginalized. At the time protests in Jakarta over removing people from areas along the river were discussed along with the increased sense of political outrage felt by the unemployed. Much of the outrage was expressed in religious terms. My paper discussed a means to enable people to make better policy decisions with those who will be affected by the decisions through working through their options and the implications or consequences of collective decisions on social, economic and environmental aspects of life.

Associate Professor Bilveer Singh based at the National University of Singapore in the Department of Political Science gave a paper on 'The offline and online impact of ICT on ASEAN security'. His focus was on Solo, the centre for protest, and he emphasized that Indonesia is the third largest user of

<sup>39</sup> <http://www.ozy.com/flashback/remembering-the-may-1998-riots-in-indonesia/31732>.

<sup>40</sup> Previously the water gardens were used by the sultan and his concubines. Today they are a tourist attraction.

<http://bettyandlingshing.blogspot.co.id/2012/05/yogyakarta-trip-kraton-and-taman-sari.html>

The castle used to be the royal garden of the sultanate. Built around 1750, the castle is believed to be an area for the former kings to rest, meditate, defence, and even escape from the enemies. The castle is believed to be a place for the kings to accommodate their concubines.

<sup>41</sup> <http://bettyandlingshing.blogspot.co.id/2012/05/yogyakarta-trip-kraton-and-taman-sari.html>.



Facebook in the world. He emphasized the potential for the Internet to be used to radicalize, and he feared the extent to which it would desensitize viewers when they are exposed to violence. He also stressed that the level of expertise used by ISIS and others was such that if it is to be countered, it requires more engagement by those who hope to promote better forms of democracy and online engagement.<sup>42</sup>

He said that he had chosen to come to Solo rather than to Jakarta where a similar conference was being held because he wanted to talk with students and also to have dinner with Abu Bakar Bashir in Solo where he has lived since his release in 2006 from jail.<sup>43</sup>

According to The Association of Internet Service Providers in Indonesia (APJII):

Internet penetration in Indonesia has now reached 40 percent of the population, or 100 million Internet users.<sup>44</sup> 85% of the population have mobile phones, 43% have smart phones and only 14% have access to a laptop.<sup>45</sup> According to another source Indonesia has 88 million internet users<sup>46</sup>

Despite the discrepancies it is clear that engagement through the Internet is an important means of communicating. The speakers included Eric Loo of the University of Wollongong who discussed ‘The Internet is only as good as its users’. He stressed that when people echo one another’s views, it can increase the level of polarization. Thus, the Internet per se cannot help to enable better decision-making unless the data is mediated through honest, fair discussion by people who can be identified.

The panel discussion by Priyambudi Sulistiyanto on ‘Soft Power, Indonesian Diaspora and Digital World: A Case Study of IndoFest’ emphasized that in Adelaide, South Australia, the development of an annual arts and culture event has provided a focus for engagement with the students based at Flinders University and with the other universities and schools in Adelaide. The event is advertised through social media, and through the Indonesian

<sup>42</sup>

Date	Users	Total population
2016	53,236,719	260,581,100
2015	50,004,175	257,563,815
2014	43,613,549	254,454,778
2013	37,539,480	251,268,276

Source: Indonesia Internet Users [www.internetlivestats.com/internet-users/indonesia/](http://www.internetlivestats.com/internet-users/indonesia/)

<sup>43</sup> <http://www.abc.net.au/am/content/2006/s1663474.htm>.

<sup>44</sup> <http://www.indonesia-investments.com/news/todays-headlines/indonesia-has-100-million-internet-users-internet-penetration-at-40/item6827>.

<sup>45</sup> <http://www.indonesia-investments.com/news/todays-headlines/indonesia-has-100-million-internet-users-internet-penetration-at-40/item6827>.

<sup>46</sup> <https://www.statista.com/statistics/262966/number-of-internet-users-in-selected-countries/>.

Diaspora Network, it has grown in popularity, and it is currently one of the largest Indonesian festivals. It is funded largely through the diaspora and not by government. It is important because of its potential to enable better relationships at a person-to-person level, although in 2015 the timing of the festival needed to be changed, because the death sentences imposed on two of the Bali 9.

He said that as an academic, he felt it is important to be where the centre of potential radicalism is located to share his ideas and also to listen so as to understand the way in which radical perspectives are framed.

## **Rights of the Voiceless in Indonesia: Starting a Conversation on Biopolitics and Rights**

Nussbaum (2011) raised the notion of the right to a life worth living for all sentient beings as a way to begin the conversations on animal rights. Nussbaum (2006) extends the notion of capabilities to human and other sentient beings. This is a step towards removing the divide between human beings and other animals.<sup>47</sup> The work of Nussbaum (2006) in ‘frontiers of justice’ stresses that the social contract excludes sentient beings who are voiceless, disabled, too young to vote or unable to vote because they are refugees. This is a first step towards extending rights to non human sentient beings. Nussbaum discusses capabilities in terms of voiceless sentient non human animals who also deserve a decent life and decent conditions at all stages of life and death. This has implications for how food production is understood. Sentient animals are not to be treated as commodities. By avoiding the notion of human dignity as something separate from animal dignity, the notion of a continuum of sentient consciousness and intelligence is assumed.

I have argued elsewhere that the researchers at Stanford, such as Frans de Waal (2009), have demonstrated that animals also have the capacity for empathy and reciprocity and that they are able in the case of primates, dogs, horses and elephants to respond to notions of fair or unfair treatment. We evolved because of our capacity for both co-operation and compassion and competition and violence.

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<sup>47</sup>This ethical position along with the need to protect the habitat of human beings and other animals is the first step in ensuring food security and ethical cross-species governance when developing policy and governance to protect the global commons. Conversations with people about how they view the human-animal relationship are a precursor to developing policy and laws to ensure the rights to a life worth living supported by a viable habitat for human beings, domestic animals, agricultural animals and wild animals (Donaldson and Kymlicka 2011). The notion developed in *Planetary Passport* (McIntyre-Mills 2017b) is that the ecological citizen has the right and the responsibility to protect living systems. Distributive networks could be used to enable this to occur. Tags on food and tags on sentient beings could ensure that they are not abused or trafficked. The capabilities approach starts with the assumption of shared rights by virtue of being sentient.

Unfortunately, the theories of evolution have emphasized competition, rather than our capacity to share and co-operate fairly, according to De Waal.

The need to find ways to protect the commons and ensure that people co-operate and share resources will become increasingly important as climate change deepens. The potential to govern ethically will depend on an ability to ensure that the frontiers of justice are expanded.

The first steps towards implementing a change need to come from a global movement to promote capabilities and lives that are worth living.

Ibu Inez Sapento (I.S.) is based at the Universitas Nasional and stressed that she lived close to the UNAS campus and takes public transport and also walks through the last few streets in her neighbourhood. During this time, she observes the way in which people treat the voiceless. She stressed that treatment of household pets made her wonder about what could be done to improve their living conditions.

I see a cage. I see children throwing stones at a dog and pulling his tail...children these days do not relate to animals and nature. They are not automatons.

The theme raised by I.S. is apt. The treatment of pets that are caged and the treatment of a skeletal, stray dog in Cibodas with a skin disease raise questions about how animals are perceived. The dog was begging for food and was chased by a vendor who was trying to sell his food from a bicycle to passersby. This contrasts with the attitude of a woman with a small shop (warung) outside Padjadjaran campus. She is from Aceh and provided food to a street cat whom she agreed to give meat on my behalf as the cat was pregnant. J.M. left a small sum for her to feed the cat, which she assured me she fed each day as she visited her on a daily basis. Attitudes to cats are very much more positive than to other animals. But even so J.M. saw many who were woefully thin, scarred and mangy at the Gede Bage Market.

I.W. explained to me that dogs are regarded as unclean for many reasons in Islam. One is practical, namely, the number of rabid dogs that pose a health hazard. The other is their blatant sexuality which makes them regarded as unclean domestic animals. Ida explained that her own grandfather kept dogs and regarded them as helpful on their farm. They were treated decently, but not as pets. Many keep dogs for hunting wild boar in the Cianjur area, but they are also not pets or companion animals.

A contextual analysis of material from a youth leader who fosters excellent entrepreneurship and who also has a great fondness for cats the many incubator hubs that he has set up, but when discussing the business aspects of farming he shifted his response (like many farmers in Australia and elsewhere) and discussed the farm animals as if they were resources, rather than sentient beings. The following gives a sense of the commodification of Muscovy ducks:

Therefore, it is necessary to evaluate, improve, and innovate it through (1) adding more value propositions to the *entog* product to make it familiar with those who have never given it a taste. This is a challenge because the underlying stigma that people have is that *entogs*, inhabiting muddy and smudged spots, are simply disgusting. Another way to tackle that challenge is to make a unique branding concept through, for example, a catchy packaging. (2) adding its product variants, knowing that customers are not used to eating *entogs*...

This contrasts slightly with the approach of Uus a farmer in *Cibodas* who saw his cows as valuable and in need of specific care. He worked closely with the vet and ensured that each cow was groomed and the store in which they lived was cleaned and maintained by sweeping and washing down the flooring. He was also concerned that their diet was affected by the lack of variety as he needed to rely on green fodder collected from the forest. He stressed that they needed a diet supplemented by corn but that the farmers did not want to sell corn for fodder as they could get a higher price using more value-added products.

Uus also stressed that the manure from the cows was made available to some of the poorer farmers so that they could increase the fertility of their soil. Biogas is the other byproduct which enables the members of his co-operative to live sustainably.

The caging of live chickens next to dead chickens is on display for purchase at the market. This contrasts with the approach of Uus, the farmer in *Cibodas* who regarded his cows not merely as valuable but in need of specific care to cater to their individual needs. He worked closely with the vet and ensured that each cow was groomed and that the store in which they lived was cleaned and maintained by sweeping and washing down the flooring.

He expressed concern that their diet was affected by the lack of variety as he needed to rely on green fodder collected from the forest. He stressed that they needed a diet supplemented by corn, but that the farmers did not want to sell corn for fodder as they could get a higher price using more value-added products. Uus also stressed that the manure from the cows was made available to some of the poorer farmers so that they could increase the fertility of their soil. Biogas is the other byproduct which enables the members of his co-operative to live sustainably.

The live chickens in cramped baskets appeared next to dead chickens in a ghastly echo of the Shambles Butcher markets in fifteenth-century Britain. The need to address animal rights was raised in conversation at one of the training sessions for entrepreneurs at Universitas Padjadjaran. Dwi used the case study of the Bandung Zoo to discuss ways to improve business opportunities for the regional areas. But the rights of animals were not included. I was advised that I would find the zoo confronting when I attended the Alumni conference for Flinders students.

### ***Biodiversity, Biopolitics Sentient Beings and Sustainability***

The following section is based on research conversations on biodiversity and biopolitics (Terranova 2009) that were held at UNAS in 2016. The conversation focused on the Indonesian event called 'one day without rice' but extended to discuss species loss and the displacement of people, plants and animals as a result of insensitive development. Participants emphasized that this was as a promising step forward along with the development of rice substitutes made of sago. The problem of cost (currently twice as much as rice) remains a barrier but could be addressed in the future.

The biodiversity of rice is threatened by the introduction of fast-ripening rice. But some long grained varieties are being lost, despite their value in terms of resistance to pests. The role of genetically modified grains and potatoes is growing in Indonesia, and this raises questions about seed security.

The conversations with Prof Ernawati Sinaga on ethno-pharmacology focused on her research on 'local wisdom' concerning plants and practices. Her work with the Dyak, for example, concentrated on customs associated with ways to process and use plants to protect their health, for example, whether to eat plants raw or cooked, and collection practices. For example, certain plants were only collected at a particular time of day or particular season. The strict customary rules helped to protect the availability of plants. Her current research is on the pharmacological benefits of ginger and turmeric, for example. More than ten species of herbs are already extinct. Currently there are over 500 herbal companies in Indonesia, and although they claim to cultivate the herbs they sell commercially, in fact many are harvested from the wild in an unsustainable way. Currently there are inadequate policies and penalties to protect the herbal biodiversity. Participants recommended that universities, NGOs, and government departments work on ways to manage and hold commercial organizations to account so that their herbal heritage can be sustained.

One participant in these conversations discussed participatory action research in North Kalimantan where he set up an ecovillage that relies on biogas and biodiesel. Communities are encouraged to recycle and reuse resources as much as possible. They have also focused on protecting the local primate *Nasalis larvatus* or proboscis monkey. The success can be attributed to a resourceful local mentor, and the priority is to enable more members of the community to take on active leadership roles.

Another initiative is ecotourism on Bunya Island where local communities have been assisted to develop accommodation and opportunities to contribute to the protection of the area through generating tourism dollars. The challenge will be to balance the ecology with this new industry.

Pak Tatang Mitra Setia and Pak Fachruddin currently work on projects such as Eco *Pesantren*, and Prof. Ernawati's project with the Dayak tribe in Kalimantan provides examples of ecologically sustainable development. Dr. Nonon Saribanon undertakes community development research through ecovillage, ecotourism in North Kalimantan and many more. Dr. Fachruddin Mangunjaya has a research project on Eco *Pesantren*, and Dr. Tatang Mitra Setia works on ecotourism in the Halimun (fog) Mountain in West Java. The focus group discussion with Sociology students covered topics ranging from challenges associated with framing social problems and the fact that the way in which problems are seen depends on the assumptions and values of the stakeholders. Their focus was on flooding in Jakarta and the management of people by moving them (often against their will). This was discussed in the context of the way in which attitudes to commodities and disposable resources have added to the problems of the river. The so-called normalization

policy to control the river flow and the excessive use of disposable plastic containers also focused on public education to reduce the disposal of rubbish in the river.

They were interested in renewable energy and ways to reduce traffic by enabling trains and buses to replace car traffic. We discussed the political issues around the competition of bus companies that wish to retain custom and the development of commuter trains, but despite the difficulties, the commuter train was running well to some sections of Jakarta, and the orderly way in which commuters are using trains has made commuting a much more viable experience. This could progressively reduce the use of cars as could the extension of carpooling and more sanctions to ensure that public transport is used at least a few days per week by commuters.

A range of projects have been suggested to Dwi Purnomo based on the research to date (McIntyre-Mills 2017a, b, c) with members of the Indonesian Research Consortium who applied for research grants to develop foster regenerative jobs involving growing mushrooms in sterilized coffee grains and developing training programmes to foster job creation. This includes supporting co-operative initiatives: 'From coffee grains to mushrooms'—growing food, jobs and social capital. The aim is to monitor and evaluate a project to develop job opportunities for women by using the waste from coffee grains to grow mushrooms. The research process could be a means to minimize waste and to reduce poverty. The research is linked to a Mixed Methods Workshop and Symposium in Partnership with Flinders University for Dec 2017. The focus is on creating opportunities for young women in the blue economy.<sup>48</sup>

## Case Studies to be Developed with the Indonesian Diaspora

Design to support vocational education and training in distributed hubs that aim to support social, economic and environmental wellbeing: [http://wirasoftfoundation.org/en\\_GB/web/smartenergy/it-villages](http://wirasoftfoundation.org/en_GB/web/smartenergy/it-villages) (Table 8.2)

According to Pak Rudolf Wirawan the following integrated projects summarised in the box below are led by the Indonesian Diaspora, the Indonesian people and the Indonesian government: *Coffee Luwak*, *Bamboo Prefab Home* and *Casava Plastic*.

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<sup>48</sup>The exploration of the opportunities in local co-operatives (poultry and mushroom growing in the coffee grains) could enable the participants to add value to local products by processing, packaging and marketing them. Products ranging from fertilizer to value-added packaged coffee, fruit and herbs will be explored. The case is made for fostering non-anthropocentric approaches to ethical development.

**Table 8.2** Joining up the social, economic and environmental dots in West Java

<ul style="list-style-type: none"> <li>• Addressing high rates of land loss, deforestation and loss of rice fields</li> <li>• Vulnerability of young people to human trafficking and exploitation in, for example, garment industries that act as a ‘front’ for illegal trafficking</li> </ul>	<ul style="list-style-type: none"> <li>• Viable demonstration project of how protecting living systems also protects communities setting up community of practice to promote jobs in association with UNPAD, Flinders, Indonesian Diaspora and Sundanese local people in collaboration with Sundanese leaders and healers</li> <li>• Adding value through packaging and marketing, for example, to strawberries by creating alternative products such as jam, juice and high-end products such as Luwak coffee produced ethically through the release of civet cats, tracking and collection of processed droppings using a specially designed collar in collaboration with appropriate VET advice</li> <li>• Developing opportunities for traditional plus vocational education in villages</li> <li>• Raising funds through platform for microfinance</li> <li>• Collaboration across public, private and volunteer sectors</li> </ul>
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**Coffee Luwak Project**

The project is called ‘Smart Luwak Tracking System (SLTS)’, and it is an NGO project, but not registered yet.

**Problem Description:** Currently cruel practices are used to produce Luwak coffee beans (Just Say No To Kopi Luwak).

**Responding to the Area of Concern with a Socially and Environmentally Just Solution:** Using GPS to track the Luwak (civet cat), the civet cat can be released back to the wild in order to contribute to the natural process of fertilizing the forests while still producing Luwak faeces that can be collected by the farmers.

**Social and Environmental Impact:** People can still enjoy a cup of Luwak coffee, and the bond between Luwak coffee drinker and the civet cat will be stronger.

**Bamboo Prefab House Project:** The project is called ‘Sustainable Smart Living (SSL)’, and it is an NGO project, but not as yet registered.

**Problem Description:** Currently the trend of unsustainable living in Indonesia is that more and more people are moving to the cities, which cause congested traffic, polluted air, polluted water, etc. On the other hand, there are more factories are moving to the rural area due to cheaper land cost.

**Problem Solution:** Bamboo-prefabricated houses will help the rural economy as well as help to reduce pollution. We are starting the project in Thousand Island, north of Jakarta, by turning one of the islands (Kelapa Dua) to become the Nusantara Gateway tourist destinations. To create a GATEWAY, we will build a bamboo-prefabricated cafe as detailed at the attached website: <http://wirasoftfoundation.org>

**Social and Environmental Impact:** By means of extremely simple natural products such as coffee and bamboo, we will help to improve the rural economy as well as improve the tourism destination in Nusantara and make a sustainable living.

**Cassava Plastic Project:** Cassava plastic has been produced for quite some time as depicted in the following two YouTube videos:

Indonesian factory produces eco bags with cassava roots

Cassava: An Indonesian Solution to the Global Waste Problem

The project is called ‘Ecoplas (cassava-based plastic)’, and it is registered as business: Greenhope. The technology has been widely scrutinized, tested and certified, to ensure trust and credibility (<https://www.youtube.com/watch?v=jON7MvJ1xOk&feature=youtu.be>).

**Problem Description:**

Ecoplas has been invented and produced for quite some time, but people in Indonesia and the world are still using the ‘cheap’ oil-based plastic for convenience, and governments all over the world are putting blind eyes to the real costs and problems of using oil-based plastic, as the costs are mostly hidden. But one day we all have to pay it back in the future with extremely big cost and impact to our environment!

**Problem Solution:**

Raise awareness of the Ecoplas product to Indonesia nationwide as well as to the world for tourists visiting the Nusantara Gateway Bamboo Cafe in the Thousand Island.

**Social and Environmental Impact:**

By means of extremely simple natural products such as cassava, coffee and bamboo, it will help create a sustainable world by preserving food, water and energy.

Submission on Climate Change Bill Food, energy and water security—mapping the production and consumption cycle—[https://archive.org/details/WirasoftAndFlindersClimateChangeInSouthAfricaV4.0\\_201808](https://archive.org/details/WirasoftAndFlindersClimateChangeInSouthAfricaV4.0_201808)





Photos provided by Rudolf Wirawan plus video footage on a complete (50+) interactive angklung orchestra to illustrate harmonious interaction as follows: <https://www.youtube.com/watch?v=OTeAxMJU3N8&list=RDOTeAxMJU3N8&t=7Saung> angklung Udjo

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# Chapter 9

## What Is Problem Represented to Be: Water Scarcity, Water Mismanagement or Misdirecting the Systems?



Jackwin Simbolon and Janet McIntyre-Mills

**Abstract** The chapter delves into the area of concern of water scarcity in an area in Indonesia that we will call Nauli. The central and regional governments have misused the water provision function to commodify drinking water, and the government regards water as a commercial good and prefers to sell it to the people rather than provide it as a common good. The chapter applies a critical analysis to address the social, cultural, political, economic and environmental context of the problem which reveals that the root of the problem is a misdirected system of managing water in the interests of profit for some at the expense of the majority and the environment. Data collected from fieldwork undertaken by Simbolon (December 2015) shows that conflicts between governments occurred and water companies commodified water while neglecting to maintain water quality and to provide services that also support and preserve the environment. The chapter proceeds to examine the wicked problem of how to address the challenges of decentralisation by ensuring that the needs of people are met by those who are elected and that the constitutional requirements of providing water are indeed addressed. The WPRB approach is used to produce a map of the different ways in which the problem is represented and propose a shift in the paradigm to address the water management problem through Ulrich's critical systems heuristics (CSH).

**Keywords** Wicked problem · Water management · Critical systems heuristics · Sustainability

### Introduction

Indonesia has declared in its Constitution that 'The land, the waters and the natural resources within shall be under the powers of the State and shall be used to the greatest benefit of the people'. This means that the government takes full control of

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water resources and is responsible for distributing it to all people. Water provision functions have been transferred from central government to local government following the implementation of decentralisation in 1999. Since then confusion and conflicts have occurred between central, provincial and local government in terms of which departments and levels of government will take responsibility for water management. Nauli City has been selected as a case study. It is the capital city of the Samsour Province which is the driest province in Indonesia. The performance of water management in Nauli City was unsatisfactory compared to the national target in Indonesia and in terms of the United Nation's Sustainable Development Goals (SDGs). This paper is part of a PhD undertaken by Simbolon and supervised by McIntyre-Mills in the School of Social and Policy Studies, entitled: 'Water as a public good: A critical review of Water Governance in Nauli City'. The twofold aim of this paper (which draws on this research) is to unravel the causes of poor water provision in Nauli City and to propose an alternative approach to addressing the water management problem. Arguments presented in this paper will be supported by evidence such as documents, photographs and interviews that were collected during my field visit to Nauli City and ongoing correspondences following the fieldwork.

Nauli City water management problem is a wicked problem because it is perceived differently by stakeholders within different sectors that have conflicting issues and interests. As such the problem needs to be addressed holistically (Australian Public Service Commission 2007; Churchman 1979; McIntyre-Mills 2002). Analysing the wicked problem will be conducted firstly by applying critical systems heuristics (CSH) to explore the existing issue and then to make policy and governance suggestions based on considering *what is the case* and *what ought to be the case* and then considering the issue in terms of problem structuring and policy design recommendations.

Following this introduction, the chapter will be presented in five parts. The first part will explain some of the background of a decentralised water management system that is currently implemented in Indonesia. The second part will describe the climate and geographic conditions, and this is followed by an explanation about the establishment of Nauli City government, a discussion on conflict in water management and the commodification of water. The third part is about key conceptual lenses through which the area of concern is analysed, while the fourth part explains the methodology. The fifth part analyses the problems by using critical systems thinking (CST), and this is followed by our conclusion.

## **Decentralised Water Management in Indonesia**

The land, the waters and the natural resources within shall be under the powers of the State and shall be used to the greatest benefit of the people (Indonesia Constitution Article 33). It firmly stresses that the government ought to take full responsibility in managing water as a basic need of its citizens, as people are the real wealth of the

nation (UNDP 2010). The government can use the power to make regulations to control public utilities and intervene the market (Wilson 1980), and public service systems will depend heavily on the policy of the ruling regime (Gormley 1983).

Water management has been considered as a local content and has been included in the local government's functions and responsibilities. This aligns with the Dublin Statement on Water and Sustainable Development that states 'that decisions of water development are taken at the lowest appropriate level, with full public consultation and involvement of users in the planning and implementation of water projects' (Gorre-Dale 1992).

Theoretically, Indonesia has been adopting a decentralised government system since its independence era in 1945. However, it was not fully implemented until year 1999. During the first regime, the Old Order regime, with Sukarno as the president (1945 to 1966), had introduced regional government through Law No. 1/1945 about the Regional-National Committee and was revised by several laws. However, during this period of time, the government was still busy to establish government system and also tried to protect the independence from separatists and rebellions. Hence, centralistic policies were often issued to keep the nation united (Sekretariat Negara Indonesia 1986).

Then it came to Suharto regime with his New Order regime (1967–1998); the term 'decentralisation' was formally used through the establishment of Law No. 5/1974. However, the centralistic approach was very strong in terms of this law, and it only supports 'limited decentralisation while preserving the unitary system' (Purwanto 2005; Sulistiyanto and Erb 2005). Central government supported by military power was very strong, and all sectors of development were fully controlled by central government, and local government was required to comply with the central's plans and regulations (Sulistiyanto and Erb 2005). During this era, water management entered a new phase where the department units in charge of water management in all local government were separated and changed into a company: a local government-owned company (PDAM).<sup>1</sup> Huge amounts of funding from foreign loans or aids were poured to support investment in water sector, and all of a sudden, PDAMs were growing very rapidly all over Indonesia along with the growing number of local governments (districts and cities). As of June 2016, Indonesia has 524 local governments; 394 of them have their own PDAM and it is still counting.

## **Nauli City Profile**

### ***Geography and Climate***

As a whole, Indonesia has abundant water. However, Nauli City region is considered as the driest area in Indonesia. The City of Nauli is the capital city of Samsoir Province which is located in the eastern part of Indonesia. This province has a very

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<sup>1</sup>PDAM stands for *Perusahaan Daerah Air Minum* or Local Drinking Water Company.

different climate from those of western and upper parts of Indonesia as it has proximity to Australia (Schmidt and Ferguson 1951). The Statistics Body of Nauli City revealed that geologically, the City of Nauli landscape is very arid, rocky, mountainous and of nonvolcanic matters (BPS Nauli City 2016). The below picture shows house fences made from rock, and it is very common for houses in the rural area of Nauli City (Fig. 9.1).

This region has uncertain climate and the dry season is much longer than the rainy season. The Table 9.1 and chart below present the comparison between the total of days of rain and the volume of rain (mm) in 2015:

The Table 9.1 shows that Nauli City had much less rain in 2015 compared to that of 2014. The number of rainy days in 2015 was 103. There is a decrease in 13 days from 2014, *because* the volume of rain that has fallen, namely, 276 mm, decreased from 2014. Schmidt and Ferguson (1951) classified Indonesia climate into two categories, based on their intensity of rain: wet months and dry months. A month is considered to be dry if the rainfall is below 60 mm because it will not be sufficient to support evaporation, while if it is over 60 mm, then it is a wet month. And based on that parameter, in 2015 Nauli City had 4 wet months and 8 (very) dry months.

The Statistics Body (BPS) of Nauli City revealed that in 2015, 50% of households in Nauli City have had private water facilities like water taps, bore wells and rainwater harvesting which 47.44% of households have to share. Just over 2% of households get water from public sources like springs and rivers, but unfortunately 0.48% of households have no access to any water facilities. The population of Nauli City has reached 390,877 people in 2015, and the 0.48% means there were 1876 people that had struggled only to find water.



**Fig. 9.1** House fence made from rock

**Table 9.1** Comparison of 2014 and 2015 rainfall

	2014		2015	
	days	mm	days	mm
January	25	470	26	460
February	21	498	24	208
March	14	103	14	332
April	11	67	8	20
May	5	27	4	5
June	3	3	0	0
July	3	14	2	3
August	1	0	0	0
September	1	0	0	0
October	0	0	0	0
November	9	113	2	7
December	23	186	23	170
Total	116	1481	103	1205

### *Conflict in Water Management*

Since the independence of Indonesia, the Nauli region has been a district, namely, the District of Nauli that was established in 1958 with 5658 km<sup>2</sup> divided into several subdistricts with the subdistrict of Nauli as its capital city. Water management in the District of Nauli was performed by a PDAM owned by the district government, namely, the PDAM of Nauli District, established in 1986. The service delivery is mainly for Nauli and 99% of its customers are in the Nauli subdistrict.

The subdistrict of Nauli was set up as the capital city of the Provincial Government of Samsoir and promoted to an administrative city in 1978. As it grew into an urban area, it was then upgraded into an autonomous city or a local government, namely, the City of Nauli in 1996. Nevertheless, water management in Nauli City was still carried out by the District PDAM until 2005 when the city government decided to set up its own PDAM. The city government urged the district government to transfer all of the District PDAM's assets that are located and implanted in the city region to the City PDAM. This request was rejected by the district government and had spurred more intense conflicts between the two governments. The city government brought this case to the provincial government, but the condition became worse.

Provincial government is supported by and acting as the representative of the central government (since Law No. 32/2004 concerning Regional Government). In order to address the water crisis in this area, central governments have been building a number of huge dams that will be utilised as water sources for domestic uses, agriculture and industries and other purposes. These dams are operated by the provincial government, and the provincial government set up a special purpose unit, namely, BLUD SPAM,<sup>2</sup> as the operator, and bulk water from the dams is priced if it

<sup>2</sup>BLUD SPAM stands for *Badan Layanan Umum Daerah Sistem Penyediaan Air Minum* or Local Service Unit for Drinking Water Provision System.



is used for commercial purposes. Hence, BLUD SPAM operates as a company, and its customers mainly are the City and District PDAMs. BLUD SPAM is not designed to sell water to end users (based on an interview with the Ministry of Public Works official, interviewed on 3 December 2015). However since about 2014, BLUD SPAM started to connect its pipes directly to retail customers or end users in Nauli City like the airport, university and some groups of residents. This situation has made water conflict in Nauli City become more entangled since there are three companies (that belong to three regional governments) that serve piped water to the people: the City PDAM, the District PDAM and Provincial BLUD SPAM. This conflict has escalated not only between companies but between the city, district and provincial governments.

## Key Concepts

### *A Wicked Problem*

A complex issue comprises many interrelated variables that can be perceived differently by different stakeholders. This kind of problems is regarded as ‘a wicked problem’ (Churchman 1967; McIntyre-Mills 2017; Rittel and Webber 1973). The concept of ‘wicked problem’ was firstly introduced by Charles W. Churchman in 1967, and he characterised it as ill-formulated. Churchman described that a wicked problem has confusing information and conflicting values and involves many decision-makers and clients, and any proposed solutions can be worse than the symptoms (Churchman 1967). A wicked problem is often highly resistant to resolution (Australian Public Service Commission 2007). Some may see an issue as a problem, and others may see it as a solution, or vice versa; one’s solution can be a problem to another. Though water scarcity in Nauli is a problem for many, the water management system ensures that some private and government sectors profit at their expense while ignoring the constitution that requires managing water should ensure that the rights of the people are protected.

According to Head (2010), some *complex technical* problems are not necessarily regarded as wicked problems. Some major project challenges such as the uncertainties and complexities in an infrastructure project sometimes only need to be solved by technical experts (engineers, finance managers and other planners) and funders. However when the issues in the projects escalate into other important dimensions (social, economic and environmental) and involve value disagreement and affected various level of stakeholders, then it can be regarded as a wicked problem. Rittel and Webber (1973) in ‘Dilemmas in a General Theory of Planning’ explain that social problems have never been tame or benign ones. They put social problems as ‘wicked’ because of their complexity, vicious circle, so they are ‘tricky’ like a leprechaun and aggressive like a lion (p. 160). Russell Ackoff use another term to explain this kind of situation: a mess (Ackoff 1974). According to Ackoff, messes are different from difficulties because messes have *many interlocking aspects* and cannot be solved,

while a difficulty is a simple problem which is only a small part of a mess. Finding an appropriate answer for a simple problem is less difficult than addressing multiple, interrelated variables that form a tangled mess or wicked problem that is ambiguous. This is because it is hard to pin down and hard to know what the actual source of problem is (Reynolds and Holwell 2010). If we try to divide the wicked problem into small, then a wicked problem is bigger than the sum of those difficulties (adapted from Aristotle's: a whole is bigger than the sum of its parts). In terms of public policy area, what decision-makers deal with is a wicked problem or a mess, not a difficulty. The way in which Rittel and Webber (1973) describe the characteristics of wicked problem will be critiqued, but their definition will be shared as a starting point as follows:

1. There is no definitive formulation of a wicked problem.
2. Wicked problems have no 'stopping rule'.
3. Solutions to wicked problems are not true or false but good or bad [and the perceptions of whether it is good or bad will vary across the stakeholders].
4. There is no immediate and no ultimate test of a solution to a wicked problem.
5. Every (attempted) solution to a wicked problem is a 'one-shot operation'.
6. We cannot identify whether the solutions to a wicked problem are complete enough.
7. Every wicked problem is essentially unique [but some processes can be better than others for addressing complex problems that are perceived differently by different stakeholders].
8. Every wicked problem can be considered to be a symptom of another problem.
9. The causal explanation of a wicked problem can be in many different ways.
10. The planner has no 'right to be wrong' in an experimental sense, i.e. there is no public tolerance of initiatives or experiments that fail.

The fact that problems of water management in Nauli City have multiple interconnected variables that are perceived differently by different stakeholders has made this kind of problems 'a wicked problem' (Churchman 1967; McIntyre-Mills et al. 2014; Rittel and Webber 1973). The problems will be perceived from three main points of view: social, economic and environmental, as the pillars of sustainability (OECD 2003).

### ***Sustainability as the Main Objective***

*Sustainability is the capacity to respond to the basic needs of everyone.*  
(Gunter Pauli, *The Blue Economy*<sup>3</sup>)

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<sup>3</sup>A talk in TEDxFlanders At Zoo, Antwerp, 5 September 2010, published on YouTube, retrieved October 25, 2016, from <https://www.youtube.com/watch?v=sLh-U99avso>

The Blue Economy, a term coined by Gunter Pauli in 2010 (Pauli 2010), strives to improve the Green Economy concept in many ways. According to Pauli (2010), in order to address the waste and pollution, the Green Economy approach requires huge spending for investment and subsidies which are raised from tax.

This chapter adds to this by considering the question of addressing the different ways in which problems are represented by adding insights from the human capability approach and critical thinking approach to stress the importance of maintaining quality of life by protecting multiple species and the environment on which they depend.

Furthermore, producing environmental friendly products is often costly and usually needs environmental friendly materials which can damage the environment itself. For instance, bio-soaps use palm oil that destroys rain forests. Pauli acknowledges that the destruction of the habitat of primates alerted him to the issues associated with the misuse of the sustainable living approach.

It is necessary to protect both people and the planet, but currently the so-called 'green or blue' traditional economies do not necessarily achieve the balance of individual and collective interests which are critical for living sustainably and well (McIntyre-Mills 2017). Fishing areas in rivers and oceans can be protected, for example, without protecting the rights of fisher folk. Land and waters can be labelled blue or green economies, but in fact can be used to support old style economics rather than new re-generative economics to balance individual and collective needs.

Organic foods can be sent long distances around the world which can cause pollution. The Blue Economy as defined in terms of Pauli (2010) on which McIntyre-Mills (2017) draws in Planetary Passport encourages not only creativity to improve efficiency and effectiveness but also the emphasis on social and environmental justice in creating jobs in a so-called cascade economy that wastes nothing and no one.

Assemblages of meaning, emotion and connection are created when people are able to own a problem. The more they are able to think about their thinking, the more they will be able to reflect on their own emotions and to assess the extent to which they shape the way in which they see an area of concern and work through the way in which it affects the many aspects of their lives. The right to own a problem is the starting point for a respectful dialogue about consumption choices.

This means producing while respectfully reusing, recycling and reconfiguring ways to use waste. For example, from a cup of coffee, only 0.2% of the coffee is used. The rest of 99.8% is waste that can be used to grow mushrooms and feed the animals. The animals make manure which bacteria can produce biogas for energy, so on and so forth. With Blue Economy, the coffee waste can be utilised to produce food, energy and jobs. The Blue Economy concept demonstrates efforts and stimulates creativity to convert scarcity into abundance (Pauli 2010: 14). Nauli City is known as a water-scarce area but still has precipitation that mostly turns into runoffs, and creativities are needed to catch the rainwater to be utilised during the dry season.

Many seminal thinkers have supported the Blue Economy concept in many different ways. Kenneth Boulding in his book *The Economics of the Coming Spaceship*

*Earth* describes that there are two types of human behaviour towards economy (Boulding 1966). First is the open economy which consists of ‘cowboys’ that consider this earth has unlimited resources. This worldview considers that there are two big reservoirs in this world: the reservoir of input or resources and the reservoir of output or pollution. People regard the success of an economic performance by measuring the level of production (the use of factors of production that are raw materials exploited from the nature) and the level of output or consumption or profit. In an open economy, the reservoirs which the materials are taken from and the effluents can be thrown into are unlimited. The ultimate figure that people care about is the gross national product (GNP),<sup>4</sup> and it means the more consumption or the more production, the higher the GNP. The second sphere that is in contrast to the open economy is the ‘spaceman economy’ that regards this earth as a ‘spaceship’. In terms of this perspective, ‘spaceship earth’ has limited resources, and people have to reuse and reproduce everything in terms of input (resources) and output (waste and pollution). Economic performance, according to this perspective, will be determined significantly by the capabilities to maintain a cyclical ecological system. Stiglitz, Sen, and Fitoussi suggest that the time has come to shift the performance measuring system from measuring economic performance to measuring people’s wellbeing (Stiglitz et al. 2010: 10). Moreover, prices or the valuation of goods and services paid for by individuals may not contain or reflect the full underlying value that the whole society has to pay. This occurs when the costs to people, the environment and future generations of life are not factored into the cost of production. These externality and opportunity costs need to be factored into all policy decisions. Damage to people, communities and the environment is a well-known example of the cost of production in many industries. The people who are not in the state of wellbeing will suffer most.

The capability approach (CA) has been used in developing welfare economics and public policy by earlier philosophers like Aristotle, Adam Smith and Karl Marx (Nussbaum 1988; Sen 1993). In present time, two renowned authors, Amartya Sen and Martha Nussbaum, have developed the CA to identify and investigate what capabilities and freedoms are and how they will be achieved. According to Sen and Nussbaum, wellbeing is about one’s capabilities to function, which include being involved in work, being healthy, being respected and so on, while the ultimate capability or freedom is when people can *choose what to do, what to be and what way they will live* (Nussbaum and Sen 1993). However, the CA has been developed in somewhat different directions by Sen and Nussbaum. Nussbaum proposed ten central human capabilities<sup>5</sup> that the government should be responsible to support and should be included in the constitution, while Sen argues that the people who are affected by the policies should decide what sort of capabilities they will choose

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<sup>4</sup>Gross national product is the sum of a nation’s economic activity, by valuing the total of finished goods and services produced in a country by its citizens in a year (Atkinson and Stiglitz 2015; Bernanke 2014; Marshall 2009; Rittenberg 2009).

<sup>5</sup>Life; Bodily Health; Bodily integrity; Senses, imagination and thought; Emotions; Practical reason; Affiliation; Other species; Play; Control over one’s environment.

(Robeyns 2003). Nussbaum (2003) assures that her ten capabilities list is the ‘... minimum account of social justice’ and should be guaranteed at an appropriate threshold level.

Robert Chambers suggests ‘*putting the last first*’, which means making policies based on listening to the poor and those who are usually excluded at the very bottom of the society (Chambers 1997: 201), as a way to ensure that their needs will be addressed in ways that responds to their lived experiences. This emphasis of participation has been stressed in the Paris agenda to which Indonesia is a signatory. Government staffs in rural area often distance themselves from the rural people with their style and arrogance, which prevent them from doing the learning from below. Chambers stressed that learning must start from the other end and that marginal people should release their voice so the government can make policies based on *real* reality, rather than constructed reality that is often well-designed but flawed. Statistics is easier to obtain nowadays, and plenty of concepts have been used to explain the phenomena. However, misinterpretation can affect decisions, and flawed decisions will distort policies. These flawed policies will not only affect current generation but also future generations in the long term. How well we deliver all resources to the future generations will determine their wellbeing. These resources can be in many different kinds physical capitals like machines and buildings; soft competencies like education, research and technologies; and more importantly exhaustible and inexhaustible natural resources as well as well-conserved environment (Stiglitz et al. 2010: 98).

Any business should achieve success through creating values for its owners, suppliers, customers, employees, financiers (shareholders and banks) and communities<sup>6</sup> (Freeman 1984).

Aside from these values, wellbeing should be able to build stocks for the future generation. Stiglitz et al. (2011: 15, as cited in McIntyre-Mills et al. 2014) propose that wellbeing can be measured through (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) and (8) insecurity of an economy as well as a physical nature. The next step in the argument is that the root cause of consumption is power without responsibility—so whoever comes to power needs to be held to account through mechanisms to address social, economic and environmental indicators that secure the ‘wellbeing stocks’ for the future’ (McIntyre-Mills 2014, 2017).

This argument draws on the concept of triple bottom line (TBL) accounting developed by John Elkington in his publication *Cannibal with Forks* (Elkington 1999). TBL stresses that a business entity’s main responsibility is to the stakeholders rather than its shareholders, and its reporting should be made of three dimensions of performance: financial (cost, revenue and financial growth), social (charitable contributions, employee welfare and fair trade) and environmental (environmental friendly

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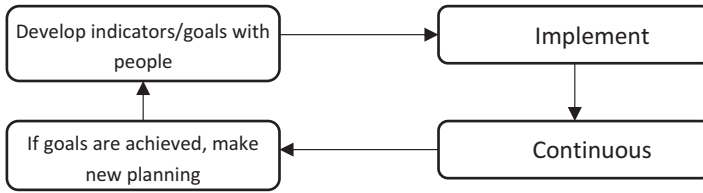
<sup>6</sup>The Stakeholder Theory by R. Edward Freeman in *Strategic Management: A Stakeholder Approach*, 1984.

materials and wastes and land use). The bottom line refers to the 'profit or loss' amount which appears on a financial report. TBL says that monetary profit means nothing if the government spends more money to clean up the rivers or to pay health care caused by the company's wastes or pollutions. Elkington (1999) also introduced the phrase 'People, Planet, Profit' or 3P and connected it with TBL concept: a business entity should (1) extend good outcome towards people surroundings like the employees and communities (People); (2) preserve the environment or at least do no activities that can cause degradation to the nature, which eventually will affect the people (Planet); and (3) achieve economic value rather than accounting profit, which means that all related costs including social and environmental costs have been accounted for in the profit and loss statement (Profit).

No one has all the expertise in all discipline, and stakeholders should gather together to address the wicked problem. Engaging a community of practice is a great way to build good communication between stakeholders. The notion of community of practice (CoP) is coined by Etienne Wenger and Jean Lave (Lave and Wenger 1991) as the basis of social theory of learning to represent regular interactions between people and stakeholders who have similar interest and passion for something, as a medium to learn and at the same time share their knowledge and experiences (Wenger 2009). A CoP consists of practitioners or 'doers'. The members are the ones who repetitively perform their particular skill or engage in a particular issue, and they gather to exchange a shared repertoire of resources: experiences, new ways to manage a particular issue, what kind of problems that may occur and how to address them (Wenger 2009).

Communities of practices (CoPs) can be conducted in all stages of water management during planning or designing, executing and monitoring. This is important to build the sense of believing, behaving and belonging to the community and the domain (Plaskoff 2003 in Hara 2008). Technical experts, central and local government officials, NGOs, foreign funders, water companies and some representatives of the people can gather together and develop a CoP to share their passion in developing better water provision. Wenger in *Communities of Practice: Learning, Meaning and Identity* explains that identity of the CoP can be developed from the members' background (their expertise and experiences), connected and expanded through relationships and interactions between, and the meaning of the CoP itself can be mutually negotiated through participations in practice and reifications of meaning (Paul 2002; Wenger 1998). Wenger (1998) describes that a CoP is a good place for natural negotiation as well through a process of participation and reification, as members have establishing mutual engagement, bounded by a sense of joint enterprise, and produce a shared repertoire of resources (Roberts 2006).

Developing CoP to build wellbeing stocks for the future through the triple bottom line as detailed in 'Planetary Passport' (McIntyre-Mills 2017) enables planners and policy-makers to work with service users so as to codevelop better indicators of perceived need and then to apply and manage their implementation from above and below. This is core to better governance which relies on a priori norms and a posteriori measures that are made with the service users. The continuous planning cycles can be performed in four steps (Fig. 9.2):



**Fig. 9.2** Continuous planning cycle

### ***Water: A Public Good, A Common Good Or a Commodity?***

Now the question arises: Who owns the water? It is always difficult to answer this question in a modern context. For centuries throughout our history, water was and will always be considered as *res omnium communes*, which means that water is for all (Schelwald-van der Kley 2009: 88). However nowadays, the way nations treat water has moved to be more like a commodity, which is provided by public or private companies.

On 28 July 2010, the United Nations formally stated through a resolution that the UN ‘recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights’.<sup>7</sup> The UN also urges all countries and international bodies to provide all necessary supports to developing water sector especially in developing countries.

Debates whether water should be regarded as a public good or commodity occurred for decades. Shiva (2002: 20) claimed that people’s right to water is a natural right, so it ‘arises as human nature, historic conditions, basic needs, or notions of justice, and it is not originate with the state’. Shiva added that ‘water must be free for sustenance needs, free of cost’, and making profit from water is harming our nature. Bakker (2003: 18) puts it very clearly: water business regards water as a product and treats citizen as individual customer rather than collective. Others suggest that imposing charge on water is needed so water industries can maintain their service of water and hence will be able to satisfy the human right for water (Gleick 2013; Gray 2008: 3). Rogers et al. (2002) challenge the old view that water price will harm equality. They argued that full-price policy integrated with economic, legal and environmental management will put water to the highest valuable uses and improve equity and sustainability of supply.

Yet Quilligan (2012) explains that with increased moves towards neoliberalism, policy now seeks to define goods as private goods and the term ‘public’ has shifted from ‘people’ to ‘the government’. It means that the goods that are supposed to be acquired and organised collectively by the communities are now controlled centrally

<sup>7</sup> United Nations Resolution Number 64/292: The Human Right To Water and Sanitation. Moreover, there is also a statement from the United Nations Committee on Economic, Cultural and Social Rights (2002): ‘Water is a limited natural resource and a public good fundamental for life and health. The human right to water is indispensable for leading a life in human dignity’.

by the government. Community empowerment to manage water is ignored, and the government merely chooses the simplest way: sell it. The constitution has explicitly mandated that water should be ‘controlled by the government’ but with further restriction ‘for the maximum benefit of the people’. Water can be a common good if the government encourage the communities to be self-providing, shared by negotiating their own rules and norms, as enjoying drinking water can be rivalrous and excludable. This is aligned with the subsidiarity principle, which recognises that individuals should be empowered to deal and to overcome their problems that are affecting them. Subsidiarity in governance requires organisations that are closest to individuals should be given the authority to make decisions and manage their own affairs and discourages centralisation and empowers local government (Bosnich 1996; Evans 2013).

As a market good, the pricing of water is a consequent, and it has to be done properly and carefully. Gleick mentions that ‘The failure to properly price water leads to inefficient use, overconsumption, environmental degradation, inadequate investment to maintain and expand services, and inappropriate subsidization of some users at the expense of others’ (2013: 14). Public Citizen (2003) also provides some cases around the world that applying too expensive tariff will lead to rejection from citizens and often riots.

The United Nations has been promoting and urging its members to improve their water provision especially provision to marginal people, especially through its *Sustainable Development* programme. The UN has proclaimed in 2010 that water right is human right and then urged its members to ratify the Millennium Development Goals in year 2000 which has specific water issues: ‘Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation’.<sup>8</sup> WHO reported in *Progress on Drinking Water and Sanitation 2012* that the target has been exceeded by 1% in 2012 (the target was 88% of population have access to safe drinking water, while the achievement was 89%).<sup>9</sup> These goals have been amended by proclaiming the UN Sustainable Development Goals (SDGs) which have 17 agendas (goals), which the sixth goal is *clean water and sanitation: ensure availability and sustainable management of water and sanitation for all*. This goal stresses that in 2030, all people (100% coverage) will have access to safe and affordable drinking water.

To achieve the target, centralistic system of governance is probably not the best option considering the fact that Indonesia consists of various local backgrounds. Hence, local issues need to be addressed locally by local perpetrators. The subsidiarity principle recognises that individuals should be empowered to deal with and to overcome their problems that are affecting them. Subsidiarity in governance requires that organisations that are closest to individuals should be given the authority to make decisions, to manage their own affairs and to discourage centralisation (Bosnich 1996; Evans 2013). Accountable regional and local governments should be allowed to enact their regulatory functions and be provided by the resources needed (Vischer 2001).

<sup>8</sup> See <http://www.un.org/millenniumgoals/enviro.html>, Millenium Development Goals, Goal number 7, Target number 7c.

<sup>9</sup> WHO/UNICEF (2012).



## Methodology

Qualitative methodology was implemented in this study (undertaken by primary researcher Simbolon) as it was deemed more appropriate to understand and analyse how members of a social system perceive a particular issue (Bricki and Green 2007). In this context, water management in Nauli City was the focus of attention. The main advantage of qualitative analysis is the ability of this method to examine problems or research questions in depth (Cleary et al. 2014). To be more specific, Bricki and Green (2007: 7) suggest that qualitative methodology is better to (1) absorb the human perspective, (2) observe their reaction to the context and (3) get deep understanding on a process. This is not to say that quantitative data are regarded as irrelevant. But it is to say that the strength of the qualitative approach focused upon in this study (see Chap. 9) was capitalised upon.

Data used in this paper are primary data which include interviews and other field data gathered through Simbolon's field work in Nauli City and Jakarta during November to January 2015 and also secondary data like reports (financial reports and statistics) and news clippings. In-depth interviews have been conducted to allow interviewer and interviewees to elaborate more deeply about the topic (Berg 2001; Bryman 2012; Patton 1990; Yin 2013). Meanwhile secondary data are also essential as official data and information, opinions from people in charge as well as knowledge that have been previously published for other intentions will help to support and reshape analysis and offer time and financial saving (Castle 2003; Heaton 2003; Hyman 1972; Vartanian 2010).

Analysis in this chapter is divided into three stages. Firstly, it applies the critical systems thinking method to examine 'what is the case' and 'what ought to be the case' in Nauli City water management through the 12 questions of critical system heuristics (CSH) introduced by Werner Ulrich (Ulrich 1983). Then, the problem will be examined using two methods: (1) Carol Bacchi's *What's the problem represented to be* approach or the WPRB approach (Bacchi 2009) and (2) drawing a problem mapping to see the aspects, cause and effects and relationships between them (Horn 2001). Finally, we proceed to conduct a policy analysis in order to address the problem.

### ***'What's the Problem Represented to Be' (WPRB) Approach***

One way to formulise the problem is with Carol Bacchi's '*What's the problem represented to be?*' (WPRB) approach (Bacchi 2009). This approach challenges the old view that a policy is a reaction or response to a problem. Instead, a policy should critically scrutinise the problem. The WPRB approach consists of six interrelated questions as follows:

Q1: What is the 'problem' represented to be?

Policies are not made to solve problems but a problem is part of the policy.

Furthermore, the policy represents the problem, and how the problem is represented

will determine how the issue is thought about, how the government perceive and react to the problem and how the affected people are treated. For example, if sending polices and troops is the chosen policy action for lowering thieveries, then the problem representation is robberies happened because of low law enforcement (Bacchi 2009: 1–3).

Q2: What presuppositions or assumptions underlie this representation of the problem?

A problem representation can be regarded as unquestionable. For example, the concept of ‘health’ can be perceived as a public vs. private commodity, or a concept of wellbeing rather than a simple illness treatment.

Q3: How does this representation of the problem come about?

The purpose of Question 3 is to highlight why a problem representation can gain a popularity or dominance. It examines the origins or the history of the represented problem.

Q4: What is left problematic in this problem representation? Where are the silences? Can the ‘problem’ be thought about differently?

As the nature of social problems that can be regarded as wicked problems, a specific problem has surrounding issues that are often (maybe) forgotten or ignored by policy-makers that have to be identified properly. This question can also be used to reveal some restrictions in problem representation.

Q5: What effects are produced by this representation of the ‘problem’?

It is assumed that a problem representation will affect a group of people more than other group of people. Policy-makers should assess and prepare policy action to anticipate them.

Q6: How/where has this representation of the ‘problem’ been produced, disseminated and defended? How has it been (or could it be) questioned, disrupted and replaced?

This question tries to question and challenge the problem representation. Every problem representation cannot accommodate various ideas, issues and interests of different stakeholders.

The WPRB approach has helped us to represent the problem and understand fundamental issues behind the problem which are ignoring the constitution mandate and problem in decentralisation implementation. Then we need a problem map that will put forward the nature of the problem as ‘wicked’, which connects the causes and effects and shows the interrelations between primary causes and secondary causes.

### ***Problem Mapping***

The answers of the six questions of the WPRB approach are very useful as a guidance to observe the problem better. In the previous chapters, the researcher has mentioned that water management problems in Nauli City can be regarded as a wicked problem.

In order to understand the mess or the wicked problem, performing mapping is essential. Horn (2001) explains that a problem map is important to describe the cross-boundary map that shows how the situations, events and phenomena are interrelated to one another, as an executive summary of the mess. The wicked problem map can:

1. Structure the flow of complex discussions.
2. Enable decision-makers to see causal connections and find interconnections between sectors and situations.
3. Incorporate perspectives from different stakeholders.
4. Maintain the big picture when discussions enter the details.
5. Give quick information for newly involved person to catch up.
6. Help members to explain the wicked problem to their colleagues (Horn and Weber 2007).

Furthermore Horn and Webber described steps to formulate the problem map:

First, conducting data collection from documents, interviews and group discussions and analysing the data.

Second, identifying problems, situations and perceptions. From the data collection processes, the conditions that occurred in the field or in the society and the perceptions of different stakeholders from different point of views can be pictured and be put in different boxes.

Third, making causal links or connections between boxes. This can be done over and over again, until we find the best arrangement and interconnections between problems.

### ***Critical System Heuristics***

*A systems approach begins when first you see the world through the eyes of another.*  
(Churchman 1968: 231)

Understanding a wicked problem is best by thinking systemically to address several points of view or relevant aspects like social, economic and political (Jackson 2000; McIntyre-Mills 2006, 2014, 2017). In the systems thinking, a problem is a part of a bigger system with several interrelated subsystems with their own problems (Churchman 1979). Systems thinking approach was introduced to criticise the conventional approach—mechanism approach—that simplifies solutions by dismantling the problem into smaller parts and addressing them separately (Midgley 2000). According to Reynolds and Holwell (2010), there are three traditions of systems thinking: hard systems, soft systems and critical systems. Hard systems or systems engineering believes that the world is constructed by interrelated systems and they can be engineered, while soft systems methodology (SSM) considers that those systems cannot be engineered because they often have conflicting values and worldviews (Checkland and Poulter 2010). Critical systems heuristics (CSH) also agrees about the conflicting worldviews of the systems and proposed that a critical approach is needed since there is no single right way to make decisions on a wicked problem,

and it really depends on assumptions and perspectives (Ulrich 2005). Boundaries can be drawn on the basis of considering the policy context in terms of 12 critical systemic questions to enable the co-design of an inquiry (Ulrich 2005; Ulrich and Reynolds 2010). Based on ‘unfolding values’ and ‘sweeping in’ contextual considerations better decisions can be made that are mindful of the relevant stakeholders and the so-called environment of their problems (Churchman 1970). CSH introduces 12 heuristics questions to examine ‘what is the case’ and ‘what ought to be case’ of the problem as follows<sup>10</sup>:

### 1. The sources of motivation

- (a) Beneficiary → Whose interests that ought to be/are actually served?
- (b) Purpose → What ‘is’/‘ought to be’ the purpose of the system?
- (c) Measure → What ‘is’/‘ought to be’ the actual (built-in) performance measurement of the system? How can we measure that the programme’s consequences create improvement?

### 2. The sources of control

- (a) Decision maker → Who ought to be/is the person or people that has/have power to determine the direction of the programme?
- (b) Resources → What resources or conditions ‘ought to be’/‘are’ controlled by the decision-maker?
- (c) Environment → What ‘are’/‘ought to be’ the conditions that the decision-maker cannot control?

### 3. The source of expertise

- (a) Expert → Who ‘is’/‘ought to be’ the planner?
- (b) Expertise → What kind of skills and knowledge that ‘is’/‘ought to be’ needed/relevant?
- (c) Guarantor → Where ‘do’/‘should’ the people involved seek the guarantee that their planning will be successful?

### 4. The sources of legitimation

- (a) Witness → Who ‘is’/‘ought to be’ the (negatively) affected people but not involved in the system?
- (b) Emancipation → ‘Are’/‘should’ the affected people ‘be’ given the opportunity to emancipate themselves into the system?
- (c) Worldview → On what worldviews ‘is’ the system/‘ought’ the system ‘to be’ based?

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<sup>10</sup>Adapted from ‘Dimensional analysis of the sources of intentionality that determine the meaning of improvement’, Ulrich (1996).

**Table 9.2** Comparison of market share, revenue and profit between five water sellers in Nauli

Perpetrators	Avg tariff (Rp/m <sup>3</sup> )	Vol sold (m <sup>3</sup> )/year	Market share	Revenue (Rp 000)	Profit (Rp 000)
City PDAM	7500	794,397	10.8%	5,967,979	514
District PDAM	5000	6,072,140	82.7%	29,753,486	1758
BLUD SPAM	2500	129,600	1.8%	283.400	0
DAMIU	200,000 <sup>a</sup>	82,334	1.5%	16,468,800	11,116,440
Water tank	20,000	240,000	3.3%	4,800,000	2,880,000
Total value of water sold in Nauli				89,193,865	

<sup>a</sup>DAMIU tariff is Rp 4000 per 20 L

## Findings

As a wicked problem, the provision of drinking water and its management is a problem in Nauli City that comprises several interrelated problems, namely, financial, social and environmental problems.

### *Financial Problem: The Commodification of Water*

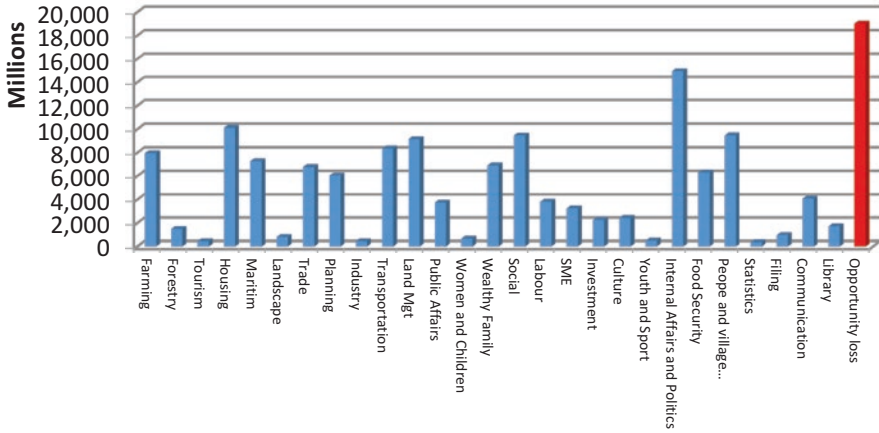
Drinking water has been a profitable commodity in Nauli City due to the arid and dry climate condition and deteriorated by the failure of the government to manage drinking water issues. When the field visit was conducted in 2015, there were five water sellers that sold water to the residents: government-owned water companies (City PDAM, District PDAM and Provincial BLUD SPAM), the trucked-water merchants and the DAMIU<sup>11</sup> or water stalls.

From the explanation above, it cannot be refuted that competition has occurred in water market in Nauli. Table 9.2 below tries to compare and contrast tariffs, market share and profit earned from water market in Nauli (Simbolon 2018).

Undoubtedly, the public operators' tariffs are much lower than of the private sectors. And in terms of profit, the private sectors (which have a very small market share) can gain huge amounts of net income compared to these water utilities as a result of being profit-oriented. So why is this happening when the constitution mandates that water services be provided by the government?

The failure of the governments to manage water in Nauli City has resulted in a huge opportunity loss to the economy especially to the people. If we recall the information provided in Table 9.1 above, people bought water from water merchants 320,000 cubic metre per year for Rp.21.2 billion. If we convert it to buying water from the public water companies with water tariff Rp7, 500 per cubic metre, then the total payment will be Rp2.4 billion. It means there was already Rp.19 billion

<sup>11</sup>DAMIU stands for Depot Air Minum Isi Ulang.



**Fig. 9.3** Comparison between the opportunity loss against 27 functions budget in Nauli City government’s 2015 budget allocation

opportunity loss that could be received by the public companies and be utilised to develop more sophisticated water provision or could reach the poor. Just for an easy comparison, that amount of money equals more than three times of the City PDAM total revenue. Or else, connection fee that is charged to connect a new customer to PDAM pipe network is Rp 1.5 to two million, which means that the money can connect more than 10,000 new customers for free. Or else, if 1 person needs 100 litre per day and 36,500 L per year or 36.5 cubic metre per person per year, then that money can be used to provide free water to 8500 persons per year, and if 1 household consists of 5 persons, then 1700 poor households could have been getting free water. If we compare it with the municipality’s 2015 budget, the opportunity loss was nearly as much as total retribution revenue of Rp 21.6 billion, or 5 times annual total subsidy expenditure of Rp4.5 billion, much bigger than the budget allocated for several functions, for example, transportation (Rp 8.3 billion), social security (Rp 9.5 billion) and 26 other functions as shown in Fig. 9.3.

**Social Problem: Poor Quality of Water**

All people, whatever their state of development and their social economic and conditions, have the right to have access to an adequate supply of safe drinking water. – United Nations Water Conference, water as a right, 1977

The Environment Control Body of Nauli Municipality during June to November 2014 had conducted laboratory test to sampled water from 100 households’ waters that were used by the residents for their domestic needs (sourced from rivers, springs, wells, trucked water, PDAMs and BLUD SPAM). One page of its report is shown below (Fig. 9.4):

Tanggal Sampling : Selasa, 25 November 2014  
 Lokasi : Sumur Cili di Kelurahan pasir Panjang, Kecamatan Kota Lama

No.	Kode Sampel	Koordinat		Waktu Sampling (WITA)	Suhu Udara		Parameter Lapangan						Parameter Laboratorium Mikrobiologi			Ket.
		S	E		Subu Air (°C)	pH	DHL µs/cm	TDS mg/L	Salinitas mg/L	DO mg/L	TSS mg/L	Fecal Coliform				
												Subu Air (°C)	Subu Air (°C)	mg/L	mg/L	
1	SGI Nov 1	107°09'10"	123°36'03"	08:47	30,0	28,6	7,22	4450,00	4076,67	5303,33	6,52	14,50	500	11.000		
2	SGI Nov 2	107°09'15"	123°36'02"	09:12	30,2	28,8	7,43	4428,00	2314,00	2878,67	6,56	14,00	0	40.500		
3	SGI Nov 3	107°09'20"	123°36'00"	09:43	31,4	28,9	7,38	7130,00	3360,00	4640,00	6,52	16,50	16.500	80.500		
4	SGI Nov 4	107°09'18"	123°36'24"	11:13	33,4	29,0	7,18	5320,00	2650,00	3453,33	5,99	11,00	0	46.500		

Fig. 9.4 One of the 120-page report from the 2015 Water Inspection Report released by Environment Control Body of Nauli Municipality

First of all, they revealed that all of the water sources in Nauli City were highly contaminated by coliform bacteria and that the contamination reached the level of index which varied between 5000 and 80,000. More specifically faecal coliform index spanned from 100 to 20,500<sup>12</sup> for most of them (83 out of 100 spots). It caused the number of diarrhoea incidences to reach 17,526 . This ranked fifth in terms of the most frequent diseases in Nauli City (Nauli City Health Profile 2014). Secondly, not less than 20% of the sampled water contained very high TDS level. TDS stands for total dissolved solids, used to measure the level of minerals (calcium, magnesium, sodium, potassium cations and carbonate, hydrogen carbonate, chloride, sulphate and nitrate anions) that are contained in as litre of water. High TDS in water may affect its taste, and WHO rated the level of TDS in terms of affecting taste: TDS < 300 mg/L as excellent, 300 < TDS < 600 mg/L as good, 600 < TDS < 900 as fair, 900 < TDS < 1200 as poor and TDS > 1200 as unacceptable. Indonesia Ministry of Health Decree regarding healthy drinking water standard states that the acceptable maximum level of TDS for drinking water is 500. The report shows that 22 out of 100 water samples contained TDS up to 4500 mg/L, and the people still used the water for their basic needs. The researcher came to one of the households that consumed water with TDS 3547 mg/L, and the water was very tasty and turbid as in Fig. 9.5 below:

High TDS water can increase the risk of arthritis or inflexibility in the joints, which is caused by high calcium and mineral deposits, and also kidney stones as the kidneys are responsible to filter about 180 L of water everyday (Rozelle and Wathen 1993).

An official of the Health Department of Nauli City in an interview<sup>13</sup> stated that the department had never done regular inspection or conducted treatment of water sources, whether it is a commercial, communal or private water source, because of the limited budget allocated for it. They checked water sources only when they were asked by users to do so. The local Department of Health claimed that the Community

<sup>12</sup>Total coliform bacteria are common in the environment like soil, water and vegetables. They are harmless. However, a high level of contamination indicates that the source of water should be examined and a need to solve the problems. On the other hand, faecal coliform contamination indicates that there is high risk of illness for water consumers (Washington State Department of Health 2016). According to the Ministry of Health of Indonesia Decree No. 492/2010 and 739/2010, the coliform index in drinking water should be zero.

<sup>13</sup>Interviewed on 19 November 2015.

**Fig. 9.5** Water with high TDS



**Table 9.3** Population and rainfall trend from 2010 to 2015

	2005	2010	2011	2012	2013	2014	2015
Population	251,170	291,794	336,239	365,348	378,425	380,136	390,877
Rainfall (mm)	2215	1720	1925	1561	1621	1579	1290

Health Centres have checked and treated at least 90–100 bore wells every year. However, the sampled residents (80 households from 24 locations) revealed that none of them were visited by the health officers to do water treatment on their wells. Meanwhile the water merchants and PDAMs confirmed that their water sources had never been tested by the government, so they do not have the incentive to treat the water since they think the water is clean and clear physically.

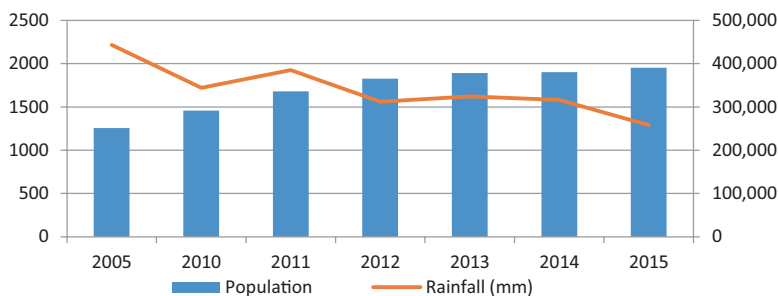
### ***Environmental Problem***

Nauli City’s geographical condition (arid with very little rain) makes water become less available. Groundwater exploitation has occurred from time to time sporadically for commercial purposes by manufacturing and service industries, seaports, water companies and water merchants. The victim will always be the residents who use water for daily basic needs. A resident said: ‘Ten years ago we can get water from a shallow bore well only 15 m deep. However, today we have dug for 70 m, and still in dry season, it has no water’.

The Table 9.3 and Fig. 9.6 below show the comparison between the trend of population against rainfall in Nauli City between 2003 and during a 5-year period from 2010 to 2015:

The table and graph indicate that Nauli City has experienced rapid growth in population about 60% in 10 years from 2003 to 2015; however the volume of precipitation was decreasing approximately 40%, which means the availability of water in Nauli City was much less than 10 years ago. Like other growing areas in Indonesia, 10 years ago people in Nauli City did not get any difficulties to find water with a





**Fig. 9.6** Population and rainfall trend from 2010 to 2015

shallow bore well or water pump. According to a plumber interviewed in Nauli City, the maximum depth of a hand water pump to be able to pump water out is 11–15 m depending on the type of the pump. Meanwhile the residents also have problems with their bore wells, since they have to drill deeper to find water. A resident explained that currently the bore well at the back of his house is 70 m deep, but during the peak of the dry season, sometimes it runs out of water. Most houses in Nauli City have their own wells, and not every resident could afford to build a well since it needed Rp. 35–40 million to dig a 70 m well nowadays. The poorer residents receive their water from other residents by connecting to the water sources using long hoses, or they build communal wells and then share the water.

Data gathered from the Department of Mining of Nauli City stated that as of 2014,<sup>14</sup> there were not less than 6000 shallow and deep bore wells all over the city, with various depths from 4 m to 70 m down, and each well is commonly shared amongst 3–4 households. As per December 2014, only 3100 bore wells have been well documented, and most of them belong to the residents, and there are 123 bigger capacity bore wells that were used by commercials or government institutions like the District PDAM (9 wells), the City PDAM (12 wells), the city harbour (2 wells), the airport (4 wells), PT Semen Kupang/Kupang Cement Co. (3 wells), water merchants (25 wells) and others like banks, universities, churches, government's offices and military barracks.

The Head of Nauli City Environmental Control Board stated, 'If the government, particularly the Department of Mining do not take immediate action regarding this water discharge problem, we will not be able to preserve the environment and in the next 25 years Nauli City will run out of ground water'. The Head of Mining Department explained that the activities to control water extraction have not been a priority in the local budget; that is why there is no funding allocated for that purpose. He admitted that the time has come for the government to look after the environment in terms of controlling water discharging, but the department has to make prioritisation since its budget was very limited and they need to control other mineral

<sup>14</sup>Final Report of Research on Ground Water Zoning and Development (2015).

and mining issues. Seawater intrusion has happened in some coastal area and even to higher places in several subdistricts. The researcher found that the people have suffered as the groundwater was brackish since 2 years ago.<sup>15</sup>

## **Critical Systems Thinking for Addressing the Wicked Problem**

### ***The WPRB Approach***

Carol Bacchi's *What's the problem represented to be (WPRB)* approach can be applied in order to structure the problem. Table 9.4 below will try to answer the six guiding questions with the purpose of unravelling the mess to formulise the problem:

### ***Mapping the Problem***

The wicked problem will be structured in several levels based on their cause and effect, to see the connection between them and how one aspect has impacts to other aspects. The problem map is presented as follows (Simbolon 2018) (Fig. 9.7):

In the map, there are three different types of boxes: (1) the shaded boxes which are the effects, (2) the dot-patterned boxes which are the primary causes and (3) the line-patterned boxes which are the secondary causes.

#### **The Effects: Shaded Boxes**

The shaded boxes are the conditions that happened in the society as a result of the governments' water provision performance. There are five shaded boxes: (1) More than 2000 people do not have access to safe water. (2) There are more than 90 trillion rupiahs of opportunity loss from the resident's pocket. (3) Less than 40% of residents got access to piped water with poor service. (4) People suffer from water-borne diseases. (5) Water table is degraded.

#### **The Primary Causes (Dot-Patterned)**

The primary causes are the root of the wicked problem from the governments' side as one of the stakeholders. Of course, there are other stakeholders that need to be taken into account like the residents and the private sectors; however as James

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<sup>15</sup> Interviewee was from Alay Subdistrict, interviewed on 19 November 2015.

**Table 9.4** The WPRB approach applied by Simbolon (2018)

Q1	What is the 'problem' represented to be?	The central, provincial and local governments are competing to sell water, not to provide water, to the people. There is no coordination between governments and water companies in providing drinking water
Q2	What presuppositions or assumptions underlie this representation of the problem?	Water provision is the government obligation as mandated by the constitution. Currently the regulations allow overlapping functions between governments in conducting water provision, and national versus local water policies are not synchronised
Q3	How does this representation of the problem come about?	It happened since the implementation of decentralisation was not followed by clear division of functions between three levels of government. Then the subdistrict of Nauli proliferated into an autonomous city government that made the authority of water provision in Nauli City become unclear
Q4	What is left problematic in this problem representation? Where are the silences? Can the 'problem' be thought about differently?	Water provision in Nauli City has only been seen merely as governmental functions (programmes and projects) and economic (profit-making and cost recovery) points of view. Other aspects such as social justice, health and environmental have been ignored and left problematic
Q5	What effects are produced by this representation of the 'problem'?	A policy will not be able to satisfy all groups of people, but it is best if the policy can cover more interests of most people. Replacing or making adjustment to current policy will give advantages and also disadvantages depending on which points of view, but it is desired that it can relieve the burdens of marginal people that have been the affected people for so long
Q6	How/where has this representation of the 'problem' been produced, disseminated and defended? How has it been (or could it be) questioned, disrupted and replaced?	A new system in addressing various interests from different stakeholders, especially the affected people, should be designed and then evaluated regularly to make improvements

Maddison said, 'the essence of government is power...', and Kaufmann et al. (2009) define governance as the institution(s) that exercise the authority or power.<sup>16</sup> Kaufmann et al. (2009) also stated that the government effectiveness and regulatory quality represent the work of a government in providing public services with ade-

<sup>16</sup>Kaufmann et al. (2009) describe six dimensions of governance: (1) voice and accountability, that which represent the freedom of citizens to express their minds and participate in selecting the government; (2) political stability and absence of violence, which represent the unlikelihood of violence to happen in order to destabilise the political condition; (3) government effectiveness, which represents how effective the government in providing public services, the quality of making, implementing and committing on policies in public service provision; (4) regulatory quality, which represents the effectiveness of the government to make and implement policies to encourage the development of private sector; (5) rule of law, which represents the effectiveness of law enforcement conducted by government officers and the parliament members as well; and (6) control of corruption, which represents to what extent power has been effectively utilised to prevent officials from making private gain in any means of corruption.



huge amount of money to encourage the development of community-based water management; however, it has not been well organised and well maintained, and they have been mistreated and neglected. Meanwhile from the second primary cause 'Municipality has no master plan in water sector', we can draw three secondary causes: (2-i) ignorance to water preservation, (2-ii) untreated water distribution and (2-iii) no regulation on water merchants.

### ***Applying Werner Ulrich's 12 Critical Systems Heuristics (CSH) Questions***

The WPRB approach and the problem mapping have attempted to portray the wicked problem in Nauli City water management.

The 12 CSH questions are applied to determine relevant boundaries critically, in order to understand what is/ought to be the case and who are the involved and the affected people of the problem. Addressing the problem based on the presentation of the previous two methods, we can draw how the 12 CSH questions shift paradigms from 'is' conditions to 'ought to be' conditions as follows (Fig. 9.8):

The CSH enables making sense of an area of concern and addressing the wicked problem as the 12 questions will set boundaries in further analysis so we can sweep in as much relevant information as possible (Cabrera 2006). In social context, setting up the boundaries enables us to include relevant stakeholders and, most importantly, decision-makers (Churchman 1970).

### ***The Source of Motivation***

1. Beneficiaries: The government as water provider should realise that the actual beneficiaries of the system are not 'customers' but instead the 'residences' or the people.
2. Purpose: Public service includes water provision is the responsibility of the government, so the main function is to 'provide' rather than to 'sell' water.
3. Measurement: Water provision is performed by water companies, and hence, financial indicators are used to measure their performance. This measurement system has to be replaced by balancing the effort to get profit with addressing social issues and conserving the environment, and the triple bottom line (TBL) can be a good alternative.

### ***The Source of Power***

4. Decision-Makers: The governments (central, provincial, district and city) should not be involved in conflicts, but they need to establish partnerships to build sophisticated water provision to the people.

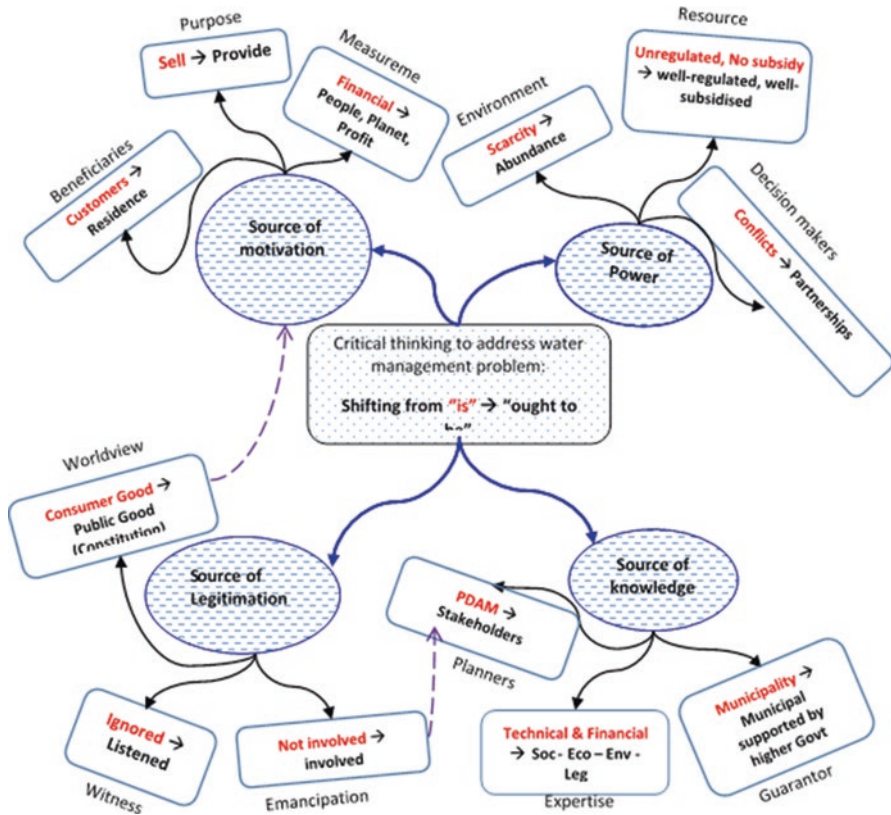


Fig. 9.8 Addressing the wicked problem with CSH. Source: Simbolon (2018: 135)

5. Resources: Making regulation and allocating budget are the resources that the government should utilise. Strong regulations in water management are needed to overcome social, economic and environmental problems, poor coordination and also law enforcement. Furthermore, allocating more funding and applying cross-subsidy system can help the poor to have access to reliable water.
6. Environment: Conditions that cannot be controlled can also be resources if managed properly. The local government can develop the Blue Economy concept that promotes creativities of the people, in order to turn water scarcity to water-sufficient by assisting and encouraging the people to build home water catchment and replanting idle land with water-saver plants. Indeed, research is needed and this should be handled by the government.

### ***The Source of Knowledge***

7. Planners: The city government that currently relies on PDAM's planning has to establish a comprehensive planning by involving people not only with various expertise but also experience. They can be from NGOs, universities, consultants and international organisations, including the affected people. Further, a community of practice should also be developed to maintain good communication between the planners.
8. Expertise: Planners consist of people who are expert in climatology, legal, financial, environment conservation and sociology and also have experiences in local water service.
9. Guarantor: Applying the principle of subsidiarity, the implementation of decentralisation system should empower the city government to make sure that the programme can be executed properly, and it needs full support from the provincial and central government.

### ***The Source of Legitimation***

10. Witness: The affected (poor and marginal) people should not be ignored, but instead they need to be given the opportunity to raise their voice especially regarding their needs of water.
11. Emancipation: The affected people should be involved, and their representation needs to be invited in the planning process, as they are one of the stakeholders of the system.
12. Worldview: Who owns the water? The constitution has mandated that the state has full control over water and should be utilised for the maximum benefit of the people. Hence, the mindset saying 'water is consumer goods' should be replaced with 'water is for all', and it is coming back to the first question; the beneficiaries are all people, not a group of people.

### **Conclusion**

The Indonesian Constitution has mandated that water should be fully controlled by the State and should meet the needs of the people. By this the constitution means all people. However, the government has considered water as a commodity and relied water provision only on water companies. As a result as the nature of a company is to maximise profit, the performances of the water companies were determined by the profit/loss per se. Quality of water distributed and environmental preservation were neglected which triggered more social, financial and environmental problem arisen amongst the people. The WPRB approach has tried to present the problem,

and the problem map has also tried to study and examine the interconnections of aspects surrounding the problem.

The CSH approach enables a way to understand and to address the wicked problem in Nauli City water management. The 12 CSH questions have been applied to examine the way in which the problem has been defined and to redraw the boundaries by questioning what is the case and what ought to be the case. The analysis demonstrates that policy and practice need to pay more attention to the affected people to perform more comprehensive planning in water sector by involving relevant stakeholders and by preserving the environment in every decision-making process and finally to revisit the responsibility of the government to provide water to all as a public right as mandated by the Indonesia Constitution, rather than focusing on its commodification and sale for profit.

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# Chapter 10

## Governance of Surakarta's Informal Sector: Implications for the Empowerment of Marginalized Stakeholders



Sudarmo

**Abstract** Street vending is one of informal sectors growing in Surakarta City of Indonesia. Officials in the Surakarta City Government claimed that the beauty of the city was worsening from increasing street vending activities. Using the political language of ‘empowerment of the poor’, the government decided to relocate about one thousand street vendors to a newly built ‘traditional’ market allocated for them in a location where known prostitution motions had been operated for decades. Formally the policy was intended to improve the street vendors’ livelihoods and ensure their future. Using ethnographic methods, the study found that the street vendors rejected the policy until the city government met all their demands or at least that the prostitution doings should be cleared from the offered relocation area. The city government then co-opted the leaders of the street vendors and of the prostitutes and procurers to support its policy. The policy implementation caused declines in the livelihoods of the powerless street vendors and former prostitutes and procurers. The city government had pledged that former procurers would be given rights to parcels of state-owned land that they had occupied, in some cases for decades, and former prostitutes given financial compensation. However, these promises were not kept and the lives of those who had earned their living in the prostitution trade deteriorated as they became unemployed. It was members of the Islamic-based local community with a concern for the lives of these marginalized people who acted to develop social capital to produce an alternative governance and empowerment for them.

**Keywords** Governance · Cooptation · Informal sector

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## Introduction

The informal sector provides a positive contribution to enabling the formal sector to survive in Indonesia through distribution of goods and relationships. The studies by Rachbini and Hamid (1994) and by Hermanto (1995) in the early to mid-1990s showed that street vendors had an important role in accelerating the distribution of goods from the formal trading and large industrial enterprises. Hermanto also reported that about 75% of the total employees, including state civil officials of Indonesia, in the formal sector consumed food from the informal sector, particularly from street vendors, because in this way they could survive although their salaries were low, thereby demonstrating some complementarity of the two sectors even during normal economic circumstances. This was even more important, during the Indonesian national economic crises in 1998–2002 when the informal sector and the street vendors played an important role in sustaining the national economy (Angelini and Hirose 2004; Bhowmik 2005). The informal sector in Indonesia was still predominant in providing income for about 60 million workers compared with the formal sector's 30 million, and, moreover, while the formal economy in Indonesia was tending to produce jobless growth, the informal economy, including street vending, continued to absorb the bulk of the estimated 2.4 million job seekers who were entering the labor market each year (Angelini and Hirose 2004). These jobs were being created with little capital and without any subsidy from the state.

Street vending in Surakarta provides employment for many people. From the Indonesian economic crisis starting in mid-1997, when there were many dismissals from formal jobs and the formal sector was not able to provide alternative job opportunities, the informal sector of street trading played an important role. According to figures from the Surakarta Manpower Office, during the two worst years of the Indonesian economic crisis, taking up street vending decreased the unemployment rate by 35%, from about 45,000 unemployed people in mid-1999 to about 32,000 in September 2001. Since then dismissals in Surakarta's hinterland have continued to occur. As well as providing employment and income, the street vendor sector of the Surakarta local economy also provides a direct source of a large income, more than one billion rupiahs each year, to the city government. Street vendors were also able to provide low-priced goods and services to their customers, giving a similar effect to an indirect subsidy to those with the lowest incomes, while the better off were also able to benefit from the lower prices.

The number of street vendors worldwide is rising because of the widespread rural migration of unskilled workforces toward towns together with global economic crisis and the shortage of employment opportunities (Bhowmik 2005). The same situation was happening in Surakarta. The number of street vendors in the city has increased from year to year, compounded by the economic crises where the formal sector could not provide employment for them; and becoming a street vendor was the only option for their survival available with easy entry requirements. Although the number of street vendors was not easy to be accounted precisely because it varied depending on time of day or the season of the year (ILO 2002), the

city government had data of the official number of street vendors. In 2001 there were officially 1115 street vendors; in 2002 this had tripled to 3390; in 2003 increased by another 13% to 3834 (Kantor Pengelolaan PKL Kota Surakarta 2003); and by mid-2005 by more than half again, to 5817 (Handayani 2006). In a politically important change, at the end of 2003, about 74% of the total street vendors were long-term Surakarta residents, but by mid-2005 the city government claimed that about 80% were non-Surakarta residents, migrants from the surrounding districts, who had entered this informal sector for economic reasons.

About 1000 out of the total street vendors occupied the Monument of Struggle in the sub-district of Banjarsari. As the numerous street vendors both long-term Surakarta residents and migrant occupied many public spaces in Surakarta and constructed permanent or semipermanent constructions, the city government defines them as a public problem, "a condition or situation that produces needs or dissatisfactions on the part of people for which relief or redress is sought by persons other than those directly affected," but there is always the possibility that "a problem will be defined differently by those directly affected than by others; problems are often defined differently by individuals and groups holding varying interest and values (Anderson 1990: 79)."

There have been diverse studies on street vending in developing countries. Some studies focused on the revenues of street vendors or the local government (Adhikari 2011; Rachmawati 2014). Some others focused on conflicting relationships between street vendors and government (Pena 1999; Cross 2000; Kayuni and Tambulasi 2009; Njaya 2014). Other studies focused on formalization of street vending (Monte and da Silva 2013). Other focused on the relations between street vendors and poverty alleviation (Mramba 2014). Other studies focused on the relationship between global economic crisis, migration, and the growth of street vending (Bhowmik 2005).

This paper discusses the government policy on street vendors by relocating them to other location, but the strategies used by the city's government of Surakarta in the early reform era to empower street vendors were at the expense of powerless street vendors and other powerless groups mainly former women prostitution and madam/pimps; they were marginalized. Powerless street vendors and other groups can also be marginalized on the basis of their having few local support networks or links with powerful families, because they are from outside Surakarta. The strategies followed by local government actions represent a divide and rule policy; it is a traditional and international pattern in which rulers who are powerful tend to dominate the ruled who are powerless (McIntyre-Mills 2006; Chambers 1997; Pilger 2002; Chomsky 1993). The city government also coopt those who were seen as a threat for the government policy implementation.

As the street vendors provide employment, incomes and services for the local people, and revenue for the city government, it appears that they have positive impacts on the local development of Surakarta. However, as many of them had migrated to Surakarta Municipality from outside this city, their existence and activities were also seen negatively, as sources of degradation, slums, disorderliness, and untidiness in Surakarta. This had provoked the city government to try to control them through creating and implementing local laws and its policy options. The city government basically had three policy options: let the street vendors run their business

in the old location, but they have to use mobile uniform shelters with limited time; relocate them to other determined area as far as their activities did not disturb others; or remove them from the site of operation as their activities were disturbing or making the city deteriorated. When government positively takes action on the problem on the agenda, thereby development of a solution for the problem occurs, and policy formulation takes place; it is the development of specific instruments to achieve goals (Levine et al. 1990: 86). Street vendors who are part of visible category of workers have always existed, despite frequent efforts of city government to remove them (Cross 2000). In doing actions on street vendors, normally the city government labeled its policy in the name of empowerment for the poor and the provision of social welfare or guidance although the substance is removal or relocation or any action representing cooptation embedded in governance of the target group.

Empowerment is a vital potency to realize better evenhandedness and to make the poor and marginalized people able to break out from blocks of poverty and inequality and take part greater political, economic, and cultural functions in society (Tucker and Ludi 2012). Therefore any severe barrier causing inequities in access to income, services, and growth occasions must be finished if people are to apprehend new opportunities (Jones 2009). Empowerment means supporting people, individually or collectively, to attain better control over their lives; empowerment of disadvantaged people often means providing them with opportunities and resources to develop knowledge, skills, and motivation to get positive change to their personal situations and/or to their communities so that it provides physical, psychological, and economic well-being for them (Murphy and Cauch 2006). However, not all the government actions to empower the target group were accepted by the targeted group. Since the government policy was rejected by the recipients or target group, the government as the power holder attempts to coopt them by intentionally extending some form of political participation to actors who pose a threat (Michael Lacy cited in Corntassel 2007). It is intended to “bring the interests of a challenging group into alignment with its own goals” of the city government (Trumpy 2008: 480).

There has been a general consensus that states are responsible for protecting “all those unable to care for themselves for whatever reasons” such as poor street vendors and marginalized people; and social welfare is “a matter of right rather than of need” (Kwok 2004: 2). Social economic empowerment for the disadvantaged groups by a welfare-state regime can be initiated by providing social welfare service for them as one of the systems of transfer payments to bridge the gap between the poor and the rich and assist the powerless to sustain their lives (Warnecke and DeRuyter 2008). According to Pakpahan (2010: 210), the welfare state is a state where the government guarantees the well-being of its citizens. Unfortunately, not all public services could be provided by the government or the state since it has limited resource. In the lack of government public service, however, community has to some extent a capacity to govern and provide services to its members which is not able to be provided by individual alone or by market and state (Bowles and Gintis 2002).

Despite the perceptions provided by earlier theoretical, empirical, and case-study work on cooptation and empowerment, the study on cooptation of street vendors by the city government in the early reform and its implications leading to empowerment

of former pimps/madams and prostitutes by community since the entire removal of Silir prostitution has not been studied in a systematic manner. Thus, this study focuses on how the process of cooptation and marginalization happens and how community is able to empower the disadvantaged people by providing training and short courses for free of charge representing social welfare service for them in the lack of government facilities through creations of networks with others.

## Methods

This study was conducted in the areas around the new built traditional market of Notoharjo and the Silir prostitution of Surakarta, Indonesia. It is a descriptive qualitative research, not statistical hypothesis testing. It uses an ethnographic method, involving several periods of fieldwork using *participant observation*, spending much time watching street traders, the prostitutes, former pimps/madams of Silir, apparatuses of the Surakarta City government relating to market affairs and law enforcement, Mr. Sarjoko and his family, and officials of Ar-Ridho Foundation paying attention on prostitution issue in Silir and talking to them about what they did, thought, and said. This approach was designed to gain an insight into the street vendors, prostitutes, pimps/madams, officials of city government, Mr. Sarjoko and his family, and officials of Ar-Ridho Foundation's viewpoints on the government policy on the street vendors relocation and its implications for the livelihood of post-street vendors relocation and the closure of the prostitution and its impact on the livelihood of former prostitutes and pimps/madams and the way they comprehended the government actions and their lives. The multi-method approach combined interviews with local people and detailed content analyses of secondary research and local newspapers. A purposive and snow-ball sampling techniques was used. The validity of this research was maintained by using multiple data sources (triangulation of data sources) or multiple information sources by using various informants and various documentary data and methods of data collection and the data interpretation collected from multiple views.

## Discussion

The city government decided the street vendors in the Monjari area were breaking Local Law 8/1995 (revised by Local Law 3/2008), and it would relocate them from this area to the new Notoharjo market in Silir on 23 July 2006. This is part of government policy to keep a zero growth of street vendors by the end of 2007. In dealing with the policy, the city government invited the representatives of street vendors, mainly the leaders and other officers of their associations, to attend the meeting and engage in a dialogue with the Mayor at his official house, the *Loji Gandrung*, on 22 November 2005. Some city government officials who were involved in policy and planning and of the relocation program attended the meeting. These were the Head



of the Street Vendor Management Office, the Head of the Regional Planning Board, the Head of the City Land-Use Planning Office, and other officials. Representatives from several local nongovernment organizations including *KOMPIP-LESKAP* and *Gita Pertiwi* also attended.

The first government speaker was the Vice Mayor of Surakarta City. He provided a general view about the relocation continued with a wide and detailed explanation about it by the Head of the Regional Planning Board. He started to explain the reasons why relocation should take place and his prediction of its impact on Surakarta's development. During the meeting only three street vendor representatives asked and expressed their interests, feelings, and ideas. They together proposed five following items for consideration: (1) the removal of prostitution from Silir, (2) building infrastructure and electricity that was appropriate to their business needs, (3) sanitation facilities, (4) the location they have left must not be occupied by any other street vendor, and (5) transport facilities to the destination. All of the reasons they articulated in front of the state officials were intended to justify rejecting the relocation because they basically had found the *Monjari* was a suitable place for marketing their goods while Silir is a remote area that is not a strategic place for running their business. However, their argument for closing the places of prostitution in Silir was based on their perception that Silir was a "black" area that may affect their business. By that time the city government officials and the street vendors had not established any agreement; the city government was still persistent with its program to relocate them while the street vendors rejected the city government program. Because of the rejection, the city government had provoked the local residents to put pressure on the street vendors in their neighborhood. To facilitate its desire to relocate them to Silir in relation to its policy goal of keeping Surakarta city beautiful, the city government tried to encourage the long-term Surakarta residents to themselves oppose the existence of the street vendors. The Mayor disseminated his program by encouraging and provoking *Camat* and *Lurah* and any other influential local residents to ban the street vendors. *Lurah* then passed the Mayor "instruction" to the leaders of neighborhood associations and the heads of citizen associations encouraging them to chase away the street vendors running businesses in their own area.

The city government's provocation to ban the street vendors seems to be successful. Many community groups, particularly those living the *Kelurahan* of Setabelan consisting of 31 neighborhood associations, supported the city government plan to relocate the street vendors. The residents of the *Kelurahan* of Setabelan were believed to be directly affected by the existence of the street vendors in this location. They showed their support with more than 2000 signatures agreeing on the street vendor relocation from Banjarsari to any other place. Other support came from a dozen schools, elementary, junior, and senior high, in the *Kecamatan* of Banjarsari, also encouraged by the city government, that the government should act as, in accordance with Article 25 of the Law no.32/2004, it had an obligation to increase the quality of social life and increase the primary education service and there these schools were losing their chance to use the public space due to its occupancy by the street vendors.

More support for relocation came from all the veterans' organizations and youth organizations in Surakarta which were affiliated to the military. They consisted of

nine groups. Their representatives urged the city government to remove the street vendors from the Monument 45 area and return it to its original function as a public space providing facilities for sport, recreation, and tourism. Support for the relocation also came from the *Perkasa*, the Association of Surakarta City Public Transport Drivers of Line 04.

Since the first dialogue had failed to achieve agreement for relocation between the city government and street vendors, the city government had made more serious attempts to relocate them by arranging the second dialogue. It also asked the local NGO, the *KOMPIP*, to be involved in the team organizing the relocation together with the city government. The coordinator of the *LESKAP* (a division of the *KOMPIP*) tried to mediate between the interests of city government and the street vendors. Through their informal meetings with him, she and her counterparts induced the Surakarta Mayor to provide kiosks for free ownership, not just for free use as had been offered in the first dialogue but actual ownership. The Surakarta Mayor finally "heard and accepted" their proposal and prepared for the second dialogue.

The city government again invited all the street vendors in the *Monjari* to have a second dialogue on 30 December 2005 conducted in the *Pendapi Gede* (City Hall Room). Contrasting with the first dialogue that had only invited the leaders and some representatives of street vendors, the second dialogue invited all *Monjari* street vendors, their officers, and their leaders. The Surakarta Mayor during the meeting promised to provide kiosks for free, soft loans amounting to 200 million rupiah, and we would ask the Minister of Cooperatives to providing five million rupiah for each street vendors in 2007, and would provide legal licenses for free and daily fees for free until early 2007.

By mid-January 2006, this relocation program had been supported by three groups, the *Masyarakat Mandiri*, the *Sumber Urip*, and the *Sumber Rejeki*, coordinated by the influential leader of street vendors, Mr. LS, but the remaining six groups organized by the prominent leader, Mr. ES, still did not agree because they were still in doubt whether the new location would provide future certainty for their livelihood and the leader had also a certain thought on the issue.

The city government put pressure on the opposing street vendors by sending police intelligence agents to spy on their meeting activities during the dissemination of the relocation plan, in particular between January and July 2006. Any meeting they held after the failure of the first dialogue was always under the police surveillance. This situation created pressure and scared the street vendor groups and their leaders.

While its provocations of local citizens against the *Monjari* street vendors were still running, the city government tried to provide kiosks based on the number of street vendors in this area. It had tried to account the number of street vendors in the *Monjari* precisely but there were different versions. According to the *Lurah* of Setabelan, there were 1377 people with only 6 of them citizens of Setabelan; the others were from other parts of Surakarta city, but many others were from Boyolali, Karanganyar, Sukoharjo, Wonogiri, Klaten, and other rural districts. In contrast, according to the Head of the Street Vendor Management Office, there were a total of 989 people. Therefore it was decided officially that there were 989 street vendors, which matched the number of kiosks constructed for them in the new location, but



**Fig. 10.1** A female street vendor with her young children

the city government had constructed 1018 kiosks. The city government invited the Surya Baru Corporation, to construct the kiosks, and all constructions were finished in the middle of July 2006. Finally, all street vendors occupying the monument in Banjarsari were relocated to the new built market of Notoharjo in 23 July 2006.

The city government also put all the small vendors, who used to sell used metal goods, *klithikan*, with small capital businesses, on the top floor, the one that was not commercially strategic. On the contrary, the city government put the large vendors who usually sold new goods, in particular the vendors of motor spare parts, on the ground floor and the front sides, the places that were very strategic. This decision contradicted the agreement made between the city government and the street vendors in March 2006. Consequently, the relocated small vendors in particular could not sell their goods as they used to because in their new location, prospective buyers were now very rare. All of them were now in trouble because not only had their income declined drastically, but most of them had stop having any income. Due to this, some had changed their occupation, some men becoming trishaw riders and some women becoming household helpers for other families. Others had preferred to close their kiosks although the city government threatened them that they would have it taken back if it were kept closed for a whole month. Only very few defend themselves by changing commodities from used goods to drink (see Fig. 10.1) in order to keep their survival.

The picture shows a female vendor trading on the top floor of the *Notoharjo* traditional market who was building a fire to boil water to serve to her customers. She was looking after her two young children (a 4-year-old daughter and a 2-year-old son). She did this for her family's survival because her husband's income was insufficient for meeting their economic daily needs. The city government also broke

its promises in that the Mayor had announced at the end of December 2005 dialogue that all kiosks would be provided for free, but this did not materialize because what was provided was only the right for their use while their ownership was still by the city government. The city government also had defeated the agreement by charging each vendor to pay electricity, sanitation, and security costs amounting to Rp 56,000 per month [about AU\$ 7] whether they used electricity or not. This decision was not only inconsistent with its promises to provide facilities including freedom from charges until 2007 but was also felt as a serious burden that threatened the sustainability of their businesses while their businesses were deteriorating; many small vendors plan to lease their kiosks to other large vendors, while many others had plans to sell theirs to vendors with strong capital.

Due to their difficulties in this new place, hundreds of *klithikan* vendors from Notoharjo Market preferred to start selling their goods in the city center of Surakarta, the slow lane of Urip Sumoharjo Street. This place was seen as being as strategic as was *Monjari*. Regrettably, their business in this location could not be continued because the city government banned them from this street in early January 2007.

The city government did not provide the placement licenses immediately. Due to the economic burden, many of the initial vendors had sold their kiosks. By December 2006, at least 30% of the kiosks had already been sold to others, in particular, those with strong capital and thus changed their ownership. However, by 2015 there were about 50% of the total traders of the new market who had sold their kiosks to the rich traders due to incapable of keeping their survival in this location.

The street vendors also had received basically soft loans amounting to Rp 200 million from the city government, but the money did not directly go to them but went to Mr. LS. He together with his family (wife and son) managed this money in a cooperative (*koperasi*). No vendor knew when the cooperative was established because Mr. LS as well as the city government had never involved other street vendors in this establishment although they had rights to be involved and the right to own this money jointly as the city government had promised in the second dialogue phase before relocation. However, Mr. LS and family treated the cooperative as their own private company and treated vendors as customers rather than the members of the cooperative. Small vendors never got any access to have loans from this cooperative. Mr. LS and family also rented their own kiosk for the cooperative as its office at a cost of Rp 600,000 per month. He had been given strategically placed kiosks when he was relocated. Moreover, Mr. LS only gave access for loans to the large (rich) vendors and to those who had good personal relationships with him.

The city government also provided extra facilities to Mr. ES, the one who did oppose the relocation program. It entrusted him with the management of the lavatory and the mosque in this area. Both public facilities produced money. The city government's decision to appoint him was not transparent because it did not involve any other vendor in the decision-making process. All the *Monjari* street vendors' former informal security officers also got kiosks although they were not eligible for them. This happened because they colluded with the officials of the Street Vendor Management Office when they were involved in the data collection intended to register the number of street vendors in the *Monjari*.

The city government finally had also provided a discretionary waiving in the obligation to pay the daily fees. The street vendors, on both top and bottom floors, were freed from paying from their relocation until early 2007. Although it was useful, it did not significantly help the poor street vendors to sustain that advantage when they sold their kiosks because of incapability to survive in the new location.

The relocation of street vendor to the new location had also affected the prostitutes and madams and procurers livelihood. In relation to the street vendors' demand for removing the prostitution as one of the requirements for their accepting the relocation to Silir, the city government had made an ultimatum that 10 July 2006 was the last day that prostitutes could live there. The madams/pimps had agreed to the Mayor's instruction as long as the city government provided a parcel of 300 square meters of land for each procurer who had occupied it for more than 20 years and granted him or her with a formal certificate as the legalization of land ownership. However, it was not easy for the madams/pimps to obtain the land because they had to meet several following requirements: if the current status of the land was as a city government asset, then transferring it required the agreement of the local legislative Assembly, and the provision of this land for them should not break the Local Law 8/1993.

Among 63 madams/pimps living in the area, 2 had obtained a certificate and 22 had sold their land, while 16 were occupying state-owned land, 30 privately owned land, and 15 city government concession land. The National Land Board could only process the applications of those on national state land. Processing the applications of those on the concession land was more difficult because it required a prior agreement between the Surakarta Municipality government and the Local Assembly, and the local legislators had asked the city government to delay the land provision to the applicants. The city government could not work alone as it could not make the necessary decisions without the agreement of the Assembly.

The processing of the ten applicants who were occupying state land was given priority because their cases were relatively easy. However, the procedures were still not easy as they had supposed, with only two madams/pimps, obtaining the symbolic certificate of land ownership from the BPN on 22 July 2006, after each of them had paid to this office a total of seven million rupiah. The others who lived on the privately owned land and the concession land were in trouble. This was not only due to the complicated procedures required but also to their financial incapacity because the process would require between three and five million rupiah depending on the size of land they were applying for, and this did not include the additional fees for the state treasury and operational costs that could be as much as another Rp two million.

Also, the city government had broken the agreement it had made with the madams/pimps and prostitutes. They had agreed that the prostitutes would leave by 10 July 2006, but the city government officials in cooperation with police and non-procurer local people had actually chased them away on 23 June 2006, 3 weeks before the due date, coming when they were sleeping. Each of the prostitutes only obtained Rp 50,000 [about AU\$ 7] from her madams/pimps for a transportation fee. This money was basically the prostitutes' own money which they had previously contributed to their madams/pimps because each of them had an obligation to always provide Rp 500 per visitor she served. A procurer could thereby obtain Rp 2500 per

night; and the total cash before they closed had reached an estimated almost Rp 50 million. The city government basically had promised to provide Rp one million as a financial compensation to each prostitute, but this had never materialized. The prostitutes were scared and under pressure. They did not have enough money to finance themselves after they were forced to leave; most were uneducated and unskilled poor people who became prostitutes to enable their families' survival.

Philip Rahmat himself, who was believed to be the leader of the madams/pimps and prostitutes, colluded with the power holders of Surakarta by encouraging them to close the prostitution businesses. Since he had been dissatisfied by Golkar in the 1997 election, he had joined with the PDIP and become the right-hand man of Surakarta's Mayor and Vice Mayor in encouraging his community members to support them in the June 2005 election of Surakarta's Mayor. The demand by Philip Rahmat on behalf of all madams/pimps of Silir for the city government to provide land certificates to them was encouraged by the fact that he was occupying at least 13 parcels of land of 300 square meters each, and his demand was positively responded to by the Vice Mayor because it was also part of the reward for him for his efforts on behalf of the victorious mayoral team. He had also always encouraged the other madams/pimps to leave their houses, hoping they would sell their properties to him, and after that he asked the city government to help him by providing the certificates of the land ownership in his name.

The closure of the prostitution businesses had caused the madams/pimps' life to deteriorate; they lived in economic trouble because they were unemployed and they did not have a certain income anymore. Until the end of 2006, about 40 pimps/madams resigned from prostitutions practices because they were getting older and did not have any access to enter the sexual sector business due to lack of capital since they were fall in debt. The current situation of the former pimps/madams and prostitutes who were mostly illiterate and unskilled had attracted Sarjoko and his family, local residents who were the non-prostitute or pimp/madam family, to pay attention on the future of the disadvantaged people. Sarjoko and his family wanted to change Silir stereotype as a center of Surakarta prostitution to be a center of public education. Therefore, this family initiated to empower them by providing them material and financial assistance from their own capital, but their capacity to provide aid was limited that's why it was not sustainable.

Since Sarjoko and his family had limited resource, again they attempted to approach the current city government asking for the right of former pimps/madams to have the parcel of land, but the city government rejected it due to legal reasons, and until the end of 2015, no more former madam/pimp got their rights to have the parcel of land. Since their lobby to the city government had failed again and again, they created network with religion-based organizations in Surakarta. Finally they were able to set up a Ar-Ridho Foundation, a religion-based nonprofit organization working on social and poverty issues and human development and dignity. This foundation led by Sarjoko initiated to construct a center of education for community of Silir. This foundation provides kindergarten education for children of the former pimps/madams and prostitutes and offers training for the former pimps/madams and prostitutes for free of charge. The former pimps/madams and prostitutes

were trained to improve their skill in reading of Holly Qur'an, producing home industry, making food diversification, operating computer, servicing of beautification, marketing management of product, tailoring, and any other training intended to improve their competence. They were encouraged to change their old behavior which is not allowed according to the religion rules, society norms, and national laws and local laws of Surakarta 3/2006 concerning prevention of commercially sexual exploitation which states that prostitution is illegal. After they had been trained in entrepreneurship and marketing management and diverse courses continually since 2006 by the Ar-Ridho Foundation, in cooperation with private institutions such as Bank of Mandiri providing capital of amount of 450 billion rupiah in 2014; *Dan Liris* Corporation and *Vinsa Mandiritama* Corporation providing 15 sewing and tailoring machines in 2013; and the Surakarta Government particularly the Office of Industry and Trading providing short courses of producing traditional food called *tempe* and its diversification in 2011, their competence were improved. Because of these various kinds of empowerment, they are now able to have sustainable income and self-sufficiency.

The above discussions suggest that the relocation of street vendors from Banjarsari to the new built market of Notoharjo does not really represent empowerment for the powerless street vendors. Instead, it was governance with cooptation of the influential street vendor leaders and the prominent pimp/madam leaders by the city government and cooption by the dominant leaders to their members. It represents a situation in which parties with a strong interest in the outcome of regulatory decisions attempt to influence the groups making such decisions and in which those entities, entrusted with protecting the public interest, are charged with regulating (Jaffee and Howard 2009). This is cooptation because there is a process of absorbing new elements into the leadership or policy-determining structure of the city government as a means of diverting threats to its stability (Selznick 1949); and there are efforts of the city government "to neutralize the effectiveness of movements for social change or to maintain the status quo" (Jaffee and Howard 2009; Campbell 2001; Gamson 1968, 1975).

The above discussions also suggest that the removal of organized prostitution while the city government did not provide any compensation for the former prostitutes and pimps/madam may result in poverty and marginalization of the disadvantaged people. Marginalization implies the issue of human rights (Schaffer and Smith 2004). However, whether or not storytelling in the field of human rights results in the extension of human justice, dignity, and freedom depends on the willingness of those addressed to hear the stories and to take responsibility for recognition of others and their claim (Schaffer and Smith 2004). Marginalization happens because the perspectives, ideology, culture, interests, and preferences of the powerful group dominate those of the weak group while both society at large and government sometimes may be involved in the process of marginalization through its policy and actions (Suparno et al. 2005).

It is also clear that the community may create an important contribution to governance through empowerment of the poor, the powerless, or the disadvantaged group

as market contracts and government's social welfare services were lacking (Bowles and Gintis 2002). The Silir community who is concerned with the problems faced by the former pimps/madams and prostitutes was able to work effectively in resolving the problems because it was able to develop itself as autonomous institution which did not rely on the city government because its independence enables it to work collectively with other institutions on equal basis in empowering the disadvantaged people (Pratchett 2004: 366) and develop their network to form bridging and linking social capital (Putnam 2000; Pretty 2003; Sanginga et al. 2007) so that they were able to share resources in providing expected social service for them. The provision of social welfare service in the form of "competence" improvement for the disadvantaged pimps/madams by the Ar-Ridho Foundation led by Sarjoko "is a kind of empowerment" (Brookings and Bolton 2000; Menon and Hartmann 2002). The Ar-Ridho Foundation has implemented ideas of capability approach (Nussabaum 2000), focusing on the *realized* functionings (what former pimps/madams are actually able to do in the real normal world and on the capability set of alternative she or he has (her and his real opportunities)). As former pimps/madams went through this process of personal transformation, they built up their self-esteem and self-confidence and were able to create safer and happier home environments for themselves and their families (Tsey 2008: 17).

The above discussion also suggests that weak literacy combined with other skills such as income generating has been found to be the most effective empowerment for poor communities (Sandhaas 2008; Dhlamini 2015) mainly the former pimps/madams. By introducing the empowerment program by the community, the former pimps/madams as disadvantaged group are benefitted from their increased self-reliance, self-confidence, and advanced status in the family and community (Dhlamini 2015).

## Conclusions

Government policy normally brings not only positive impact but also negative impacts. The process of governance labeled with empowerment may embed cooptation because the power holder wants that his or her programs were successful so that it attempted to make any influence or pressure to the target group perceived as a threat intended to keep its status quo.

In the absence of government public service for the disadvantaged group, the community may perform governance for its members. The community may provide the program of empowerment for the disadvantaged group such as powerless former pimps/madams; but to make it effective, the program should provide literacy education and livelihood skills training plus a package of economic support and related training to the disadvantaged people so that they may improve their self-reliance, their self-confidence, and their advanced status in the family and community.



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# Chapter 11

## Education to Address Social and Environmental Challenges: A Critical Pedagogy Perspective on Saudi Public Education



Saad Algraini and Janet McIntyre-Mills

**Abstract** Education plays an important role in enhancing people's autonomy and in helping them to make well-informed decisions. Thus, the aim of the current chapter is to investigate the ability of students in the Saudi education system to build creative and critical thinking capabilities. The analysis draws on critical pedagogy to highlight key issues in learning at the school level. In general, the focus is on the process and the content of learning and on the extent to which learning considers broader social and environmental challenges. In the analysis of the current top-down approach to learning, the findings highlight that education is often in passive forms and that the curriculum is less relevant. The recommendation made in this chapter is that the learning system should provide students and teachers with better opportunities for creative learning and teaching and that the importance of social and environmental diversity is acknowledged and appreciated. This will support the UN's Sustainable Development Goals, which are aimed at preparing students to become lifelong learners.

**Keywords** Saudi public education · Critical pedagogy · Passive learning · Social and environmental challenges · Human development · Sustainable development

### Introduction

This chapter is part of a PhD project that is intended to contribute to our understanding of human development in education. The research design includes data collected from public and private schools for boys and girls in two Saudi Arabian

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provinces. A range of qualitative methods was used for the research, including interviews, focus groups, and field notes (see Algraini and McIntyre 2017). The research defines human development in terms of students' ability to achieve their learning goals, as well as to maximize their potential as human beings. As part of enabling students to develop this potential, the study focuses on encouraging young people to function effectively as critical thinkers by enabling them to navigate different ways of knowing. The aim is to equip students to think socially and environmentally about the issues they will face in an increasingly globalized and challenging world. Achieving this aim will require interdisciplinary and cross-cultural thinking; thus, it is important that the process of teaching and learning is capable of supporting education for human development. To this end, the current chapter starts with a review of the literature on critical pedagogy. The section on the Saudi education system provides an overview of how formal education is being managed and the central role of the Ministry of Education in curriculum development. The results section highlights the implications of centralization on learning in schools, while the discussion section aims to link the results to policy issues and to expand on current thinking about education and how it should address social and environmental challenges.

## **Critical Pedagogy: How Education Can Help Students to Become Well-Informed Citizens**

In the critical pedagogy approach, educational processes and practices are investigated to address the following: To what extent does education empower people to become well-informed citizens? One main contribution comes from Paulo Freire and his seminal work, *Pedagogy of the Oppressed* (Freire 1970). In this book, Freire discusses how education could be used as a process of development and freedom. Critical pedagogy, according to Freire (1970), allows the development of a critical consciousness that enables students to consider their views, the nature of ethics, and how problems are framed (p. 37). In this sense, critical pedagogy is not concerned merely with the teaching methods traditionally used in the classroom but also provides an alternative approach to evaluating the purpose of education (Wink 2011; Giroux 2011). One way to apply the critical view of education is to ask how it can empower people to become critical and to be active participants in the development process. In this way, the intrinsic role of education goes beyond acquiring literacy skills; it also involves the ability to reflect critically on learning. Freire (1998) notes the following:

If learning to read and write is to constitute an act of knowing, the learners must assume from the beginning the role of creative subjects. It is not a matter of memorizing and repeating given syllables, words, and phrases, but rather of reflecting critically on the process of reading and writing itself, and on the profound significance of language (p. 485).

Based on Freire's words above, it is clear that he perceives education as a way to create and build critical consciousness. In this way, people can obtain the critical

capacity needed to diagnose their problems and to challenge implicit assumptions (Kincheloe 2000: 24). Education fosters thinking in the classroom, so that students can think socially, economically, and environmentally. In this sense, it is the opposite of learning practices where students passively listen and where curriculums do not address their lived experiences.

In stressing the importance of building the consciousness of learners, critical pedagogy refutes learning practices that do not motivate the use of critical abilities, for example, memorization and passive learning. Freire (1970) uses the concept *banking education* to describe teaching that does not stimulate critical abilities in learners. He calls this process banking education because it is akin to the teacher making a deposit of information in students' minds (Freire 1970: 52–54). In this case, students save and repeat information without thinking about or reflecting on what they are learning. According to McKay and Romm (1992), banking education happens when educators assume that students' minds are empty and need to be filled with information. Based on this premise, the teacher is the only knowledgeable person in the classroom, while the student's role is limited to perceiving this knowledge passively and without critical understanding (p. 30).

The dehumanizing of banking education and its limited results inspired Freire (1970) to suggest an alternative approach. Learning according to an alternative approach is based on what he calls *problem-posing education*. In effect, problem-posing education means the opposite of banking education, in that problem posing provides students with better opportunities to raise their critical consciousness than banking education does. In problem-posing practice, students learn not to hide their reality, and in this way, it recognizes the importance of linking people to their ontological world and getting students to think about the process involved. Also, problem posing helps students to become critical thinkers by getting them to think about problems and then communicate their understanding of those problems as part of a dialogue with their peers and teacher (Freire 1970: 64–65). Accordingly, it stimulates thinking and leads to a participatory approach to learning.

Dialogue is central to problem-posing education. Freire (1970) insists that dialogue is necessary to build active communication between teachers and learners (p. 60). Through communication, education becomes a participatory relationship in which a teacher and a learner exchange roles; in other words, the student can become a teacher and vice versa (p. 61). Dialogue also needs to be practiced critically, since without critical thinking, the dialogue has no meaning, according to Freire (1970: 73). For example, Bode (in Freire 1970) used Freire's method of problem posing when teaching peasant communities in Chile. What he found was that the peasants gave full attention to learning when themes specific to their environment were being discussed. Conversely, they lacked interest and motivation to learn when the topic had no meaning for them or did not relate to their needs (p. 97).

To transform the notions of problem posing and dialogue from mere theoretical concepts to reality, students need relevant education to apply these concepts in the classroom. Freire describes this approach as *generative themes*. Generative themes can be derived from real-world situations, which an educator can try and utilize to understand the world of learners and to feature real examples in the classroom based

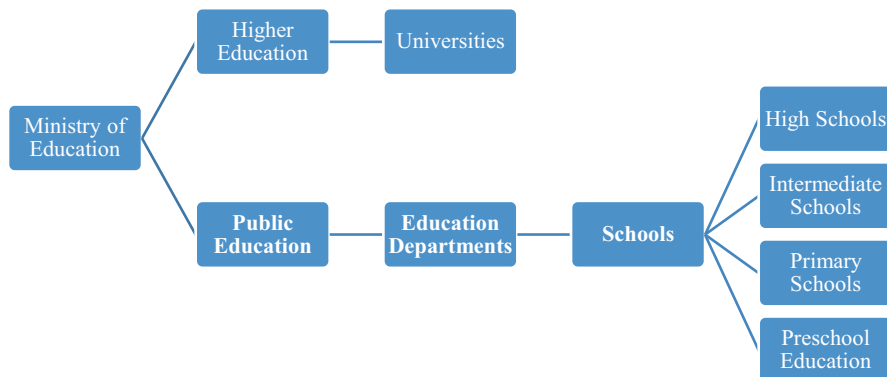
on their struggles (pp. 77–78). Freire offers more examples of generative themes in his book, *Education for Critical Consciousness* (Freire 1974), and the book also contains illustrations of real-life situations as examples of how educators can use problem-posing practice in the classroom. For example, one illustration shows a man working in a field, surrounded by his family, with a shovel in one hand and a book in the other (Freire 1974: 59). This scenario is captured from the real lives of peasant communities. This method provides more opportunity for the teacher to link peasants to their environment and offers two ways of facilitating communication and dialogue. There are many diverse cultures in Saudi Arabia, with people around the country living in widely varying environments. The challenge for students learning in the classroom is to address these diversities, and one of the best ways teachers can do this is to link students to their real-life environment in their learning and to foster thinking and dialogue in the classroom.

In shaping education as an empowerment process, critical pedagogy asks questions that challenge the norms and beliefs of education system that models the world over (Burbules and Berk 1999). This investigation includes questions about who has control over knowledge, what normative ideas typically frame an education system (Giroux 2011: 169–172), and in particular, to what extent the education system represents student diversity and needs (Wink 2011: 69). Thus, the investigation is concerned with whether or not learning in the classroom has any relevance to a student's identity, culture, and needs.

To allow more opportunity for dialogue and generative themes, critical pedagogy argues for less control over knowledge. For example, Kincheloe (2008) criticizes control exerted by a dominant power over knowledge. Similarly, Giroux (2011) refutes control over information in a way that limits teachers' and students' ability to bring knowledge, ideas, and problems from their own world to the classroom. According to Giroux (2011: 7), control over information in the classroom results in students consuming knowledge instead of taking meaning from it in a transformational way. Freire (1970) supports this view. He argues that knowledge can be achieved through human life experience by creating and recreating ideas and information and by communicating with the world (p. 5). Thus, pedagogy practice needs to incorporate an appreciation of students' knowledge. The knowledge that students bring to the classroom is important, and teachers have the responsibility of linking pedagogy to the wider context of students' lives and social problems (Giroux 2004: 500, 2011: 6). By emphasizing the linking of education practice to students' lives, the goal is to raise their awareness of themselves and their situations.

### ***Public Education in Saudi Arabia***

The Ministry of Education is the main body responsible for public and higher education in Saudi Arabia. Public education includes schooling from the level of kindergarten to the primary, intermediate, and high school levels. Figure 11.1 shows the current organization of education under the responsibility of the Ministry of Education.



**Fig. 11.1** The current organizational structure of education under the responsibility of the Ministry of Education in Saudi Arabia. Source: Algraini (2017), p. 16

The Ministry of Education employs a central system to manage public education. Specifically, its head office has central departments responsible for managing various aspects of the country’s public education system, such as learning supervision, admission and examinations, and administration and finance (Ministry of Education 2011: 16). The Ministry also has a central education department in each province. Part of these departments’ responsibility is to make sure that schools adhere to the central learning system. According to the National Education Policy (1969), the central learning system is the basis for the development and management of the country’s learning methodologies (p. 27). Thus, it is the Ministry of Education that sets the national standard curriculum. Through the central supervisory system, the Ministry of Education makes sure that students follow a common curriculum. Those curriculums are very similar for boys and girls in public and private schools. According to Article number (XIV) of the Private Education Act in Saudi Arabia:

Private schools need to follow the national curriculum that is applied in public schools. The Organising department could permit some private schools to teach extra subjects or to increase school time (Private Education Act 1975: 3).

## The Central Learning System and the Challenge of “Banking Education”

As shown in the last section, the central learning policy limits learning to textbooks that are developed centrally. One implication of this restriction on learning in schools is the prevalence of passive learning. The study found that centrally developed textbooks create an environment for what Freire (1970) describes as “banking education,” where the role of teachers is limited to feeding students with

information, which they write it down in order to memorize it. Students' own words best describe the different forms of banking education they face in schools:

Akram: The teacher expounds, and my role is only to answer.

Ahmed: The teacher fills the board with writing, and we write after him.

Hamza: The same routine every day. Every day I come to school only to fill my notebook with information, and that is what makes us hate school (focus group discussion with students at a boys' private school in Riyadh on 23 December 2013).

In exams, teachers ask questions and want answers to be literally from the textbook. If I give an answer with the same meaning but with some paraphrasing, they mark it wrong. They need exactly what was written in the textbook (Munirah, a student at a girls' public school in Riyadh, speaking during a focus group discussion on 23 February 2014).

These students' words describe the top-down approach to learning and how it undermines their voices. They only receive information with few links to their lived experiences. In Freire's (1970) notion of problem-posing education, students are given fewer opportunities to link their life experiences and their environment with their learning. "Our education is isolated from our reality," notes Mubarak, a student at a public boys' school in Riyadh, during a focus group discussion on 4 March 2014. Another student notes that they "study knowledge without practice" and that "[k]nowledge ought to be linked to real examples from life" (Akram, a student at a private boys' school in Riyadh, during a focus group discussion on 23 December 2013). Therefore, it is clearly a major challenge for schools to make learning a relevant and essential part of building students' critical capacity (Freire 1970; Wink 2011). Educators also recognize the issue of relevance in the material they teach, as noted below:

Schools do not provide a curriculum that serves society's needs. All that I teach are things that do not relate to their reality (Suleiman, a teacher at a public boys' school in Riyadh, during an interview on 30 December 2013).

As mentioned previously, the standard curriculum raises the issue of relevant education, in which critical consensus, communication, and active learning play a major part (Freire 1970; Giroux 2011; Wink 2011). In effect, the lack of relevant education highlights the issue of memorization, with students reporting that current educational methods make them passive, since they are obliged to memorize concepts and information without thinking about or reflecting on what they are learning. The following are some of the students' views:

Ahmad: How can I understand something without seeing it? We just fill our notebooks with writing without understanding what we learn.

Akram: We need to be linked to examples from our lives (focus group discussion with students at a private boys' school in Riyadh on 23 December 2013).

Lack of relevant education affects the way students construct knowledge and understanding. The current approach to learning tends to result in knowledge that is only temporary, with students memorizing facts despite not understanding what has been taught:

Fawaz: We memorize ... memorize ... memorize for the test. If you ask me about any idea or information later after the test, I can rarely remember (focus group discussion with students at a public boys' school in the Border Province on 2 February 2014).



The gap between students' perceptions and the material they study increases when textbooks are brought to them that reflect a different cultural context. According to the Ministry of Education (2011: 71), many of these textbooks are developed by international textbook companies such as Pearson Longman, McGraw-Hill, Oxford University Press, MM Publications, Education First, and Macmillan. Students study information and ideas they have never been exposed to in a way that affects the development of their critical capacity. "One negative aspect of the translated books is that they provide information from areas that students have not visited before," noted Waleed (a teacher at a public boys' school in Riyadh, interviewed on 30 December 2013). As a consequence, there are few opportunities for students to connect to their environment, which raises concerns about education's potential to address many environmental challenges. To foster a sense of ecological citizenship (Dobson and Eckersley 2006), students' need learning materials that will open their eyes to the many environmental challenges that exist. In other words, they need active learning and a greater connection with the natural environment. One teacher described this as follows:

The educational system does not fit with our present age. Old system. Does not fit with the progress we have and all the things that exist. There is a need for schools to be developed to become more attractive to students. Students must see in reality many of the things they study, such as mountains, valleys, and observatories. Learning needs to connect students to the environment. It's not important that they only listen and memorize. This is not the school's mission. The mission of the school is that it should be connected to the environment. This is important because student will be motivated to learn (Salem, a teacher at a private boys' school in the Border Province, during a focus group discussion on 28 January 2014).

The above discussion shows the challenges facing education in terms of enhancing the world of young people and equipping them to learn the skills that will facilitate a sustainable future for them in Saudi Arabia. The current education system has a limited impact on the development of a sense of social and environmental rights and responsibilities (McIntyre-Mills 2014; Romm 2015). This is particularly important for Saudi Arabia, as it faces a number of environmental challenges. In terms of sustainable development, Saudi Arabia has a higher dependency on carbon resources, and this means increased environmental challenges. The country needs to sustain its natural resources and move toward greater dependence on renewable energy. Saudi Arabia also faces other environmental challenges besides carbon emissions. One pressing environmental issue is the increased level of urbanization, highlighted by the fact that 60% of the Saudi population currently live in major cities (Ministry of Economy and Planning and UNPD 2003: 30). This number is expected to grow in the future, with an increasing number of people likely to move to major cities. For example, the city of Riyadh's population jumped from 4.9 million in 2009 to 5.7 million in 2012, with a migration rate of 1.2% (Riyadh Municipality 2016). This increased level of urbanization has placed even more pressure on water and food security in a country that possesses few water and farming resources. Increased levels of urbanization have also led to waste management issues and the need to sustain resources and increase the level of recycling, which is still at only around

35% (Ministry of Economy and Planning 2014: 110). Education can bring changes in sustainability, as well as better ways to maintain natural resources and our environment, because in essence, the nation state is relying on the capabilities and awareness of current and future generations to protect the environment. Thus, education has the potential to foster social and environmental capital and to transform our world for the better. The right education can open up numerous opportunities for students to relate to their community and to understand complex environmental challenges (Giroux 2011). In addition, it enables students to think environmentally by connecting them to their environment.

Another implication of banking education is the limited opportunities it provides for discussion and dialogue:

Instead of rote learning, which always means just one person talking, we need discussion. Girls will understand more when they get involved in the discussion. In this way, the student will find ideas by herself, not through the teacher. This is better education (Munirah, a student at a girls' public school in Riyadh, in a focus group discussion on 23 February 2014).

This lack of recognition of students' voices echoes Freire's argument that critical learning rarely occurs when students cannot relate to what is being taught. Therefore, how can dialogue exist if the topic does not interest students or if they cannot contribute to what they are learning? Such a learning approach prevents students from sharing insights and appreciating different points of view. In addition, it fails to prepare them for dealing with the global economy and the digital world, since they have not been taught how to appreciate and understand different arguments. Critical learning cannot happen when students have no option other than memorization. Instead, they need to be able to relate to what they learn, because students learn better when they have a sense of being linked with what they are learning (Freire 1970; Giroux 2011; Wink 2011). The more students can relate to what has been taught, the more they can engage in dialogue and communication (Freire 1970). Thus, relevant education can give students more opportunities to stimulate their imagination and their critical understanding so that they can prepare for an in-depth understanding of the many issues they face.

The central learning policy also renders teachers powerless, in that they lack the autonomy to encourage students to think beyond the limits of textbooks. The central supervision system applied by the Ministry of Education limits teachers' ability to be creative. "I cannot bring any material outside of the textbooks. Anything else is not acceptable," noted Suleiman, a teacher at a public boys' school in Riyadh, when interviewed on 30 December 2013. Therefore, the teacher's role is essentially that of a "bank-clerk educator" (Freire 1970: 57), and the students' role is only to receive. Paradoxically, this is making teachers more passive and eroding their sense of agency, as well as their creative capabilities. So even if teachers feel that textbooks are irrelevant to students, they have no choice but to teach from them, as this is the basis of their learning evaluation. However, in learning, one teaching method and one set of materials cannot fit the needs of all students (Kameenui and Carmine

1998; Stinson et al. 2012). One English teacher describes why she cannot respond to the variety of learners' needs in her class, as follows:

Textbooks restrict teachers. For example, now I am teaching English conversation at the beginner level. Even girls who have an advanced level of English need to study these lessons. One day when I was teaching, I heard one girl laughing at the back of the classroom. I asked: "Why are you laughing?" and she said, "I taught this lesson yesterday to my brother who studies in year 2 at primary school." I felt frustrated. Then I had to tell the girls that this was their curriculum, and we had no other choice. I cannot do anything about it (Lubna, a teacher at a girls' private school in Riyadh, during an interview on 30 December 2013).

From teacher Lubna's statement above, it is clear how textbooks limit a teacher's ability to be creative. The teacher cannot respond to different needs in the classroom even though she is aware of the problem, because she is constrained by one specific material. Therefore, she tends to be passive. Class material frequently does not take account of learners' needs.

One fundamental impact of the top-down approach to learning is that it makes students dependent learners; in other words, students are highly dependent on teachers for learning. They assume that they are unknowledgeable and simply wait for the teacher to fill their minds with information. "The problem now is that students' mentality is just for receiving," stated Yasser, a teacher at a public boys' school in Riyadh (focus group discussion from 29 December 2013). Therefore, students grow up accepting that they play a passive role in their learning. They also accept the notion that they have an inability to acquire knowledge directly, so they believe less in themselves and accept what the teacher tells them without challenging those ideas, as noted below:

Girls now do not use their minds. This is true to the extent that one day I asked a student how much four plus five equals. She could not answer, which made me want to cry (Aysha, a teacher at a private girls' school in Riyadh, during the focus group discussion on 30 December 2013).

The above comments highlight the challenges Saudi Arabia faces in encouraging its citizens to be better informed. Students believe it is impossible to understand ideas and concepts directly by themselves. They are dependent learners in a way that harms the building of their critical consciousness. This is why one can imagine the challenge of achieving an education that advances students' ability to think critically. However, this skill is an absolutely necessary part of equipping students to achieve lifelong learning and to think socially and environmentally about the issues they face. Among the social challenges currently facing us is the rise of terrorism, coupled with the spread of extreme ideas in the Middle East, as part of political and social movements. Education needs to address such concerns in a way that will help students to be critical of ideas that promote violence and hate. Environmental issues and climate change must also be emphasized. In short, education that addresses the social and environmental aspects of our lives has greater potential in terms of making a significant contribution worldwide.

## Discussion

Education plays a vital role in the process of creating citizens who can make informed decisions by themselves. In fact, it is education that cultivates thinking beyond the border of textbooks. Therefore, students can logically investigate and analyze many ideas and arguments. However, the experiences of students and teachers outlined in the last section show how learning functions in a way that makes students passive instead of promoting critical thinking. This is particularly the case when students are restricted to learning from specific materials that are developed centrally and when the teacher's role is only to pass on information from textbooks. Students typically save and repeat information without thinking about or reflecting on what they are learning. These results corroborate the findings of a great deal of previous research on Saudi education (see, e.g., Al-Issa 2009; Kampman 2011; Alabdulkareem and Alshehri 2014; Alzahrani 2016). The findings of those studies suggest that learning restricted to textbooks poses challenges for critical and collaborative learning. As Giroux (2011) argues, learning only from specific sources "celebrates rote learning [and] memorization" (p. 9).

The standard curriculum shapes boys' and girls' education into a very narrow form of knowing where there is less emphasis on encouraging lifelong learning and getting students interested in why certain things occur and more emphasis on simply passing exams. Accordingly, students are exposed to few opportunities for critical and creative learning. This approach to knowledge acquisition is not helpful for building the critical capacities that stimulate critical and creative thinking (Kincheloe 2008; Giroux 2011). As part of building their own critical capacity, students and young people need to be able to navigate different ways of learning across many disciplines and cultures so that they can function effectively as critical thinkers in a globalized world. In this way, education can contribute to the process of creating a learning community, connecting with people in communities that are increasingly diverse, and aligning with the natural environment. Thus, students will be better equipped to face global challenges and will have a greater ability to deal with differences that require the ability to think critically and analytically (McIntyre-Mills 2006, 2014; Borradori 2004). This will become increasingly important in avoiding narrow economic perspectives and religious fundamentalism.

The lack of relevant education raises concern about the extent to which learning in the classroom considers some of the broader social and environmental challenges. In this regard, the education system could contribute to the process of bringing the Saudi economy beyond its traditional role. Currently, Saudi Arabia is dependent on nonrenewable energy, and oil accounts for a large part of the country's income. For instance, in 2013, oil revenues were responsible for 89.5% of the national income (Ministry of Economy and Planning 2014: 47). Falling oil prices, coupled with a population growth rate of 2.21% (Ministry of Economy and Planning 2013: 8), have put more pressure on the country to create jobs and advance the economy. Education can open more channels for the Saudi economy to move beyond its current traditional and unsustainable role. One way to reframe our

approach to the economy is by getting students to think differently about the role of the economy in further development and to develop a sustainable economy instead of an economy that emphasizes profit at the expense of the environment and the fabric of society. It is also vital to promote a new economy that values current and future well-being socially, economically, and environmentally in a changing context where, in fact, some types of older economy are no longer relevant. However, having students learn only from textbooks without encouraging creativity will not enable them to think critically and to develop a new economy in the future that values both social and environmental justice. As Giroux (2011) argues below:

I believe it is crucial for education not only to connect classroom knowledge to the experiences, histories, and resources that students bring to the classroom but also to link such knowledge to the goal of furthering their capacity to be critical agents who are responsive to the moral and political problems of their time (p. 7).

As Giroux (2011) points out, a more open approach to knowledge can help in enabling education to achieve more potential than is possible within the confines of the traditional role of schooling. If we want to empower boys and girls, we cannot simply fill their minds with information from predefined materials. As Freire (1970, 1998) argued, the traditional approach to learning and basic literacy skills is not enough. The intrinsic role of education needs to include the ability to reflect critically on learning. Students need to think about the world through the word (Freire and Macedo 1987). They need the capacity to take on roles in the community and to think strategically. However, the capacity to get students to think strategically seems far from the reach of an education system that makes them passive consumers of knowledge. Instead, they need relevant education that will empower them and give them greater potential as future citizens. Schooling practices should promote the discussion of ideas among students in two-way communication. Depriving them of dialogue or problem posing means that learning has less impact on students' lives.

The central learning policy also reduces teachers' capacity to work effectively across disciplines (the interdisciplinary approach), and because of this, they have limited ability to enable students to be independent learners. Teachers need to play a more active role. They need to be creative and to encourage students to think beyond some dimensions of the curriculum. They also need to enable students to think socially, economically, and environmentally about the issues they face. Well-rounded graduates are produced when learners and teachers are able to engage actively in the learning process within, but also beyond, the textbooks on the curriculum.

## Conclusion and Recommendations

The findings of this study highlight that the top-down learning approach shapes learning according to a teacher-centered strategy. The impact of passive learning on critical awareness justifies Freire's (1970) argument about the importance of active

learning and of giving students more opportunity to reflect on what they have learned. In particular, there is a need for the education system to focus on building critical capacities through relevant learning that addresses social and environmental challenges. Additionally, students need to challenge concepts and ideas in order to develop critical thinking abilities. They need to be able to appreciate how an area of concern can be understood from multiple points of view. This kind of understanding is vital in terms of positioning young people in the global economy and in the digital world, so that they can appreciate and understand different arguments. It is also necessary to enable students to contribute to new knowledge (Kincheloe 2008) that will help to reconnect people to one another and to the land on which they all depend. This requires an open approach to co-creating knowledge and also involves giving teachers more power over what is taught. To overcome the limited scope of textbooks, the new design needs to include a workbook to engage the students in learning a parallel curriculum that will enable them to think critically and become more aware of social and environmental challenges, as well as their own rights and responsibilities.

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# Chapter 12

## Education Policy and Governance of Secondary Schools in Saudi Arabia: A Critical Review Informed by Nussbaum's Capabilities Approach



Saad Algraini and Janet McIntyre-Mills

**Abstract** This case study of both public and private schools in Saudi Arabia is drawn from a completed PhD project that aimed to contribute to the understanding of human development in education. The research defines human development in education in terms of students' ability to achieve their learning goals as well as to maximise their human potential. The research design includes the collection of data from public and private schools for boys and girls in two provinces in Saudi Arabia. A range of qualitative methods is used in the research, including documentary review, interviews, focus groups, and field notes.

The study draws on the 'Capabilities Approach' (Nussbaum 2011) to analyse policies and governance challenges faced by the Ministry of Education in Saudi Arabia. Nussbaum's Capabilities Approach to human development is applied in order to address the complex needs of students pertaining to the ten basic capabilities, including basic physical needs, educational content and context, and social empowerment. This chapter pays special attention to the process and content of education, in order to critically investigate the development of students' capabilities and the extent to which the educational outcomes are able to produce well-rounded graduates. Participants in schools have expressed concerns about passive forms of education and the relevance of the curriculum in a centralised learning system. The recommendation made in this chapter is that the current governance system should provide better opportunities for students and teachers to share their perspectives to facilitate better accountability across public and private schools so that equitable learning outcomes could be obtained across genders. In addition, centralised grading systems should reward creative teaching and learning that goes beyond the limits of the curriculum, rewarding critical engagement that fosters lifelong learning capabilities.

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**Keywords** Human development · Capabilities Approach · Education policy · Saudi schools

## Introduction

This case study is based on PhD research which is designed to contribute to the understanding of the extent to which the human development goals are achieved in Saudi education system. The research design includes the collection of data from public and private schools for boys and girls in two provinces in Saudi Arabia. The aim of this study is to explore policies and governance challenges. To achieve this aim, the study explores the key issues concerning human capabilities in education with (a) students, (b) teachers, (c) schools administration, and (d) officials in the education departments and in the Ministry of Education's head office. The research addresses those key human development issues in terms of human capabilities to include the ability of students to be educated in a way that has meaning to their own lives, besides the ability of people to lead healthy lives, to be safe, and to have control over their environment (Nussbaum 2011). The objectives are to:

- *Investigate* policy and governance challenges that face Ministry of Education to achieve education for human development.
- *Identify* if there are any disparities between provinces, between public and private sector, and between gender groups in terms of human development.
- *Provide* policy recommendations that promote human development in the education system.
- *Enhance* the role of education in human development outcomes for Saudi students.

## *Policy Context and Rationale for the Research*

Since the United Nations issued the first Human Development Report in 1990, development has been increasingly recognised as advancing people's development in many aspects, including health, education, and standards of living. With this movement towards a more integrated and human-centred approach to development (UNDP 1990; Stiglitz et al. 2010), human development needs to be fostered through appropriate policies. These policies need to foster a sense of ecological citizenship (Dobson and Eckersley 2006) and to foster ways to engage and listen to young people during their formal and informal education programmes. Education policy thus needs to establish education systems that appreciate the wider role that education can play in development. The role of policy-makers, administrators, and teachers needs to be focused around sustainable development goals to meet human needs rather than only economic bottom line. This is also necessary to develop opportunities for students to understand their roles as future citizens and leaders who will

support the Millennium Development Goals, the UN Sustainable Development Goals, and the UN 2030 Development Agenda. If the education system is supposed to contribute to development in this new paradigm, then the question needs to be asked: education for what? Education for the economic bottom line or education for human development (defined in terms of the Capabilities Approach)?

If education policy fails to recognise the role of education in promoting a wider view of development, then education has less meaning to people's lives. McKay and Romm (1992) contend that if education lacks meaning, it will not improve active participation, and thus it will not support great human development (p. 26). Therefore, there is a demand for human development to be fostered through appropriate educational policies that address the need of development in different aspects.

While a variety of definitions of human development have been suggested, this study uses Amartya Sen's definition (2004), namely:

Human development, as an approach, is concerned with what I take to be the basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it.<sup>1</sup>

According to the above definition, the great potential that the Human Development Approach has for education is in the way it sees the development of people, ideally, as the end goal. It means students being able to achieve their learning goals as well as being able to maximise their potential. This role of education—through the lens of human development—involves the full development of children's personalities and their capacity to benefit themselves and the community (Alkire 2013: 14). According to Sen (1997: 1959), 'The benefits of education, thus, exceed its role as human capital in commodity production. The broader human-capability perspective would record – and value – these additional roles'. In this way, education needs to be addressed in a systemic manner in order to address the broader life of the students and at the same time to develop an understanding of what is required to protect the so-called wellbeing stocks for the future generation (Stiglitz et al. 2010). These are defined as follows in the book *Mismeasuring Our Lives*:

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. (Stiglitz et al. 2010: 15 cited in McIntyre-Mills 2014b)

This research also builds on McIntyre-Mills' work (2014a, b, c) on many interrelated concepts to provide a basis for developing a multidimensional measure of capabilities and wellbeing in education. The aim is to equip students, so they can think socially and environmentally about the issues that they will face in increasing globalised and challenging world. In this respect, we need to develop opportunities for students to understand their role as future leaders and good members of society.

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<sup>1</sup>An interview by Asia Society. Also available online. <http://asiasociety.org/amartya-sen-more-human-theory-development>

In Saudi Arabia, education policies are developed based on the principle of preparing good citizens (National Education Policy 1969; Ministry of Education 2013). The challenge for Saudi education is to address human development based on expanding students' development opportunities, not just in terms of economic preparation. This has particular importance for the Saudi education system as it is usually criticised for falling short of achieving its economic goals. Thus, great emphasis is given to the lack of skilled national workers, and the criticism tends to focus on the fact that the Saudi education is lacking in its preparation of students for the labour market (Ministry of Economy and Planning 2013: 24–25). This study, however, argues that the current emphasis is only on economic goals and this has the potential to lead to an imbalance in the role of education in human development. Therefore, there is a demand for human development to be fostered through appropriate educational policies that address the need for the development of well-rounded students.

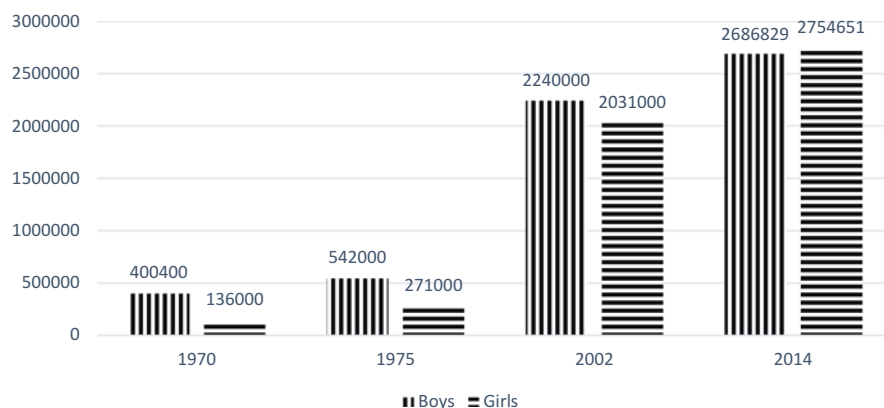
Education for human development in this study is investigated by exploring challenges that face students in achieving their learning and life goals and to provide policy recommendations that can be used to enhance the role of education in human development.

## Education in Saudi Arabia

Ninety years ago at the beginning of formal education in Saudi Arabia, the number of literate people was very low. Illiteracy was widespread across the country, with only four schools built (Ministry of Education 2016). The beginning of formal education in 1925 faced the challenge of a high number of illiterate people and a limited number of schools. Providing equal access to basic education for women was also out of reach because it was not socially acceptable in that period.

In 1938, the country joined the industrial revolution. Oil had been discovered, and education became a basic role in this transformation. Public education also benefitted from the rapid growth of income in building more schools. With the spread of schools across the state and free basic education, the number of students increased from 536.4 thousand students in 1969 to 5.4 million in 2013 with a yearly median growth of 5.4% (Ministry of Economy and Planning 2014: 155). The increased number of schools allowed the country to overcome the challenge of widespread illiteracy. In 2014, the country achieved 94.4% for adult literacy and 99.2% for youth literacy. This lower level of illiteracy enabled Saudi Arabia to achieve the second goal on the list of the United Nation's Millennium Development Goals (MDGs) by achieving **universal primary education** (Ministry of Economy and Planning & UNDP 2014: 46).

Saudi Arabia was able also to overcome the challenge of women's education over time. The increased number of schools and the community awareness of the importance of women's education have played an important role. The gender gap in school enrolment dropped from a 2.2:1 male/female ratio in 1975 to a 1:1 ratio in

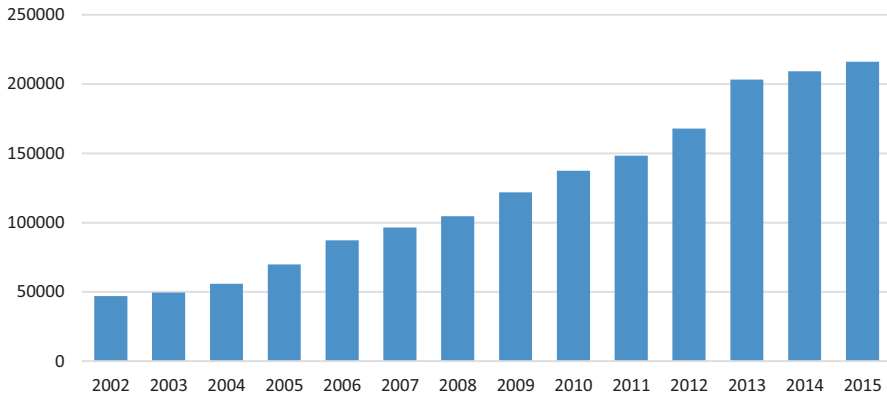


Sources: Ministry of Economy and Planning & UNDP, 2003, p 58; Ministry of Economy and Planning 2014, pp. 155-157; Ministry of Education 2015.

**Fig. 12.1** Enrolment by gender and number of student in basic education, 1970–2014. Sources: Ministry of Economy and Planning & UNDP (2003: 58); Ministry of Economy and Planning (2014: 155–157); Ministry of Education (2015)

2002 (Ministry of Economy and Planning & UNDP 2003: 58). Also, the country succeeded in achieving the target of the ‘Dakar Framework’ to eliminate gender disparity in primary and secondary education (Ministry of Education 2008: 18). Figure 12.1 illustrates enrolment by gender in basic education from 1970 to 2014 which highlights the growing number of girls in schools. Saudi Arabia also achieved the third MDG goal, which concerns gender equality and empowerment. Enrolment for girls increased from 82% in 2001 to 97.8% in 2013, while enrolment for boys increased from 84% to 95.3% in the same period (Ministry of Economy and Planning & UNDP 2014: 55).

While the country succeeded in overcoming illiteracy and eliminating gender disparity, the challenge was to provide education that contributed positively to development. The government announced many plans to improve the system and allocated generous funds to achieve this goal. These development initiatives were usually combined with increased funding for education. Spending on education has doubled over the last three decades to reach 9.5% of the GDP in 2002, an increase of 3.5% of the GDP in 1970 (Ministry of Economy and Planning & UNDP 2003: 62). Spending on education continues getting a higher share of the national budget compared to other countries. In 2006, for example, spending on education, as a percentage of the GDP, was 6.2% compared to France at 6.0%, Germany at 5.1%, Japan at 4.9%, and Turkey at 3.7% (Ministry of Economy and Planning 2010: 358). Figure 12.2 shows the increased spending on human development over the last 10 years, which includes the education share of the annual budget (1 dollar equals 3.75 Saudi riyal).



Source: Ministry of Finance, Kingdom of Saudi Arabia, 2016

**Fig. 12.2** Government budget data for human development sector by millions of Saudi Riyal. Source: Ministry of Finance, Kingdom of Saudi Arabia (2016)

## Research Design and Approach

The study applies a qualitative approach to explore the human development challenges in Saudi general education. This approach is ‘a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem’ (Creswell 2009: 4). As Creswell (2009) points out, qualitative research helps researchers explore and understand social issues. The exploratory nature of the qualitative approach is helpful when little is known about important factors in the researched problem (Morse 1991, p 120). The exploratory nature was not the only reason for choosing the qualitative approach. The study conducts qualitative research also as it has the potential to systemically capture different aspects of the research problem (Corbin and Strauss 2015: 5). In this respect, the qualitative approach can capture more details and factors that can influence our understanding of social issues. According to Sarantakos (2005), qualitative research has the advantages of offering thick descriptions and providing a detailed analysis of the human experience (p. 45). This rich understanding of social issues also comes from an inductive strategy that is usually used in qualitative inquiry.

The design of inquiry utilises a case study approach. Case study research is usually used widely in social research including education. Case study approach means understanding social issues in specific context or group of people (Yin 2014: 4). The case study of this research is the Ministry of Education in Saudi Arabia. The case study is concerned with general education in Saudi Arabia, which starts from kindergarten to high school.

The qualitative tools that were used in the research include a contextual study of documents to review the different discourses, interviews, and focus groups to address the views of different stakeholders and field notes. Also, to have in-depth understanding and analysis, the first author used his lived experience with Saudi

general education during his school days. This effort was undertaken to contribute to answering the research questions and enrich the data analysis. The interviews and FGDs questions explore the perception of participants around the issues of human development. The semi-structured interviews included questions relating to education policy, access, the learning environment, and teaching and learning. Questions during the FGDs were about the learning environment and teaching and learning. Study participants are students, teachers, policy officers, policy-makers, and heads of schools. The reason the study includes different stakeholders in the Ministry of Education is to achieve the critical systems thinking (CST) goal of this study by appreciating different views that people have about education and human development. Collecting data from different groups in the system is also an attempt to make the sample as representative as possible. In qualitative research, diverse points of view about the research problem help to maintain objectivity and reduce bias (Strauss and Corbin 1998: 43–4). Research's participants were not in one location or at the same organisational level. Instead, they had different levels of responsibilities from the Ministry and two provinces in Saudi Arabia. Working with a female coresearcher was essential to follow the norms of Saudi culture. The female coresearcher took over the first author role in girls' schools and also during interviews with female policy officers in education departments.

The Ministry of Education is located in the capital city (Riyadh) and has central departments for general education in each province. According to the Ministry's yearly report (Ministry of Education 2011), there were 78,917 employees working in civil service, which includes policy-makers, policy officers, and clerks. For educational jobs, there were 484,758 employees. This number includes heads of schools, teachers, and student advisors (Ministry of Education 2011). Also, there were 5,441,480 students, 2,686,829 male students and 2,754,651 female students (Ministry of Education 2015). The recruiting strategy for approaching this large number of participants includes purposive and snowball sampling. Those non-probability strategies of sampling are commonly used in qualitative research when the target of the study is a specific group in the wider population (Cohen et al. 2007: 113–6). The selected participants to inform the study are policy-makers, policy officers, school administration, teachers, and students (Table 12.1).

Below is a detailed description of the levels that the participants came from and the criteria for selected schools:

First level: The main office of the Ministry of Education in Riyadh. Participants are policy-makers in the ministry. Policy-makers in the ministry are working in the central departments who are usually responsible for education policies, rules, and regulation. The semi-structured interviews were the primary tool for data collection at the Ministry of Education main office.

Second level: Education departments. The Ministry of Education has education department in each province in Saudi Arabia. The first department is from the Central Province (Riyadh). The second department is from one of the border provinces. We have hidden the name of this province to protect participants' identities because of the limited number of private high schools. In both

**Table 12.1** Description of each type of participant and the recruiting strategies used in the research

Participant type	Description	Basis for recruitment	Component of research involved in
Policy officers and policy-makers	Policy officers and policy-makers in the Ministry of Education and education departments	Invitations sent by the Ministry of Education	Interviews
School administration	Heads of schools, deputy heads, and student advisors	Invitations sent via education departments	Interviews
Teachers	Teachers from selected schools	Invitations sent via the heads of the schools	Interviews and focus groups
Student representatives	Schools asked to invite student representatives to give their perspective	Invitations sent via the heads of the schools to students and students' families	Focus groups co-facilitated by the school

**Table 12.2** Number and type of schools included in the research design

School type	Public schools		Private schools	
Boys' schools	Riyadh Province	Border Province	Riyadh Province	Border Province
Girls' schools	Riyadh Province	Border Province	Riyadh Province	Border Province

provinces, the first author and the female coresearcher interviewed policy officers in the education departments. The education departments also facilitated the process of selecting schools.

Third level: Schools. This level is researched to add depth to the data collection. The subunit of data collection is the high school level. However, because schools in Saudi Arabia are single-sex institutions, the selected schools are schools for boys and schools for girls from each province and include the public and private sectors. The Table 12.2 below summaries the schools included in the research design. In boys' schools, the first author interviewed the heads of the schools and teachers. Focus groups discussions in each school were with teachers and with students. The female coresearcher followed the same process for data collection in the girls' schools.

Ethical approval for this study was obtained from the Social and Behavioural Research Ethics Committee of Flinders University (SBREC, project number 6169).

## The Capabilities Approach

One important contribution that roots the Human Development Approach comes from the Capabilities Approach (CA). The Capabilities Approach and its idea of human capabilities have become central in evaluating human development since the

first Human Development Report was introduced (UNDP 1990). The Capabilities Approach was developed by the economist Amartya Sen who won the Nobel Prize in 1998. Sen (2007) defines the Capabilities Approach as:

The capability approach to a person's advantage is concerned with evaluating it in terms of his or her actual ability to achieve various valuable functionings as a part of living. (Sen 2007: 271)

The Capabilities Approach in economic literature was a reaction to the Utilitarian Approach, which focused on economic growth as a form of development and evaluation. Instead, the Capabilities Approach shifted the perspective, and as a result, the evaluation focused on thinking about development. It shifted the emphasis to 'what people are actually able to do and to be', instead of measuring production to judge people's wellbeing (Nussbaum 2003: 33). This shifts emphasis on people being ends in themselves to development, and the argument for thinking about people needs in different aspects was usually ignored by the Utility Evaluation (Deneulin and McGregor 2010: 509): for example, the ability of people to be healthy and well educated.

The Capabilities Approach emphasises the importance of our view on human development. That is, the motivational beliefs that stand behind development policies in the world. Our view to development as described by Sen (2003: 41) is that humans should be regarded as ends for themselves not only as a means to achieve specific goals. Sen identifies 'capability perspective' as the best way that underlies a normative view of development (1999, 2005). According to Sen (1999: 81), the capability perspective affects human development evaluation. Based on the change in the basic assumptions about development, education should play a wider role. The normative foundation for education policies should recognise the importance of education that develops overall human beings.

The Capabilities Approach criticises development evaluation that does not address people's capabilities. The example that Sen usually uses to explain this idea is about two people: one forced to face hunger and the other one who chooses to fast (Sen 1999: 75). Both individuals have similar nutritional functioning, but of course, they have completely different capabilities to choose. The one who has chosen to fast has the capability of eating. The other one has no choice other than to face hunger. The previous example illustrates the importance of evaluating people's capability when considering their level of development. On the other hand, the previous example shows how focuses on outputs and people's achievements may give a false picture about the quality of their lives. In this way, Sen (1987: 23) argues that development needs to focus not merely on functioning but also on capability. A focus only on outcomes or achieved functioning leads to limited views about progress or the quality of peoples' lives (Walker and Unterhalter 2007: 5). In education, focusing only on academic outputs, for example, hides the various abilities available to different students. Students in well-equipped schools with good teachers have more capabilities to achieve good results. On the other hand, students in less equipped schools with poor teaching have less opportunities to achieve good results. A focus only on academic results or 'functionings' will not tell us about unequal opportunity



to access good education. It also covers different advantages or disadvantages for students to engage actively in making a difference in their lives.

The previous paragraph shows how freedom is an important aspect of the Capabilities Approach. In development planning and evaluation, it is crucial to consider enhancing peoples' capability to be and to do. In this way, the Capabilities Approach offers a theoretical framework for human development in terms of expanding people's capabilities (Sen 2003). From this point of view, Sen (1999) argues that the Capabilities Approach has an extensive reach to evaluate social justice in human development compared to other mainstream approaches (1999: 86). The most practical example Sen has used to explain the extensive reach of the Capabilities Approach is in the area of poverty analysis (see, e.g. Sen 1981, 1999). Sen (1981, 1985, 1999) argues for poverty to be considered as a capability deprivation more than economic indicators. The evidence he provides is from both developed and less developed countries. From a capability perspective, poverty is not merely the lack of wealth or resources; rather it is a limited ability to convert resources to utilities (Sen 1999: 87–110). Thinking of poverty as capability deprivation means thinking in terms of people's ability to convert resources to valuable outcomes especially for people with special needs (Sen 1999: 87–110). Using this new view of poverty, Sen shows how poverty may exist in developed and less developed societies clearly as a lack of basic capabilities, not only as a lack of income (1999: 89). The previous example about poverty also shows how it is important for public policy to go beyond people's actual performance; the investigation should include their ability to be and do. Improving people's being and doing will lead to overcoming more than investment in resources and other means to wellbeing. In education, it means thinking of students' capabilities to use and benefit from a school's resources. Such understanding requires more empowerment for students instead of them playing a passive role in their schools.

The key terms that Sen used to illustrate his approach are 'capability' and 'functionings'. The notion of capability means the substantive freedom a person has to achieve his or her goals (Sen 1999: 74), while the concept functionings describes achievements (Sen 1987: 23). In education, writing and reading are examples of functionings, whereas capability refers to having the freedom to achieve these literacy skills. Other important concepts in the Capabilities Approach are agency freedom. Sen (1985: 204–5) describes being free to decide and having the freedom to be the agent responsible for one's life as the so-called agency freedom. In human development, 'agency freedom' is moving from being passive recipients of development results to real opportunities for individuals to form their lives in line with their aspirations and goals (Sen 1999: 11), that is, the ability of people to have a level of freedom to decide on their development.

Another important idea that the Capabilities Approach insists on is value. Capability and functioning have no meaning if they have no value for people. Accordingly, policy design needs to give attention to peoples' diversity of needs and their personal choices. Also, people should be given the opportunity to decide what is important and what is less important to them (Sen 1999: 31).

People's choices and what they value, however, have its limitations. The limitations come from what has been called the adaptive preference (Nussbaum 2000, 2011; Sen 1999). The adaptive preference means some people adapt to unfair or poor life conditions (Nussbaum 2000: 135). As a result, people may report higher self-satisfaction, which may mask their suffering and struggles. In this case, the Capabilities Approach refuses to build social policies only based on people's reported satisfaction. The reason, according to Sen (1999: 62) and Nussbaum (2000: 112), is because people may adapt to circumstances that may be lower than the threshold of human dignity and the basic rules of social justice.

The issue of adaptive preferences was evident in Nussbaum's (2000) work about women's development in India. She found that women who have been employed with poor working conditions and very low payment seem to be unaware of their rights. In one instance, a woman who worked in brick factory did not complain about the lower payment she received compared to men doing the same task (p. 18). Issues of adapted preference may happen in schools. Girls may adapt to having less time for physical activities. Students may adapt to devaluing their voices because they have been demotivated to take part in decisions related to their lives.

To avoid adaptive preference, the Capabilities Approach emphasis is on equality based on fair circumstances for people to achieve their goals (Sen 1999). In this respect, the Capabilities Approach stands in opposition to the Utilitarian Approach and people's adaptive preferences. Nussbaum (2011) goes even further in terms of defending a list of basic human capabilities. The ten central capabilities developed for human development are to be achieved by enhancing the capability for all human beings, so that they have voices and their basic needs have been met (see Nussbaum's Capabilities Approach in the following section in this Chapter).

The Capabilities Approach also gives attention to resources. The view the Capabilities Approach has to resources differs from a welfare approach to development. Resources are important but only as a capability input, not as the final goals of development. What is more important, however, is the ability for people to convert those resources to valuable outcomes (Walker 2010: 900). In this way resources work as instruments to achieve functioning. In other words, resources are a means to enhance people lives, not an end in itself. For example, in schools, infrastructure is supposed to play its instrumental role in supporting student capability in learning as well as in other aspects of their human development. Students and teachers need to have freedom to use and benefit from a school's resources in a way that improves their education and their human development.

Information and measurement as proxy for human development are important. Sen (1999) warns about information manipulation that may happen in the traditional way of evaluating people's development when the policy focuses on one indicator to evaluate people's capabilities (1999: 132). The example Sen (1999) gives is using income as the basis for incentive to foster people's nutrition, health, or education. In times of famine, some families resorted to starving one of their children to get food aid on returns (1999: 131–2). In education, relying only on academic achievement in quantitative measurements may encourage students and school

administrations to work to reach specific numbers that hide their individual struggles or other human development aspects such as health or safety.

The Capabilities Approach also stresses the need to avoid tragic choices. Tragic choice in human development occurs when people are forced to choose between two important aspects of their development. In other words, it is when social policies undermine an aspect of people's lives in order to give priority to the importance of another (Nussbaum 2011: 37). In education, for example, tragic choices can happen when students have limited recess time that makes them choose to eat their food at the cost of not playing and socialising with other students or the opposite scenario. From the viewpoint of the Capabilities Approach, policy-makers have the responsibility to give students reasonable choices between play and nutrition in ways that give them the ability to achieve balanced human development.

The Capabilities Approach influences development research and evaluation across different areas of human lives. At the international level, the notion of human capabilities has been used in the Human Development Index since its inception in 1990. For example, the term 'expanding people's capabilities' was used in the first Human Development Report to discuss international development in life expectancy, literacy, and basic incomes (UNDP 1990: 19–22). In addition, the Capabilities Approach has been used by different researchers to evaluate different parts of people's life spanning health, poverty, and equality. The research by Drèze and Sen (2013) on development in India presents an example of the Capabilities Approach in practice. By defining development as 'an expansion of people's basic freedom, or human capabilities', they identified many challenges facing India such as illiteracy, health issues, and inequality (Drèze and Sen 2013: ix–x).

### ***Nussbaum's Approach for Human Development: Creating Capabilities for Young People***

Amartya Sen (1999) focuses on human capability as a general term for development. Much of his previous work was on economy and poverty reduction (see, e.g. Sen 1981; Drèze and Sen 1989; Sen and Anand 1997). Sen sets out his ideas to remain general to development and does not support the idea of having a complete list for which capabilities we need most for human development. His main concern is such a list might not be applicable in different contexts and prioritising capabilities, suggesting the most important needs should be left to be decided by the people (Sen 2005: 157). In contrast, Nussbaum, a humanities philosopher, is more normative in her approach and concentrates on the basic principle of human capabilities. Nussbaum, who worked with Sen previously on investigating capabilities for human development (Nussbaum and Sen 1993), developed a list of ten central human capabilities (see Nussbaum 2000: 77–80; 2003: 41–42; 2011: 33–34). She developed her approach when investigating women and development in India. Nussbaum's

approach insists on human dignity to be achieved through creating a basic number of capabilities. Nussbaum defines central capabilities as follows:

Taking a stand for political purposes on a working list of functions that would appear to be of central importance in human life, we ask: Is the person capable of this, or not? We ask not only about the person's satisfaction with what she does, but about what she does, and what she is in a position to do (what her opportunities and liberties are). And we ask not just about the resources that are sitting around, but about how those do or do not go to work, enabling [people] to function in a fully human way. (2000: 71)

The ten central human functional capabilities cover wide aspects of life that are essential for all human beings and at the same time are also relevant to other sentient beings (Nussbaum 2011: 33–34). The government, through appropriate policies, has a role to protect these capabilities and to make sure that people are living beyond its threshold (2011: 79). The ten central capabilities are (1) life; (2) bodily health; (3) bodily integrity; (4) senses, imagination, and thought; (5) emotions; (6) practical reason; (7) affiliation; (8) other species; (9) play; and (10) control over one's environment. Below is a detailed discussion of these capabilities and its application within the frame of this study:

**Life** This is the first capability on the list. In this capability, Nussbaum (2011) defines life in terms of being free from factors that cause immature death or not being able to live until a late age. As Nussbaum puts it, life capability is:

Being able to live to the end of a human life of normal length; not dying prematurely, or before one's life is so reduced as to be not worth living. (2011: 33)

Life capability is among the three basic capabilities that Human Development Index has measured since it was put in practice in 1990 (UNDP 1990: 1). In Saudi Arabia, morbidity and mortality were high at the time of the unification of the country in 1932. The country was able to improve life capability over time. The average of life expectancy increased from 53.9 in 1970 to 72.7 for women and 70.3 for men (Ministry of Economy and Planning & UNDP 2003: 47).

In education, life capability is relevant to all people. It is central to human development and needs protection in any setting, including schools. In this respect, students need to be free from factors that cause early death. It also means students are able to go to school in a safe neighbourhood. Facing the risk of death in front of their schools as a result of the lack of road safety is an issue.

**Bodily Health** Being healthy according to Nussbaum (2011; 2000) includes the ability to have good nutrition and good living standards and being able to maintain one's health. It includes:

Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter. (Nussbaum 2011: 33)

The previous definition of what it means to be healthy is consistent with the World Health Organization's (WHO 1946) definition of health which is 'a state of complete physical, mental and social well-being and not merely the absence of disease

or infirmity'. Health capability has been recognised and measured internationally by the Human Development Index (HDI) since 1990. Health indicators are also among the United Nation's Millennium Development Goals (MDGs) which are to reduce [child mortality](#), to improve [maternal health](#), and to combat [HIV/AIDS](#), [malaria](#), and other diseases. In education, health is central to education for human development. It includes the ability for students to be healthy, well-nurtured, and physically fit. Health also has an instrumental role in achieving a good education. Good nutrition plays an important role in building students' abilities to understand and communicate during their learning in schools. Students' capability for health is discussed in this Chapter. The purpose is to investigate challenges students face in nutrition and physical activities.

**Bodily Integrity** Nussbaum defines bodily integrity in terms of:

being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction. (Nussbaum 2011: 33)

This capability highlights the importance of being safe, to move from one place to another, and being able to protect one's body from physical and sexual assault. Being safe at schools has intrinsic value. Bodily integrity of students should be protected against risk, bullying, and violence. Protecting this capability includes students are able to go to school in a safe neighbourhood. Safety also has its instrumental importance. For education, it affects students' capability for having a good education. We cannot imagine successful learning in an environment where students are bullied or their life is at risk. Building on this is important for education, and to protect bodily integrity, schools need to be free from sources of harm. Boys and girls need to be safe inside and outside schools.

**Sense, Imagination, and Thought** Nussbaum (2011) defines this capability in terms of the ability for using the mind in creative activities like imagination and thought. She points out that this capability is about:

Being able to use the senses, to imagine, think, and reason—and to do these things in a “truly human” way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training. Being able to use imagination and thought in connection with experiencing and producing works and events of one's own choice, religious, literary, musical, and so forth. Being able to use one's mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech, and freedom of religious exercise. Being able to have pleasurable experiences and to avoid non-beneficial pain. (Nussbaum 2011: 33)

Nussbaum stresses the importance of education systems in cultivating this capability. Therefore, education should play its role in building creativity and innovation among students. This demands teaching and learning that goes beyond passing knowledge in a passive way. Being able to use imagination and thought could be cultivated by getting students to think differently in order to position themselves for a better future, that is, to be able to communicate their ideas in a critical way, to

reflect on their learning, and to pose problems that have relevance to their lives (Freire 1970).

To cultivate sense, imagination, and thought, education also needs to place emphasis on lifelong learning and well-rounded human beings instead of narrowly defining success in terms of grades and learning for the sake of passing tests and exams. In this respect, students need extracurricular activities to enhance learning for the sake of learning such as sport, involvement in cultural activities, and school visits to places of cultural, historical or natural interest. Extracurricular activities, also, could help students to connect with people in the community that are increasingly diverse and in connecting with the natural environment. This is the opposite of focusing learning on achieving narrowly defined learning outcomes, in which the task-oriented approach of teachers is to get students to comply with limited performance requirements.

The policy aspect of supporting appropriate educational curriculums should support the purpose of education and overall human development, to ensure that students are learning to be capable citizens in the future for the good of the country. Developing education that enhances creativity and innovation is also good for the economy in the long run. In Saudi Arabia, the economy is dependent on natural resources especially oil, which is not sustainable and also creates many environmental issues. The education system should play a central role in building an agile, innovative, and sustainable economy.

The challenge for the Saudi education system is to equip students with sense, imagination, and thought capabilities. This is addressed in terms of encouraging students to view education as a capability not merely as a certificate and a means to achieve employment, despite these being important goals as well. Students need to be able to achieve their learning capabilities in terms of learning evaluation, curriculum, and pedagogy. These are the challenges boys and girls face to be well-informed students who will be capable of lifelong learning. This will enhance their preparedness for being participants in development. In this respect, education can build on the efforts to address some of the challenges put forward by Stiglitz et al. (2010) about the needs for promoting the wellbeing of future generations.

**Emotions** Nussbaum defines emotions as follows:

Being able to have attachments to things and people outside ourselves; to love those who love and care for us, to grieve at their absence; in general, to love, to grieve, to experience longing, gratitude, and justified anger. Not having one's emotional development blighted by fear and anxiety. (Supporting this capability means supporting forms of human association that can be shown to be crucial in their development). (Nussbaum 2011: 33)

In education students need to develop a sense of attachment to their school. One way to help students create positive emotions towards schools and learning is through empowerment. Empowerment increases the level of positive emotions and engagement among individuals (Hyden et al. 2004: 19; Woodall et al. 2010: 27). For this to occur, students need to be part of decisions made in their school. They also need some control over their learning and to be able to choose among different

subjects. It is also important that they can follow up many learning and research opportunities. Achieving this capability is far from being achieved in the top-down approach of learning with little opportunity for informal learning.

**Practical Reasoning** To be critical according to Nussbaum is:

Being able to form a conception of the good and to engage in critical reflection about the planning of one's life. (This entails protection for the liberty of conscience and religious observance.) (Nussbaum 2011: 34)

As practical reasoning is important to human development, it is also central in education. To achieve this capability in education, students need to be able to test out ideas in a critical way and to build good perceptions that inform their actions and decisions. As part of human development for students, students also need to function effectively as critical thinkers in a globalising world where they need to navigate across different ways of knowing across many disciplines and cultures. Young people also need to be able to make sense of data as basic information that needs to be interpreted through critical analysis. Sen (1999) makes a similar point when he puts emphasis on the role of education as not simply a means to give students the ability to read and write but also positively influences their ability for decision-making and informed choices (Sen 1999: 294). Achieving this capability in education includes students accessing a wide range of readings and texts that help them to advance their critical reading and understanding. Also, knowledge should be taught in a way to help students to think critically. Hence, learners should play an active role in transforming knowledge through dialogue, communication, and problem posing (Freire 1970; Giroux 2011). The challenges students face to develop critical thinking are highlighted in terms of the limited opportunities to express personal ideas, to read widely, and to apply their conceptual and analytical skills to examples.

**Affiliation** The ability for people to create a sense of belonging to others and to institutions is central to Nussbaum's list of central capabilities. She defines affiliation in terms of:

Being able to live with and toward others, to recognize and show concern for other humans, to engage in various forms of social interaction; to be able to imagine the situation of another. (Protecting this capability means protecting institutions that constitute and nourish such forms of affiliation, and also protecting the freedom of assembly and political speech.)  
(B) Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others. This entails provisions of non-discrimination on the basis of race, sex, sexual orientation, ethnicity, caste, religion, national origin. (2011: 34)

The growing number of social clubs and social institutions combined with advances in technology give people in Saudi Arabia more opportunity to be part of the increasingly connected world. In education, it is important to notice that many educators including Freire (1970) and Giroux (2011) emphasise the importance of students being able to relate to their culture through culturally relevant teaching. The central

learning that the Ministry of Education follows raises concerns about students' capabilities to be linked to their local culture, community, and their environment. The research investigates curriculum relevance among students and educators. Another way in enabling affiliation in schools is through empowering and increasing students' participation in decision-making at schools.

**Other species** Nussbaum extends capabilities to all sentient beings other than human beings, realising that our capabilities are fostered by having an environment that is ecologically sound and protected. Nussbaum defines this capability as follows: 'Being able to live with concern for and in relation to animals, plants, and the world of nature' (2011: 34).

This capability gives the list an environmental concern and at the same time recognises the right of nonhuman creations. Climate change and an increased level of pollution around the world have put more pressure on education systems to adapt to changes and be part of the solution, not the problem. Saudi Arabia is not exceptional here as there are a number of environmental issues that impact on the quality of life of people along with plant and animal habitats. Waste management, water scarcity, desertification, and sand encroachment are examples of some key pressing environmental issues in Saudi Arabia (Ministry of Economy and Planning & UNDP 2014: 88–92). Its higher dependency on oil and natural resources also raises the need to think about the future in a new post-carbon future. The education system in Saudi Arabia needs to be central in the efforts to mitigate increased levels of environmental risks. When we think about education, we think about equipping young people and the positioning education system to address the ways to enhance the overall sustainability of Saudi Arabia. In this respect, schools need to teach students how to connect with the natural environment, in particular, to understand the systemic importance of protecting and regenerating the environmental conditions that enable food and water security to be maintained. This is an important lifelong learning skill and vital for human sustainability. The fundamental shift in education also needs to be in valuing people and the environment as ends in themselves and not as a means to an end. Thus the intrinsic values need to be appreciated, rather than emphasising its instrumental benefits that are not sustainable.

Whether or not education is successful depends on whether education improves in the short, medium, and long term. This is an important lifelong learning skill, but it is also vital for human sustainability. The wider understanding of education extends its role to deal with global issues such as sustainability and environmental problems that affect our capability to live a better life. It is education that supports thinking and that builds emotional capacities which are helpful to tackle global issues of the wellbeing of the planet (McIntyre-Mills 2014a, b, c). Education that promotes thinking is important to tackle increased levels of climate change. Thinking also plays a vital role in moving our society towards more sustainable living. People are trapped in limited thinking as the result of their activities and do not think about how their social, economic, and environmental choices make an impact on protecting or undermining the environment of which they are a part (McIntyre-Mills 2013). This has implications for the way in which we see ourselves as citizens



versus ecological stewards beyond the limits of the nation state (McIntyre-Mills 2010a). Part of students' education capabilities is to have the necessary understanding of what is required to protect wellbeing stocks for future generations and to equip them so they can think socially and environmentally about the issues that they face. Curricula need to enable students to think about ways to protect the environment and the global common through drawing thinking about the UN Sustainable Development Goals and through rethinking our rights and responsibilities within and beyond the boundaries of the nation state (McIntyre-Mills 2010a, b).

**Play** Nussbaum (2011) recognised pleasure and recreational activities as a basic human capability. Play capability is defined in terms of 'being able to laugh, to play, to enjoy recreational activities' (Nussbaum 2011: 34). Nussbaum (2011) argues for play to be part of her list because of the value and contribution it has for living life (p. 36). The same importance of leisure time to play and recreate has also been highlighted by the Commission on the Measurement of Economic Performance and Social Progress (see the Report by the Commission on the Measurement of Economic Performance and Social Progress 2009: 131).

Being able to play and having time for leisure activities are important especially in increased urbanised and congested cities in Saudi Arabia. To protect this capability in education, students need time and space to play and socialise. However, the short-time school day and focus on academic achievement in a narrow way raise concerns about to what extent learning in schools recognises the importance of leisure activities. This capability needs to be addressed in terms of whether learning in schools is broadly defined and whether it develops well-rounded human beings. In this view, education should give students more opportunities for extramural or extracurricular activities. Extramural activities can increase learning opportunities and provide recreational benefits to students. It may include sport, involvement in cultural activities, drama, art classes, and visits to places of cultural, historical, or natural interest. This broad and capability-based view is the opposite of education that is narrowly defined only in terms of focus on achieving narrowly defined learning outcomes. The purpose is to highlight challenges facing students to achieve play capability in terms of school infrastructure and time to play and socialise with other students outside a formal classroom setting.

**Control Over One's Environment** This is the last capability in the list. Nussbaum places importance on empowerment in this capability by emphasising the necessity of participation to give people the capability of being able to take part in decisions related to their lives. She recognises that each human being should have the right to work on ways that enhance their quality of life and living. Nussbaum recognises control over one's environment in two ways as follows:

- (A) Political. Being able to participate effectively in political choices that govern one's life; having the right of political participation, protections of free speech and association.
- (B) Material. Being able to hold property (both land and movable goods), and having property rights on an equal basis with others; having the right to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure. In work, being able

to work as a human, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers. (2011: 34)

Being able to take part in decisions related to people's lives is a central capability. Sen (1999) highlights the importance of involvement and participation of people affected by development decisions. He states:

If a traditional way of life has to be sacrificed to escape grinding poverty or minuscule longevity, then it is the people directly involved who must have the opportunity to participate in deciding what should be chosen. (p. 31)

The efforts to develop a list of basic or central capabilities in education also recognise the capability of students to voice their needs as part of their basic human development (see, e.g. Biggeri 2007; Terzi 2007; Walker 2007). Education plays a vital role in empowerment and participation. Firstly, by preparing students for active participation in community development, as the aim of education is to prepare students for the future, engaging in discussion about learning and choices is important to build their future capability for reasoning in public debate (McIntyre-Mills and De Vries 2013: 450). Also, students learn participation by practicing participation. Schools are expected to assist children to build participation capabilities for students to play a positive role in development in the future. Schools need to give students the opportunity to experience participation and how they can together work for change. It is also important to learn teamwork and communication, moreover, to learn how change can be made through discussion and cooperation, not through force or violence. Thus, it is important to apply processes that enhance and empower the voices of students when engaged in learning. This research explores the extent to which the school empowers students through giving them some level of control and giving them the opportunity to be involved in the school system.

Empowerment also can be addressed by giving staff, teachers, and students the opportunity to voice their concerns and be part of change. Participation provides the opportunity for people to give their opinion about various issues related to their lives. Through active participation, students can achieve better educational outcomes. In this respect, participation help to shape better policy design and implantation by narrowing the gap between service providers and service users. For human development to be achieved, staff, teachers, and students need to speak out strategically. This is based on the principle of subsidiarity which requires decision-making at the local level, and it is informed by Ashby's Rule of Requisite Variety which requires that the complexity of a decision is matched by the complexity of the decision-makers and that a suitable variety of participants are included in the process (Ashby's Rule 1956). People who are to be affected by decisions ought to have a say in a decision-making process (McIntyre-Mills 2010a: 23). This capability is addressed as part of Critical System Heuristics (CSH) 12 questions (see Algraini and McIntyre 2018). The analysis investigates to what extent the Ministry of Education involves stakeholders in decision-making process including students, teacher, and staff.

The previous discussion of the ten central capabilities shows the interrelated relationships among the capabilities. For example, empowerment capability can

have a positive impact on people's emotions. Building students' capabilities for thinking and reasoning can enhance the way they think about their health and their environment. The interrelated relationships between human capabilities require systemic intervention that appreciates the interconnection of our needs (Midgley 2000; McIntyre-Mills 2006).

### ***Human Development Framework: Applying Nussbaum's Capabilities Approach in Education***

As previously discussed, Nussbaum's Capabilities Approach provides a holistic theory upon which to support policies for human development. By arguing for central capabilities as being a system of universal accountability for human development (Nussbaum 2000: 34–110), Nussbaum's Capabilities Approach can provide a basic understanding of human development in education. The list is quite general, and this gives it more flexibility to be applied in different contexts. The approach thus provides a framework through which policy-makers and administrators could expand the role of education and at the same time provide a good life for students: to achieve an education that supports the development of well-rounded human beings who have the capacity to benefit themselves and the community (Alkire 2013: 14).

The way the ten central capabilities are applicable in education can have two important applications. The first is the potential the list has to the process of teaching and learning. Nussbaum (2000, 2011) raises in her list the way education can be a process for human development through emphasis on thinking in achieving a meaningful education, that is, learning in a way that emancipates the mind and gives people the ability to question their choices. In particular, the intrinsic value of education can be linked to two central capabilities from the list: 'senses, imagination, and thought' and 'practical reasoning'. For the purpose of this study, I call it 'learning capabilities', that is, the ability of people to be educated in a way that has meaning to their lives. From this perspective, students need to build the ability to be creative, to reason, to imagine, and to be critical.

In creating the so-called learning capabilities, students can understand ideas in a critical way and be able to transform their life through meaningful learning. In this respect, it helps us to ask questions like whether students have the opportunity to develop the intrinsic aspect of education: Are students able to create creative and critical thinking abilities? Are students able to access a body of knowledge that gives the opportunity for meaningful education? Walker (2009) argues that when applying human development to education, it is important learning is aligned with the fundamental ideas of being critical as a way to humanise learning (p. 334). The work of Nussbaum on higher education in the United States and for public education in India emphasises this intrinsic value of education and the wider understanding of the role of education in human development (Nussbaum 1997, 2006).

The remaining capabilities build the theoretical base for protecting human dignity in the general view of the notion of basic human capabilities. In this wider implication, I call it ‘life capabilities’. The general view is when the Capabilities Approach is used to investigate the quality of life and other important capabilities that are essential for all human beings in an education setting, for example, health, safety, and empowerment. This view is related to human capabilities in a general perspective ‘by the virtue of their humanity’ (Nussbaum 2011: 62). Life capabilities are still relevant to students and worth protection in any education setting. Nussbaum (2011: 36) argues that all people should be entitled to all the ten capabilities, and people should be placed higher than its thresholds. Thus the role of public policy in promoting health and providing a decent life for students is a fundamental requirement. Life capabilities can be used to address such concerns.

The following figure presents the conceptual application of Nussbaum’s ten central capabilities in education (Fig. 12.3).

The conceptual framework of Nussbaum’s Capabilities Approach is an attempt to provide an understanding of human development in education. ‘Learning capabilities’ present the potential intrinsic education can provide in creating capabilities for critical thinking, reasoning, and imagination. The second aspect of human development in education is ‘life capabilities’. ‘Life capabilities’ address human development needs from a wider view, for instance, being safe, being healthy, and people being able to voice their needs. ‘Learning capabilities’ and ‘life capabilities’ together can support the efforts of students to become fully rounded, educated citizens who understand their rights and responsibilities to others and the environment on which they depend.

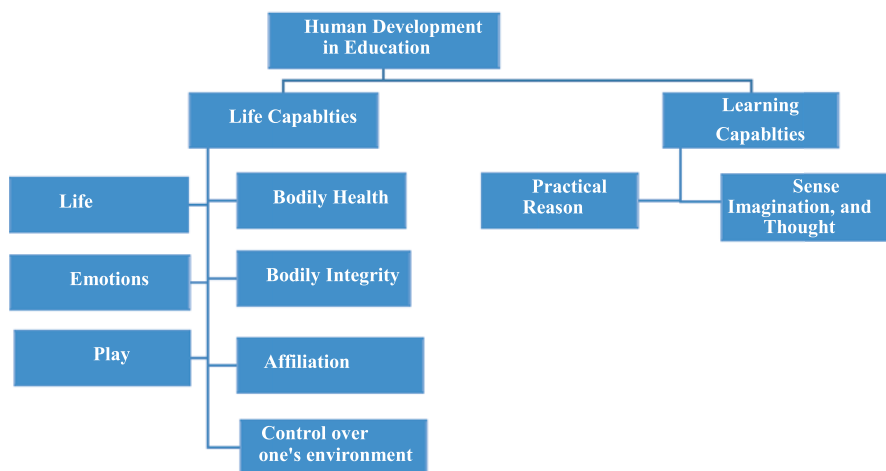


Fig. 12.3 Conceptual framework of Nussbaum’s Capabilities Approach applied to education

## Human Development in Saudi Schools

The qualitative study of human development in secondary schools highlighted governance and policy challenges that face boys and girls to achieve learning and life goals. The study draws on the Capabilities Approach (Nussbaum 2011) in data analysis. The theoretical framework for the study was helpful in thinking of the key challenges that face Saudi students to be capable of lifelong learning and become well-rounded human beings. Nussbaum’s (2011) Capabilities Approach to human development was applied to address the complex needs of students pertaining to the ten basic capabilities. The challenges that students face have been organised into two aspects (see Fig. 12.4).

**The First Aspect Represents Challenges in Terms of Achieving Learning Capabilities** The comparative case studies highlight four key challenges that students face while learning in schools. The first challenge is the limited scope of learning evaluation. Measuring learning progress in school focuses only on measuring learning from standard textbooks. This challenge is more significant in private schools where learning measurement usually focuses on summaries of the textbooks. Pedagogical challenges represent the second challenge. Participants in schools have expressed concerns about passive forms of education and the relevance

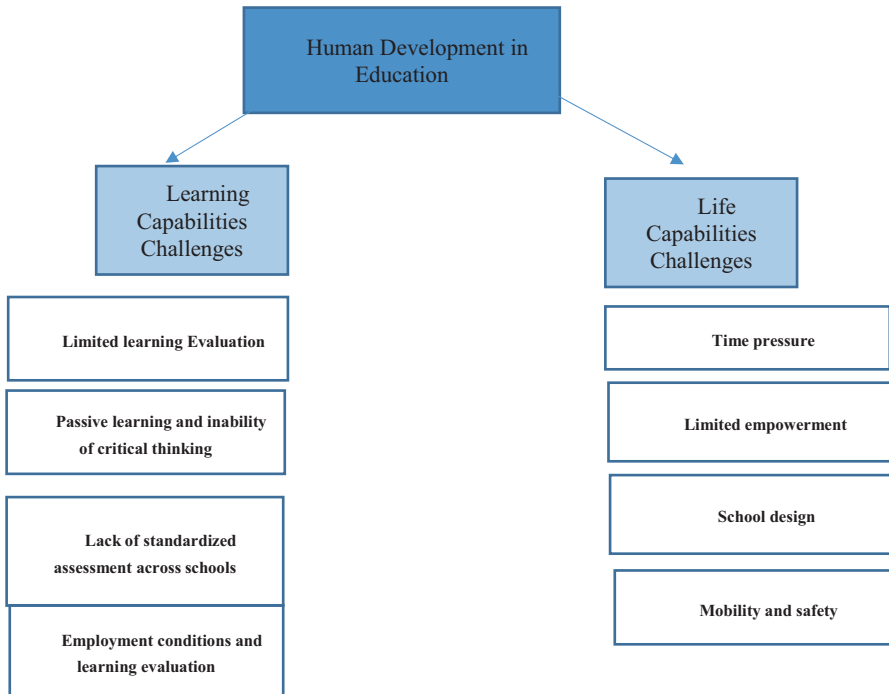


Fig. 12.4 Research findings organised according to the human development framework

of the curriculum in a centralised learning system. One important implication of passive learning is that students are not taught the skills of reasoning and critical thinking. The third challenge is related to the lack of standardised assessment. The absence of standard tests was reflected in many students achieving an advanced level of their education despite poor academic results. The fourth challenge is the influence of employment conditions on the integrity of learning evaluation. Employment conditions in private schools jeopardise learning evaluation where the teacher is employed by the school and faces pressure to give high grades.

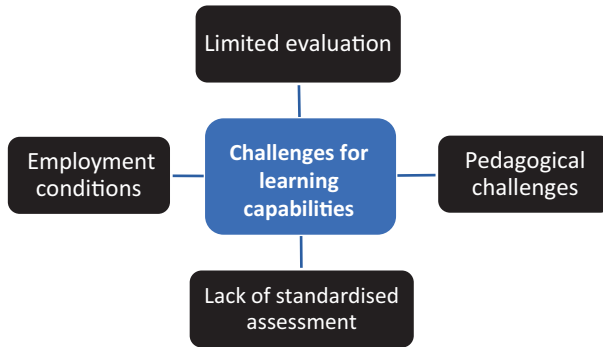
**The Second Aspect Addresses the Challenges Students Face in Achieving their Life Goals** The challenges that students face are to enjoy a healthy life, to play and create, to be safe, to control their life and their learning environment, and to have opportunities to create positive emotions and a sense of hopefulness towards their learning. In this regard, the study found four key challenges that students face to achieve their life goals. These challenges are time constraints, limited student empowerment, school design, and safety and mobility.

More details about key challenges that face human development in schools are highlighted in the next sections.

## Learning Capabilities: Case Studies in Schools

Human development from a capability perspective puts an emphasis on people's abilities to achieve valuable outcomes, that is, the real opportunities people enjoy to achieve their goals (Sen 1999; Nussbaum 2011). In education, human development involves being able to build lifelong learning capabilities and have a critical understanding of one's reality (Nussbaum 2011: 33–4). Based on this view, in this section, I compare and contrast case studies from public and private schools for boys and girls in Riyadh and the Border Province. The comparison between schools is in terms of the key challenges facing the creation of learning capabilities in schools. Those challenges are the limited scope of learning evaluation, pedagogical challenges, the lack of standardised assessment, and the influence of employment conditions on the integrity of learning evaluation. See Fig. 12.5.

The central learning policy from the Ministry of Education plays an important role in the learning challenges highlighted in the previous Fig. 12.5. The central learning policy requires central development and management of learning in the country (National Education Policy 1969: 27). In this regard, the Ministry has created a central curriculum department which develops textbooks for boys and girls in public and private schools for all different subjects. Public and private schools in all different provinces are subject to the same requirements from the Ministry of Education (Private Education Act 1975: 3). The Ministry of Education also has a central education department in each province. Part of their responsibility is to make sure schools follow the central learning system which is important for the maintenance



**Fig. 12.5** Challenges for learning capabilities

of standards. The similarities include similar content and similar regulations for learning evaluation and examinations. This centralised structure limits the differences across provinces. Therefore, the study did not find significant differences between the central province (Riyadh) and the Border Province in terms of challenges students face to achieve their learning goals. Boys and girls face similar challenges of learning in schools which do not build in the so-called parallel curriculum to foster critical thinking and respect for many ways of knowing and respect for diversity. The inbuilt curriculum needs to foster gender sensitivity and the potential for boys and girls to achieve their goals.

There is limited research on textbooks as a basis for fostering engagement with learners. This is the case in Saudi Arabia. The best practical example of this can be found in South Africa where textbooks have become a hybrid between a workbook and a standard text, and these efforts by Veronica McKay has received many UNESCO awards, most recently in 2016. According to McKay (2018), it fosters improving both curriculum content and the process of engaging students:

Notwithstanding the dearth of research on the impact of ‘workbooks’ in school classrooms, much research has been conducted on the importance of textbooks in supporting the curriculum. City et al. (2009) states that for any real improvement in learning to be achieved, the instructional core—which comprises teachers’ knowledge and skills as well as their content knowledge, and the role of the learner in the instructional process—needs to be improved. He thus stresses the important relationship between the teacher, the learner, and the content, learner and teacher support material—textbooks and workbooks—being fundamental to the instructional core ‘composed of the teacher and the student in the presence of content. The instructional core refers to the relationship between the teacher, the student, and the content—not the qualities of any one of them by themselves—that determines the nature of instructional practice.’ He explains that ‘the instructional task is the actual work that students are asked to do ...’ (City et al. 2009: 22–23). ‘Following Elmore’s thesis, the workbook development team explored the role workbooks (and textbooks) might play in improving the instructional core. Accordingly, the workbooks

were conceptualised with a view to supporting teachers regarding what they should ask learners to do. The workbooks were therefore designed to fulfil the roles of both textbooks and workbooks or structured collections of worksheets. While they include some instruction, explanation and extensive reading text, they also guide the learner-teacher engagement with regard to the content, encouraging discussion and “doing” (2009: 86).”

The problem in Saudi Arabia is that it did consider ways to engage students and to measure knowledge and skills in thinking about the content in textbooks (rather than have students merely regurgitating them) and also the lack of transparent examinations. The greatest difference the study found was between public and private schools. Although the policy on learning is uniformly applicable across public and private schools, it is implemented and interpreted differently across these schools. In private schools, the content of the curriculum is more likely to be summarised and rehearsed into achieving goals in a narrow way. This has the implication of students being evaluated on some parts of the curriculum only. The difference in private schools is associated with the conditions of employment for teachers. Private school teachers are employed by the schools. The pressure they face from students and school administrations play a significant role in the different implementation from public schools. Private school teachers have an extra role in that they have to teach according to a very carefully rehearsed examination. This happens to some extent in public schools. However, there is less leverage for the students and school administrations to pressure teachers who are employed by the public sector.

Table 12.3 summarises the differences between public and private schools in terms of the key challenges facing learning in schools. Then the key challenges that face learning in schools are discussed in more detail in the following sections.

## **Lack of Integrated Measurement for Learning in Schools**

The Ministry of Education’s current approach to measure learning in schools is in terms of academic achievement. The information that the Ministry relies on in this regard is educational attainment in the form of grades and tests that create the basis for measuring learning capabilities. Achieving a specific number of grades is essential for students to move from one academic year to another. At the high school level, grades have more importance. It shapes students’ futures as it plays a significant role in further education and creates the basis for employment after high school.

The Ministry’s approach to measure learning broadly is consistent with the argument that has been made in the literature review. The argument is that schools need a governance framework that addresses more integrated ways of measuring progress (Stiglitz et al. 2010). This is to make sure that students are achieving their learning and life goals (Sen cited in Saito 2003: 25; Nussbaum 2011: 26). Thus, in learning, evaluation needs to consider the wider aspects of students’ education: for instance, a wider body of knowledge and basic skills. The skills necessary include



**Table 12.3** Challenges for learning capabilities: comparison between public and private schools

Challenges for learning capabilities	Public schools	Private schools	The difference between public and private schools
Limited learning evaluation in schools. Tests and exams are limited to textbooks. Learning measurement does not reward other formal and informal learning such as reading and the achievement of many skills such as communication and critical thinking	Central grading system applied in public schools is limited to textbooks	Central grading system applied in private schools is limited to textbooks	Although the Ministry of Education restricts the evaluation to textbooks, learning measurement in private schools usually focuses on summaries of textbooks
Learning in schools is constrained only to the national standard textbook. Students learn only from pre-decided materials. The top-down approach creates issues of relevance and limits creative teaching and learning for teachers and students. One implication is the heavy reliance on passive forms of education	Central learning through the supervisory system required public schools to teach the standard textbooks	Central learning through the supervisory system requires private schools to teach the standard textbooks	The content of the curriculum is more likely to be summarised and rehearsed in private schools to achieve goals in a narrow way. This has a significant implication of lessening a private school student's chances to create critical thinking capabilities
Lack of standardised assessment across schools	No standard for learning assessment. Teachers set the tests to evaluate students' learning from textbooks	No standard for learning assessment. Teachers set the tests to evaluate students' learning from textbooks	Employment conditions for private school teachers make evaluation easier to manipulate. Teachers in private schools are employed by the school and face pressure to give higher grades
Teacher's employment conditions	Teachers in public schools are employed centrally by the Ministry of Civil Service	Teachers in private schools are employed by the school	Different employment conditions for teachers across public and private school affect the transparency of learning evaluation

critical thinking, communication, and problem-solving (Freire 1970; Nussbaum 2011). To build lifelong learning, the grading system also needs to reward creativity, innovation, and learning that goes beyond the absolute essentials required in the standard curriculum.

Given the importance of measuring students' learning, the questions now are: What has been measured? Do schools measure formal and informal learning? Does the grading system reward learning beyond the limits of standard textbooks? These kinds of questions are important to maximise student potential and to build their capacity to think critically and build lifelong learning capabilities. In this respect, the study found that the challenge that Saudi students face is related to the nature of

testing and the kind of narrowly defined tests that cover limited aspects of students' learning and evaluation.

The study found that learning measurement in schools is limited and that the national textbooks do not build in ongoing evaluation using workbooks that foster 'going beyond' and 'diving deeper' to use the current pedagogical terminology for teaching that inspires lifelong learning that can make a difference. Grading systems do not address the wider understanding of education's role in development through more formal and informal learning opportunities (Freire 1970; Terzi 2007). The following quotations from students give examples of how they think they have been restricted by learning evaluations which do not reflect their learning needs:

In other schools outside Saudi Arabia school reports do not have only academic subjects .... No. Their certificates include many skills. Even the way the students deal with other students. We do not have such a thing. They told us since we are still young to succeed only in the subjects we have. (Asma, focus group discussion with students at girls' private school in Riyadh, 20 February 2014)

It supposes our tests have field research. Field research in that we go and collect data from the field not from Google. We want to live such experience. (Youssef, focus group discussion with students at boys' private school in Riyadh, 23 December 2013)

The previous quotations from students highlight how learning assessment limits their opportunity of 'being and doing' (Sen 1999; Nussbaum 2011). Their potential has been restricted by school reports that are narrowly directed to the standard curriculum that is not shaped by a parallel curriculum to support social and environmental justice, and is without adequate evaluation of critical abilities. The parallel curriculum needs to take a leaf out of the current approach used in South Africa, for example, where McKay (2018: 84–85) suggests that the:

Millennium Development Goals (MDG) and the recent Sustainable Development Goals (SDG). SDG Goal 4.7 (which forms the essential precursor to all 16 other SDGs) sets the target of ensuring that by 2030, all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, sustainable production and consumption, sustainable lifestyles, human rights, gender equality, a culture of peace and non-violence, global citizenship and an appreciation of cultural diversity. Clearly, if education was to respond to these goals, it was necessary to ensure that education inculcates positive values that transcend content knowledge and promote: human rights, gender equality, a culture of peace and non-violence, global citizenship, an appreciation of cultural diversity, peaceful societies, inclusive societies, justice for all, sustainable lifestyles, environmental and eco-stewardship.

In other words, schools are only rewarding students for doing successful tests based on limited materials. This limitation on measuring in schools has been recognised by the Strategic Plan for Public Education (Ministry of Education 2013). The plan points out that the current tests and examinations focus on specific topics and do not measure creativity, innovation, and the ability of students to analyse different ideas (p. 108).

Learning evaluation in schools is narrow despite the need to advance students' learning across different subjects and skills and thus to enable students to achieve their learning capabilities. Thus, instead of measuring learning only from standard textbooks, students need measurement that includes progress and achievement in

many skills such as critical thinking and reasoning (Nussbaum 2011). As part of human development for students, young people also need to be able to navigate different ways of knowing across many disciplines and cultures. This will enable them to function effectively as critical thinkers in a globalising world. Different ways of knowing will also allow students to achieve their own sense of gendered, cultural identity which is important for human development (Freire 1970; Kabeer 1994), by learning skills to ‘unfold values’ and to ‘sweep in’ social, cultural, political, economic, and environmental dimensions of an area of concern (see McIntyre-Mills 2003a, 2014b; McIntyre-Mills and De Vries 2011 who cite West Churchman 1979). In this way, students could be better equipped to face global challenges and have better capabilities to address differences which rest on an ability to think critically and analytically (see McIntyre-Mills 2006, 2014b; Borradori 2004). This is increasingly important in order to avoid narrow economic or religious fundamentalism. In Saudi schools, the grading system needs to respond to more learning needs. The centralised grading system should reward creative teaching and learning that goes beyond the limits of the curriculum, rewarding critical engagement that fosters lifelong learning capabilities. This is a grading system that measures both quantitative outputs and qualitative outcomes, in order to foster the wellbeing of students and future generations. A raft of indicators to address academic achievement is needed to provide a means to develop the social and environmental rights and responsibilities of well-rounded students.

The lack of recognition of many learning capabilities in learning evaluations is broadly consistent with other studies. The work of Biggeri and Santi (2012) found that creativity and critical thinking are usually neglected in academic focused education systems. Lozano et al. (2012) analysed European higher education and found limitations in the focus on achieving only a few number of competencies. They suggest complementary measurement using the Capabilities Approach as it provides a wider understanding of and the implication of education’s role in development.

The limitation of measurement students face broadly applies to public and private schools for both genders. This is due to the central learning policy that requires tests to be made from the standard curriculum. Despite this similarity, this research found differences between public and private schools in terms of what has been tested. To help students achieve success in terms of grades in private schools, teachers usually give summaries to students. Questions are made in ways that cover only teachers’ summaries, not the whole textbook. The following quotations from teachers and students in private schools illustrate this issue:

Talal: The whole book is summarised in 20 pages. Our knowledge will be affected.

Hamza: At the end of the year he gives us [the teacher] only 20 pages extracted from only 10 lessons. What about other lessons! In the end, I was being tested only in 2 lessons. (Focus group discussion with students at boys’ private school in Riyadh, 23 December 2013).

The student comes to private school, and she assured that at the end of the term she will be tested on few pages. (Dallal, teacher at a girls’ private school in Riyadh, focus group discussion, 30 December 2014)

This is usually the opposite in public schools:

We have a lot of monthly tests. For each chapter of our books. Test after test. When we just finish one chapter directly, we get a test. (Ayman, a student at a public boys' school in the Border Province, focus group discussion, 2 February 2014)

The previous quotation suggests students in public schools seem to work harder than their peers in private schools. Mustafa, a teacher, confirms students in public schools work hard to succeed. Mustafa worked for many years in public schools before becoming a private school teacher. He points out that many students come to private schools looking for higher results with less effort:

As I have worked before in public schools and now in a private school, public schools have better equipment than private schools. The government provides generous support to public schools. However, public schools are strict. Therefore, students do hard work. On the other hand, private schools pamper their students. This is a process of marketing because it is kind of an investment project. (Mustafa, teacher at a private boys' school in Riyadh, interview, 1 January 2014)

The previous quotations highlight how education privatisation creates more challenges for building learning capabilities. Limiting examinations to a few pages in the textbook is motivated by students asking for higher grades and private school teachers being pressured to ease the process for students. Teachers on temporary contracts in private schools also impact the integrity of learning evaluation.

### ***Lack of Integrated Measurement for Learning in Schools: Implication on Students' Learning Capabilities***

The limited focus of learning measurement limits the focus of students. Instead of students being encouraged to broadly perceive their learning from different sources, they only focus on what has been measured. They have been taught to build skills and knowledge from limited content. The way students are concerned about education that has been measured is best described by one teacher:

I was naive about the impact of grades when I started my career. When girls asked the question whether any lesson was part of their test or not, I would simply answer 'yes' or 'no'. If I said no, it will not be included in your final exam they directly ignored my expounding and engaged in side conversations. Now I am fully aware of this matter. (Lubna, a teacher at a girls' private school in Riyadh, interview, 30 December 2013)

Students' concerns towards what has been measured are consistent with the work of Stiglitz et al. (2010). They argue that metrics shape people's perspectives. In this regard they point out that 'what we measure shapes what we collectively strive to pursue' (p. 6). Therefore, the omission of some aspects from students' learning that is without measurement gives them the wrong message. Students are encouraged to strive for achievement in terms of limited materials. In the narrow measurement view, students are not encouraged to develop lifelong learning skills. The powerful impact of this evaluation ignores many formal and informal learning opportunities

without measurement. However, for more meaningful learning, students need to be given the message that learning out of textbooks matters. For this to occur, the grading system needs to reward more formal and informal opportunities. This is especially important in the digital era, where shaping learning in the classroom limits the contribution of education to students' development. Students need to seize upon the availability of computers, the Internet, and smartphones to become more educated and to be more creative, to go the extra mile to learn and relearn new concepts and ideas. I have raised this concern in one focus group with students. I have asked students whether they use the Internet for learning. Not one student mentioned that they use the Internet to expand their knowledge, and one student added the following comments:

No. There is no desire. We just finish our school and go home. (Eyad, a student at a private boys' school in Border province, focus group discussion, 4 February 2014)

My observations in schools about the lack of interest to learn more new knowledge has been recognised by the Ministry. The Ministry of Education Strategic Plan (2013) points out that schools have a very low culture for learning (p. 107). One teacher comments on the Ministry approach for learning in schools:

They think that knowledge is limited to school. Nowadays you cannot limit knowledge to schools. Students can learn from the internet and from books in libraries more than what they could learn from me (Mansour, a teacher at boys' public school in the Border Province interview, 3 February 2014)

One important implication of the narrow grading systems is the lack of wider reading among students. Students are not encouraged to access a wide range of readings and texts that could help them to promote their critical capabilities and stimulate imagination and thoughts (Nussbaum 2006, 2011). Therefore, students rarely access a wide range of readings and texts that help them to advance their critical thinking and understanding. Students usually read textbooks which are formally measured by their teacher. They usually do not read extra material:

Books are collecting dust in the library. No student goes to the school library to read. Students' mentality focuses only on preparing and passing their tests. So there is no reasons to read extra material. They wondered whether they should bother to read anything beyond the textbooks' (Fawaz, a student at a public boys' school in the Border province, focus group discussion, 2 February 2014)

The lack of appropriate workbooks to make students read beyond the core curriculum to help them to understand it better is highlighted in the previous quotation. Students have been distanced from books and informal reading. Students justification for the lack of reading interest is because it is not being reflected in their school report. This shows how the limited scope of measurement is not enough to advance thinking in the classroom. Building lifelong learning skills for students is a real challenge as these students grow up almost without reading widely. A reading survey across all 13 provinces in Saud Arabia found similar results. The survey found teachers do not help students build reading habits because they do not ask them to read books beside the textbooks (Saudi Aramco 2014). Based on my personal experience as student, the lack of wider reading among students was a common issue.

It is common to find some students in the last year of high school who have not read any other single book than their textbooks. My personal experience drove me to raise this concern in one focus group discussion with students. I was shocked to hear that only one student out of six mentioned that he had read extra books on his iPad. Others did not report any further reading:

- Sami: I hate reading. In all our studies we did not borrow any books from the school library. If you try to take a book, you will find a spider web. The school library is for chatting not for reading.
- The researcher: Why do you not borrow any books?
- Sami: Why should I?
- The researcher: Why not read a book in history for example?
- Sami: No one read history.
- Researcher: Have you seen any student setting reading any book?
- Sami: No.
- Bander: No ... (Laughing).
- Hamdan: Reading is almost non-existent. (Focus group discussion with students at a public boys' school in the Border Province, 2 February 2014)

The previous discussion shows how schools deprive students from reading and building reading habits from an early age. As this is important for their learning, it is also important for creating critical capabilities (Nussbaum 2011). Lack of reading affects the process of building critical thinking reasoning and imagination among students (Nussbaum 2006). The lack of reading among students highlights the importance of a grading system that is responsive to a range of capabilities. Following Stiglitz et al. (2010), there are many strategies for schools to encourage and reward students for reading more books. Based on my experience with my children here in Australia, these strategies include essential reading levels, the South Australian Premier's Reading Challenge, and Scholastic Australia where students report their daily reading online. These different strategies to measure and motivate learning beyond textbooks make the weekly visit of the public library part of my children's learning. In Saudi Arabia, schools can advance students' learning by adopting similar strategies. Thus, students can develop learning habits and become well-informed citizens. This could supplement the current traditional grading system and could be used to encourage students to address wider areas of concern such as building an awareness of social and environmental rights and responsibilities.

Lack of reading among Saudi students is broadly consistent with the work of Nussbaum (2006) on Indian public education. In her field study on Indian schools, she found that much of the curriculum is concerned with science and technology, with less attention to humanities and further reading in history. She wrote about the importance of reading beyond a school's subjects:

There is no doubt that scientific and technological education is important, and there is also no doubt that good textbooks are important. It is indeed important that young people read a complex and nuanced version of Indian history, one that stresses the agency and interaction of many different groups and presents an accurate picture of these interactions.... In the light of the whole huge question of how to develop the minds of young children who are going to grow up to be democratic citizens, however, the twin emphasis on technology and textbooks seems extremely narrow. (pp. 387–8)

As Nussbaum highlights in the previous quotation, students need to access a wide range of reading to stimulate their critical capabilities. In this way, education has more potential for developing good citizens (National Education Policy 1969). However, the lack of reading among students suggests schools' fail to build lifelong learners. Therefore, it would be a challenge to advance human development where many students graduate lacking reading habits. This issue raises big concerns about the ability of the education system to play its important role in development to tackle social and environmental issues. This is because a literate society needs to read and build awareness of many important issues and to develop an understanding of what is required to protect 'wellbeing stocks' for future generations (Stiglitz et al. 2010; McIntyre-Mills 2014b). For instance, in sustainable development, lifelong learning strengthens the movement towards a more sustainable way of living (Noguchi et al. 2015).

Lack of reading seems worse in private schools. As highlighted earlier, a private school teacher has an extra job to summarise the textbooks and to make it easier for students to digest them. It means students do not even bother to read the whole textbook:

- Ali: We did not open the textbooks in the whole year. We only write in our notebooks teacher's notes and explanations. We never open the book.
- Iyad: Rarely the teacher asks us to read. We rely on his explanations on the blackboard and our notebook. Sometimes the teacher gives us a summary. (Focus group discussion with students at a private school in the Border Province, 4 February 2014)

The previous quotation provides more evidence on how learning challenges are more serious among private school students. In terms of reading, it suggests private school students will have more challenges in developing more knowledge across different subjects. It also suggests a higher potential for inabilities for critical thinking and reasoning (critical thinking challenges are discussed in more details the following Section).

## **Pedagogical Challenges**

The Ministry of Education develops and disseminates textbooks to all public and private schools. These textbooks become official documents which are given to students at the beginning of the year, and students need to study them to graduate to the next level. If the delivery of textbooks at the beginning of the term is delayed, then learning at schools can be jeopardised or in some instances can stop completely. I can draw on the following example from personal experience. In 2011 when my eldest daughter started her first school, I registered her in a private school because it was the nearest school to our house. A few days later, my daughter told me that she did not learn anything. When I contacted the school, they told me that this was not their mistake, but it was the education department's mistake, who did not give them the new textbooks. Reports from local newspapers sometimes highlight similar

issues in different provinces. For example, in 2015, delayed textbooks affected learning in schools in Jeddah<sup>2</sup> which raised complaints among students and their families (Ettalhi 2015).

The study found that control over learning highlighted in the previous paragraph creates an environment for passive learning. As will be discussed in detail in this section, passive forms of education and relevance of the curriculum affect teaching styles, particularly when students learn only from specific materials that are developed centrally and teachers' roles are only to pass on information from textbooks (Al-Issa 2009: 21). In this central approach to learning, most teachers follow the passive teaching approach where they provide information and facts without giving students the opportunity to be active (Alabdulkareem and Alshehri 2014: 48).

The central learning policy also limits students' opportunity to learn out of school, where connections can be made with the wider community. This approach to knowledge is not helpful to develop lifelong learning and well-rounded capabilities (Kincheloe 2008; Giroux 2011). It also does not support education for human development that requires learning practice that stimulates critical and creative thinking (Nussbaum 2011). In particular, it shapes learning chances for boys and girls into a very narrow form of knowing. One implication in development is to limit an education system that achieves wellbeing outcomes for the country (Stiglitz et al. 2010; McIntyre-Mills 2014b). The education system should contribute in the process, transforming the Saudi economy beyond its traditional role. This is important to promote a new economy that appreciates current and future wellbeing socially, economically, and environmentally in a changing context where in fact some of the old economies are no longer relevant. Learning only from textbooks without encouraging creativity will not enable students to think critically and to develop a new economy that values both social and environmental justice. As Giroux (2011) argues:

I believe it is crucial for education not only to connect classroom knowledge to the experiences, histories, and resources that students bring to the classroom but also to link such knowledge to the goal of furthering their capacities to be critical agent who are responsive to moral and political problems of their time. (p. 7)

As Giroux (2011) points out, the more open approach to knowledge can help in achieving more potential to education that exceeds the traditional role of schooling. It has specific importance to gender needs. If we want to empower boys and girls, we cannot simply just make them literate. The traditional approach to learning and basic literacy skills is not enough to achieve gender needs (Kabeer 1994: 250). Students need to think of the world through the word (Freire and Macedo 1987). They also need the capacity to address roles in the community and to think of how they can achieve their basic and strategic needs (Moser 1993). The capacity to get students to think strategically seems far from the reach of an education system that makes students passive consumers of knowledge. Instead, they need a relevant education that empowers them for more potential as future citizens.

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<sup>2</sup>The second largest city in Saudi Arabia which is located on the coast of the Red Sea.



Hassan, a policy-maker at the Ministry, recognises how the central development of textbooks isolates students from their culture and does not respond to Saudi cultural diversity and local economic needs. He said:

Instead of central management for education in Riyadh, I argue for each education department to have more independence in terms of curriculum development and management. For example, the Eastern Province is a petroleum region and the curriculum is supposed to focus on the oil industry and the advancement of scientific and engineering aspects. For agricultural areas, the curriculum should be focusing on the advancement of the agriculture and transform into agricultural industry. We need innovation and a move away from the traditional education system. (Interview, 11 December 2013)

Unlike Hassan, Khalid, a policy-maker, goes further to argue that the Ministry should get rid of textbooks and give teachers and students more independence over their learning. Khalid said:

Developed countries have moved from centralisation to the decentralisation. They do not impose the same textbooks for all schools. They have a curriculum, but not textbooks nor CDs. Curriculum has (vision, policy, goals, and competences). Schools can choose textbooks that help students to achieve the competencies of the curriculum. (Khalid, a policy-maker at the Ministry of Education's head office, interview, 21 January 2014)

As stressed at the outset of this study, I am not arguing against the use of textbooks, but I am following McKay (2018) in stressing the importance of including the engagement of both teachers and learners with content and that norms for social and environmental justice need to be built into the curriculum. In fact, some textbooks can foster critical thinking to some extent and set action learning tasks (Nussbaum 2006: 387). For example, the books developed in South Africa by Veronica McKay have empowered many women and children to overcome illiteracy and reach more sustainable development (UNESCO 2016). The challenge, however, is the practice of the top-down approach for learning. The central learning policy limits learning only from textbooks that are developed centrally or translated from international textbooks. In this way, the top down approach for learning limits students from being and doing in a way could enhance their human development (Sen 1999; Nussbaum 2011). In particular, it makes students and teachers passive. Learning tends to be 'banking education' as described by Freire (1970). The teacher's role becomes one of a 'bank-clerk educators', and a students' role is only to receive (Freire 1970: 57). Central learning policy also creates issues of relevance which is important for education that raises critical consensus, communication, and active learning (Freire 1970; Giroux 2011; Wink 2011).

The less active approach is best described by students' words. Below are two examples from boys' and girls' schools:

Rote learning is when the teacher expounds, and we write without any other learning approaches. With this style, we lose focus and the proper understanding of the information. (Omar, a student at boys' private school in Riyadh, focus group discussion, 23 December, 2013)

Our curriculum needs to be linked to our lives. The school also needs to prepare us for the future. Teachers sometimes make us memorise textbooks not to understand it, and this is a problem. (Munirah, a student at a girls' public school in Riyadh, focus group discussion, 23 February, 2014)

The previous quotations from students are a good example of ‘jug and mug’ education (McKay and Romm 1992: 30) which has serious limitations on students’ critical consciousness abilities (Freire 1970). The following discussion in this section discusses in detail how passive learning occurs. The investigation is mainly through the eyes of the most affected (teachers and students) (Churchman 1968; McIntyre-Mills 2006). This section will conclude the discussion by highlighting the implications and the challenges students face for critical thinking.

### ***Pedagogical Challenge: Passive Learning in Schools***

To understand the issue of passive learning, critical systems thinking (CST) suggests seeing the issue through the eyes of those who are affected (Churchman 1968; McIntyre-Mills 2006). In learning, it suggests seeing the process through the eyes of teachers and students.

Through the eyes of teachers, it can be seen that they are bound by the limits of the curriculum. They have to teach according to the standard textbooks. The central standard curriculum has become carefully and closely designed and monitored to be the only source of knowledge in schools. One teacher describes the limitation of being restricted to textbooks. He said:

What I have as a teacher is just the textbook. (Khaleel, a teacher in boy’s public school in Riyadh, interview, 4 March 2014)

The Ministry also plans the way teachers can deliver the material. In one example, Adel, a teacher at a private boys’ school in the Border Province, gave an example of how the centralised supervisory even plan the timetable of the delivery of the textbooks:

The education system is extremely bureaucratic. For example, at the beginning of the academic year, I felt that the students’ levels are lower than the textbook. So I give them two weeks preparation. When the supervisor from the supervision office came, he asked me which lessons I am now teaching. When I told him that we have not started yet and that I am still preparing my students for the new textbook, he described me as a lazy teacher. Am I a lazy teacher because I am giving students extra help! There is no freedom in teaching. (Adel, focus group discussion with teachers at a boys’ private school in the Border Province, 28 January 2014)

The central supervisory system goes further to include the ways teachers teach and what kind of questions to use:

Each textbook has another printed book that explains to teachers the teaching method that they ought to follow. (Salah, a teacher at a public boys’ school in Riyadh, focus group discussion, 29 December 2013)

If I use essay questions in my tests, the supervisor asks me why I have not used objective questions. If I use objective questions, the supervisor wonders why I did not use essay questions or my questions are easy, why it is not more difficult. (Suleiman, a teacher at a public boys’ school in Riyadh, interview, 30 December 2013)

The previous quotations from teachers illustrate how central learning limited their ability to be creative. Therefore, teachers seem powerless to be more active. When teachers find that textbooks are irrelevant to students, they have no choice other than to teach it, as that is what their learning evaluation comes from. However, in learning, one type of teaching and material cannot fit the needs of all students (Kameenui and Carnine 1998). One English teacher describes how she cannot respond to the variety of learners' needs in her class:

Teachers are restricted by textbooks. For example, now I am teaching English conservation for beginners' level. Even girls who have an advance level in English need to study these lessons. One day when I was teaching, I heard one girl laughing at the back of the classroom. I asked: Why are you laughing? She said 'I taught this lesson yesterday to my brother who studies in year 2 in the primary school'. I feel frustrated. Then I told girls that this is your curriculum, and we do not have any other choices. I cannot do anything. (Lubna, a teacher at a girls' private school in Riyadh, interview, 30 December 2013)

The previous example by Lubna, a teacher, and the response she gets from her students show how textbooks limit a teacher's ability to be creative. Lubna cannot respond to different needs in her classroom even though she is aware of the problem because she is constrained to specific material. Therefore, she tends to be passive. Doing what is required in the class material is irrespective of learners' needs. The challenge Lubna faces is to be creative, and this is the case for many other teachers, which has not been recognised at the Ministry level:

The Ministry has contracted teachers to deliver textbooks to students. They want textbooks to be in students' memories in specific time. Students need to empty this knowledge in exam papers to get their grades. What we are doing is charging then emptying students' memories. There is no practice that develops students' skills and perceptions. (Khalid, a policy-maker at the Ministry of Education's head office, interview, 21 January 2014)

The previous quotation recognises the task-oriented approach for teachers. The top-down approach for learning shapes learning to be teacher-centred approach. Their role is limited to enable students to comply with the central curriculum requirements. Nevertheless, to achieve the potential of students' education, teachers need to play a more active role. They need to be creative and to encourage students to think beyond some dimensions of the curriculum. They also need to enable students to think socially, economically, and environmentally about the issues they face. In addition, teachers need to show leadership to enable students to contribute to new knowledge that helps to regenerate and reconnect people to one another and to the land on which they all depend. This requires an open approach to cocreating knowledge and giving teachers more power over what has been taught. This would be a better contribution to the process of preparing good citizens (National Education Policy 1969).

Seeing learning through the eyes of students brings more understanding to how passive learning occurs. Through the eyes of students, passive learning happens as a result of students not being linked to some of the material they learn. Textbooks that have been developed centrally have little relation to students' lives. Students report that the issue of relevance made them passive and that they tend to memorise

some concepts and information without even understanding what it really means or to what it refers. Here students from different schools describe this issue:

- Bander: the problem with our textbooks is it not been linked to our lives. The biggest examples are from chemistry and physics. For example, I memories a physics law for the test but I do not even know how it relates to my life. In chemistry, I do not even know what my food composed of. Learning needs to be based on experiment and observation not based on memorisation. Now, I memories what I have learned and I write it down in exams.
- Tariq: Textbooks are isolated. It is isolated from our environment. There is no relationship between what we study and our environment here in our province. (Focus group discussion with students at a public boys' school in the Border Province, 2 February 2014)

Students in another school add:

- Ahmad: How can I understand something without seeing it? We just fill our notebooks with writing without understanding what we learn.
- Akram: We need to be linked to examples from our lives. (Focus group discussion with students at a private boys' school in Riyadh, 23 December 2013)

As students have mentioned above, through their eyes, passive learning occurs as they have little connection to what has been taught. They only receive information with limited opportunity for them to reflect on what they learn. Therefore, students approach the material they have through memorisation. They memorise it even if they do not understand what have been taught:

- Fawaz: We memorize ... memorize ... memorize for the test. If you ask me about any idea or information later after the test, rarely I could remember. (Focus group discussion with students at a public boys' school in the Border Province, Focus group discussion, 2 February 2014)
- Nawaf: Our system here is we study ... study ...study. After test everything deleted. This wrong. We need learning help us keep knowledge. (Focus group discussion with students at a private boys' school in Riyadh, 23 December 2013)

The previous quotations from students show passive learning in action. Lack of relevant education affects the way they construct knowledge and understanding. Their current approach tends to be temporary and does not last much time. Therefore, this education has limited impact on students' critical consciousness (Freire 1970). By contrast, relevant education opens many opportunities for dialogue and communication that helps students to go through what has been taught (Freire 1970; Giroux 2011; Wink 2011). It means students are able to pose problems and concerns from their life experience and the surrounding environment. If this aspect is missing, they lose proper understanding:

- Instead of rote learning which always just talking, we need discussion. Girls will understand more when they involve in the discussion. In this way, the student will find ideas by herself, not through the teacher. This is better education. (Munirah, a student at a girls' public school in Riyadh, focus group discussion, 23 February, 2014)

Munirah, a student, raises her concern about dialogue and discussion in their learning. Nevertheless, in the previous examples I have given through meeting students, it is evident they have limited opportunities for discussion and dialogue. Critical

learning rarely occurs when students cannot relate to what has been taught (Freire 1970, Giroux 2011, Wink 2011). Therefore, how can dialogue exist if the topic does not interest students or they cannot contribute to what they have learned? The critical learning that students demand cannot be fully captured when they have no option other than memorisation. Students need to be able to relate to what they learn because students learn better when they have a sense of belonging to what they have to learn. The more students can relate to what has been taught, the more they can engage in dialogue and communication (Freire 1970). Thus, relevant education could give students more opportunities to stimulate their imagination and their critical understanding (Nussbaum 2011) to prepare them for in-depth understanding of many issues they face.

The few opportunities students have to connect to their environment also raise concerns about education's potential to address many social and environmental challenges (Giroux 2011). To foster a sense of ecological citizenship (Dobson and Eckersley 2006), students need learning material that opens their eyes about many environmental challenges. In other words, they need action learning and more connections with the community.

The gap between students' perceptions and the material they study increases when textbooks are brought to them from the standard Western curriculum. According to the Ministry of Education (2011: 71), many of the textbooks are developed by international textbooks companies such as Pearson Longman, McGraw-Hill, Oxford University Press, and Macmillan. 'Our new textbooks such as chemistry and physics are translated from American textbooks' said Nawaf (a student at a private boys' school in Riyadh, focus group discussion, 23 December 2013). Therefore, students study some information and ideas that they have never seen in a way that affects the development of their critical consciousness (Freire 1970). Concepts sometimes are mere abstract ideas that students cannot easily understand or relate to. This issue of translated textbooks was recognised by teachers as they could not link students to many examples in the translated books:

Now I am teaching my students translated textbooks. The problem that most of the experiments cannot be found in our environment. For example, the book has exercise to take my students to the closest lake or river. All Saudi Arabia has no lakes nor river not only here in Riyadh. (Aliyah, a teacher at a girls' public school in Riyadh, Focus group Discussion, 17 February 2014)

Textbooks are cut and paste from European textbooks. We need the content to be linked to our environment. (Amjed, a teacher at a boys' private school in the Border Province, 27 January 2014)

Learning that is restricted to textbooks creates challenges for critical and collaborative learning. The top-down approach plays against other interactive learning approaches such as when students play the role of the teacher to make students transform knowledge and make meaning of what they learn (Freire 1970: 61). One student describes the lack of opportunity to play the teacher role to help them overcome passive forms of learning:

There is no way for a student to stand up and expound. Teacher only who expound and our role are to answer. (Akram, a student at a private boys' school in Riyadh, focus group discussion, 23 December 2013)

The issue of passive learning in Saudi schools has been recognised by many other studies (see, e.g. Al-Issa 2009; Kampman 2011; Alabdulkareem and Alshehri 2014; Alzahrani 2016). It also has been recognised by the Ministry itself. The current Minister of the Ministry of Education wrote a newspaper article about public education in Saudi Arabia. In the article, he recognised the issue of less active learning in schools. He wrote:

Teaching methods are still sinking into rote learning. The lecture style, in general, is predominance by the teacher talking most of the time, while the role of the students is listening. Then the student saves and writes down in the textbooks for the test. As a result, many students lacking personal skills based on communication and self-confidence and the ability to express and adapt to the changes and difficulties they will face in their lives. (Ahmed Al-Issa, Minister of the Ministry of Education, Al-Hayat Newspaper, 20 March 2016)

This recognition from the Minister about passive learning and its impact on students is consistent with what the study found. Also, this recognition from top management can be regarded as a positive indicator for change and a positive step from the Ministry to move forward on overcoming the impact of less active approaches to learning. However, through many responses I have received from officials in the Ministry, the focus is more about teaching methods. The official view seems to overlook many factors that have been discussed earlier through the eyes of teachers and the eyes of students, in particular the powerless teacher and the isolated student. The following quotations from two policy officers give examples of the way the Ministry approaches passive learning in schools as a teaching style:

In the last two years, the Ministry adopt active learning strategies as international experience to improve learning. (Hanan, a policy officer at Riyadh Education Department, interview, 16 December 2013)

Previously, learning was based on behavioural theory and interested in specific results. However, now in the era of openness of knowledge, we must be transmitted learning strategies to methods that give the learner self-education skills. Knowledge multiplies and the behavioural theory gives us only limited results in the way that students memories information and do not have the skills to apply it in any new life experience or problem. Learning inspired by constructivist theory help students to adapt to the era of knowledge explosion and dealing with various life skills. (Hashim, a policy officer at the education department in the Border Province, interview, 27 January, 2014)

One teacher challenges the way the Ministry deals with passive learning simply by asking teachers to use more interactive approaches:

The co-researcher: Why not you change the classical learning approach?

Lubna: We are starting using active learning strategies. However, textbooks restricted us and did not help. The textbooks do not help us to be creative. Even if we tried to use different teaching styles, all what have to teach need to be based on the textbook. (Lubna, a teacher at a girls' private school in Riyadh, interview, 30 December 2013)

The previous quotation shows that active learning cannot be fully captured in the current central learning system that forces one-way communication. From the critical systems thinking (CST) point of view, the Ministry needs to think of the context and the structure not only the learning process (McIntyre-Mills 2006). In other

words, the Ministry needs to ‘sweep in’ more important factors to enrich the understanding of learning issues in schools (Churchman 1979, McIntyre-Mills 2006). These factors are to include a more open approach to knowledge and relevant education. Then, teachers and students will have more opportunity to be active and creative. As Giroux (2011) argues, learning only from specific subjects ‘celebrates rote learning, [and] memorization’ (p. 9). Systems thinking to combat passive forms of education also includes classroom design. Classroom design and the layout of chairs in fixed rows tend to support one-way communication and can work against dialogue and interactive communication between teachers and learners and among learners.

### *Passive Learning and the Challenges for Critical Thinking*

Human development depends on citizens who are able to make informed decisions by themselves, that is, people who logically can investigate and analyse many ideas and arguments. Education plays a vital role in this process. It is education that cultivates thinking; it is not about ‘the passive assimilation of facts and cultural traditions’ (Nussbaum 2012: 18). Indeed, the previous discussion in the last section shows how learning functions in a way that makes students passive instead of learning that is based on dialogue and two-way communication. The last section discusses the implication of the central learning policy on pedagogical approach in schools. Through the eyes of teachers and students, central learning policy limits their opportunity for an active form of education. This sub-section will shed more light on the serious impact of passive learning on students’ capabilities for being critical and productive thinkers.

Education plays more opportunity in developing students when they can discuss ideas in a two-way communication. Depriving them from dialogue or posing problems means that students become domesticated to passive learning (Freire 1970). Students rely on the teacher to give them the information, and they write it down to memorise it, while active learning strategies are based on inductive and critical thinking:

The problem I have with students is they think learning is just memorising information, while if the students understand the idea, they will keep it more than if they just memorise it. (Waleed, a teacher at a public boys’ school in Riyadh. Interview, 30 December 2013)

The previous quotation highlights one implication on students’ capabilities for critical learning. In the current approach for learning, students become domesticated to passive learning, until they reach the point that their brain becomes like a memory device. They absorb facts and information without critical understanding:

Aysha: Students just memories answers without realizing what questions are about. I gave my students homework then we answer it in the class. In the exam, I have repeated the same exercise but after changing the order of questions. Students answer it wrong. They give answers according to the order in their homework.

Lina: One day I gave my students two exercises about 'force and acceleration law'. In the exam, I have changed the order. Students give the answer according to the order in their notebook. They just memories. (Focus group discussion with teachers at a private girls' school in Riyadh, 30 December, 2013)

The previous quotation shows how the capacity to get students to think critically has been affected. Many years of passive learning have stifled their creativity and their critical abilities. Heavy reliance on passive learning harms creative thinking and imagination capabilities (Nussbaum 2006, 2011). In other words, the process of learning to be a capable citizen in the future for the good of the country (National Education Policy 1969) has been highly affected. The impact of passive learning on critical awareness justifies Freire's (1970) argument about the importance of action learning and more opportunity for students to reflect on what they have learned. In particular, students need to challenge concepts and ideas to create critical thinking abilities. They need to be able to appreciate of how an area of concern can be understood from many different points of view (Churchman 1968; McIntyre-Mills 2006). This kind of understanding is vital when positioning young people in the global economy and digital world, in order for them to be able to appreciate and understand different arguments.

Another fundamental impact of passive learning is students grow up believing in themselves less. Students are highly dependent on teachers for learning. They assume that they themselves are unknowledgeable and wait for the teacher to fill their mind with information. Therefore, they believe less in themselves and accept what the teacher tells them without challenging ideas. The challenge to create independent thinkers is best illustrated by examples from the study's data and from my public education experience. I will start with my example. When I was in intermediate and high school, I used to find maths difficult to understand. My source of knowledge was my teacher. I did not believe in my ability to understand without my teacher's help. After I finished high school and entered university, maths was one of my subjects. As learning in the university was more independent, I spent many hours studying maths by myself. After a while, I discovered that maths was not as difficult as I expected. In fact, it was much easier than many of my topics in high school in which I needed to memorise hundreds of pages to pass exams. What I believe prevented me from reaching this conclusion for many years was the result of a learning practice that assumes students are unknowledgeable and cannot attain knowledge by themselves. This approach of learning also prevents many other students from reaching their intrinsic learning capabilities which, according to Nussbaum (2011), involve imagination and critical thinking (p. 33–4). The following examples from private and public schools show how I can relate my previous story to many students as a result of the central learning system:

- The researcher: Have you tried to reach the information by yourself?  
 Bakr: There is no way.  
 Researcher: If you read the textbook by your own will you understand?  
 Bakr: impossible. (Focus group discussion with students, in a private boys' school in the Border Province, 4 February 2014)



One teacher gave another example of how students are domesticated to be dependent learners. He said:

The problem now is that student's mentality is just for receiving. I'm trying to give them research but until now, they did not get the idea of independent learning as they need to go and search for the information by themselves. They want the result directly. To told them that  $1 + 1$  equals 2. (Yasser, a teacher at a public boys' school in Riyadh, focus group discussion, 29 December, 2013)

The previous quotations show challenges that face the process of developing well-informed citizens. The lack of independent learning shows how the central learning policy does not fully support learning for human development. The top-down approach makes students accept the idea that they have an inability to acquire knowledge directly. Therefore, they believe it is impossible to understand ideas and concepts directly by themselves. They are dependent learners in a way that makes building critical consciousness far more difficult (Freire 1970). Here one could imagine the challenge of achieving an education that advance students' capability to think critically. The capacity to get students to think strategically (Moser 1993; Kabeer 1994) is a key area to address through workbooks that require students to do specific tasks that teach critical thinking. This skill is necessary to equip students to achieve lifelong learning and to think socially and environmentally about the issues they face. This is important for the development of well-rounded people. From a human development perspective, it means students do not have the level of freedom for doing and being to achieve such goals (Sen 1999; Nussbaum 2011). The current system does not encourage students to become independent learners with the capability to address social and environment challenges. Their inability to do critical thinking hinders the process of education of good citizens that is central in the National Education Policy (1969).

Students need more opportunities to be independent learners, to reach conclusions by themselves. This is achieved through learning that gives students more freedom to be and do (Sen 1999; Nussbaum 2011). However, I would suggest this issue is more serious in private schools as a direct result of the less challenging learning environment. The widespread use of textbooks summaries (Section 5.3) and employment conditions for private school teachers (Section 5.6) means students have few opportunities even to build critical thinking capabilities:

Most students go to private schools expecting summaries and few pages. Six to five pages. If I gave them 32 pages, their brain stop from working. They cannot study 32 pages. Their parents also complaints; we have pay for them why they study this much. (Lubna, a teacher at a girls' private schools in Riyadh, interview, 30 December 2013)

From the previous quotation, students in private schools do not want the kind of learning that 'challenges the mind' (Nussbaum 2012: 18). They demand learning that helps them to achieve their instrumental goals. Therefore, students want ideas and information easy to memorise in the form of points and clauses. They do not want critical reading to reach conclusions:

Information in new textbooks is overlapping unlike the old one where we can find information easily. Before it was in the form of points and clauses, but now much text and we need

time to extract the idea from it. (Mazen, a student at a private boys' school in the Border Province, focus group discussion, 4 February 2014)

The demand for less challenging reading, as highlighted above, comes only from private schools. I have not heard such complaints in public schools. The following quotation from Amjed, a teacher at a private school, confirms the struggle his students face to understand new long texts. He said:

New textbooks are essays. Students need to make a big effort as possible to understand. They need to be patient to draw information. However, it is a small percentage, around 5%, of students who can do this much of effort. The majority want a quick piece of information. (Amjed, a teacher at a private boys' school in the Border Province, interview, 27 January 2014)

The demand for less content at private schools highlights a narrow focus on passing tests that are narrowly defined to enable students to do the minimum to pass with high grades. As will be discussed in more detail in Section (5.6), education privatisation limits the potential of education and increases the risk of capability failure among students.

## **Measuring Students' Achievement: The Lack of Standardised Measurement**

While the Ministry of Education controls learning through standardised textbooks and a supervision system, assessment, on the other hand, is completely up to teachers. Tests are made by teachers across public and private schools for boys and girls. Nasser, a teacher at a public boy's school in the Border Province, comments on the absence of national assessment measures:

The touchstone of the education process is in the classroom; however, no one except the teacher knows what happen. I do not like we just talk about trustworthiness, piety and, conscience. I want a system so that the Ministry knows whose teacher is doing their job or not. (Focus group discussion with teachers at a public boys' school in the Border Province, 29 January 2014)

Adel, a teacher, comments on the imperfect process of evaluation (Stiglitz et al. 2010: 2) and its impact on students' learning. He says:

In my opinion, there is no quality of education without strong assessments. Now, we let students without evaluation until the last two years in high school. From primary level, students have been pushed forward without standard measurement. Then in high school, we told students it is a matter of life to get higher GPA. Why we leave students studying many years without evaluation. Sometimes I face students who even could not tell the real difference between liquids and solid state. Some other students have very poor grammars and made mistakes even when they write their names. The education system should have three core evaluations that cover the three level of schooling; primary, intermediate, and secondary level (Focus group discussion with teachers at a boys' private school in the Border Province, 28 January 2014).

In the absence of assessment standards as described in the previous quotations, students receive grades which usually do not reflect their academic abilities. Alzamil (2015), after evaluating the academic performance of 7256 male students and 4606 female students at King Saud University in Riyadh, found less accuracy of grade point average (GPA) in high school compared to university academic performance. In 2016, the Education Commission of the State in Saudi Consultative Assembly, the 'Shura Council', recognised that there is a continuous big gap between high scores that students achieve in schools and their real academic level (Riyadh Newspaper, 23 January 2016). Participants from schools also mentioned that the excellence of grades does not reveal the truth about students' learning:

Some students take full marks in their schools, but after they graduated from high school, they get bad results in General Aptitudes Tests. (Fatmah, a teacher at a public girls' school in the Border Province, interview, 3 February 2014)

Students take full marks on exam paper, but even students themselves do not believe these results reflect their real abilities. (Lina, a teacher at a private girls' school in the Riyadh, focus group discussion, 30 December, 2013)

The Ministry Strategic Plan (2013) recognises the lack of standard measurement across schools to evaluate outcomes. The plan points out the lack of standard measurement which affects the comparison of outcomes to inputs (p. 107). A similar finding of how the inconsistency of measuring education affects students' capabilities is also evident by AlSadaawi (2010) and Alhareth and Dighrir (2014). They found that the lack of national standards in the Saudi public education results in lower achievement among students. This finding is also broadly consistent with Drèze and Sen's (2013) work in India. In assessing education capability, they found that the absence of standard tests translated into a large number of Indian students who reached an advance level in their basic education without adequate abilities (2013: 138).

Policy-makers acknowledge the gap between what they want and what has been achieved. For example, Thamer, a policy-maker in the Ministry, recognises the problem of weak academic skills among students. He gives an example of literacy skills and the challenge the Ministry of Education faces:

We have a major problem in the weakness of reading and writing. This promotes the formation of committee from education departments that include teachers from all different school levels. (Thamer, a policy-maker at the Ministry of Education's head office, interview, 15 December, 2013)

Khalid, a policy-maker at the Ministry, also makes similar comments:

Our international results are not satisfactory at all. The proof is that the results of our students in The Trends in International Mathematics and Science Study (TIMSS) or other tests like (Education Olympic) were very low. (Khalid, a policy-maker at the Ministry of Education's head office, interview, 21 January 2014)

With the absence of a national assessment standard, teachers face pressure to give high grades regardless of students' academic abilities. The pressure is motivated by grades being important not only for students but also for teachers and their schools. If a high number of students fail their exams, this affects teachers' evaluations and

schools' rankings and reputation. Reem, a teacher at a public girls' school, describes the pressure teachers face in evaluating students:

The Ministry's evaluation system is focusing on motivating students to succeed in academic years. School's evaluation is on this basis. So, the principal put pressure on us to give good grades to all students. It is impossible. There are individual differences. If a girl fails, she fails because she did not achieve a successful level. However, some teachers let all student pass whether they deserve it or not. So their job performance will not be affected. This is the most factors that negatively affecting education in this country. (Interview, 3 February, 2014)

Mansour, a teacher at public boys' school in the Border Province, agrees with Reem in a way, as he classifies teachers into two types in response to pressure for higher grades. According to Mansour:

Teachers in general fall in two categories. In the first category, they are the frustrated. They are lazy and do not give students homework. To hide their failure, they give all students good grades. Students who study with those teachers used to achieve higher grades regardless of their lower achievement. The second category is the sincere teachers. They give students what they deserve. However, sincere teachers face pressures from the administration, their colleagues and families. Sometimes they respond to the pressure and give students higher grades than what they deserve. The result, students, used to achieve higher than what they deserve, and excellence in grades does not reflect their academic ability. (Interview, 3 February 2014)

As teachers have highlighted in the previous quotations, students' capabilities for good education is affected. Lack of standard tests not only harms critical abilities, but it also harms basic literacy and numeracy skills:

Mariam: Some students reach high school while they have poor reading and writing skills.  
 Aliyah: I have some texts for reading in my subject. Some girls even could not read well. Imagine in the last year in high school. (Focus group discussion with teachers at a girls' public school in Riyadh, 17 February 2014)

With the dependence of evaluation on teachers, employment conditions play a significant role in the integrity of the evaluation process. The study found that there is significant difference between teachers in public schools and teachers in private schools in response to pressure for high grades for students. In public schools where the teacher is employed by the public sector, teachers cannot easily be pressured by students and school's administrations to the same degree as a private school teacher. As a result, the research has found that paradoxically, the public school system achieves higher outcomes in terms of independent evaluation criteria than private schools. Therefore, students achieve better outcomes in public schools. This finding, which highlights the influence of job security on teacher's evaluations, is also evident in the UNESCO Global Monitoring Report for 2009. The report highlights that temporary employment contracts affect teacher's performances and negatively impacts learning outcomes (2009: 173). More about employment conditions in private schools and its implication on learning evaluation is discussed in detail in the next section.

## Employment Conditions: The Implication on Learning and Evaluation

Employment policies vary between public and private schools. In public schools, the Ministry of Education follows a centralised employment policy. The Ministry of Education in collaboration with the Ministry of Civil Service recruits teachers and administrators from university graduates. Public school teachers usually enjoy the benefit of working in the public sector until retirement age. Besides job security and long-term employment, a public school teacher has a higher salary compared to their peers in private schools.

On the other hand, there is a less centralised employment policy imposed by the Ministry for private schools. Private schools have more autonomy in recruiting and selecting their teachers. Employment in private schools is based on temporary recruitment in the form of yearly contracts. In this way, private schools rely on temporary contracts with teachers, and the school determines salaries that do not go beneath the formal limit.<sup>3</sup> Also, private schools have the right to end a contract or reject renewal when the contract expires. Maha, a head of a private girls' school in Riyadh, explains how the employment policy for private schools works:

Unlike public schools, as a private school, we have more space to decide which teacher to recruit and which level she can teach. According to teacher's character, we decide she can be good at the kindergarten level or maybe at the high school level. (Interview, 2 January, 2014)

Given the different employment conditions, the study found significant variation in teacher's abilities to give transparent evaluations. In public schools where the teacher is employed by the public sector, teachers face less pressure to give higher grades. It has a positive impact here on more independent evaluation. The worst scenario for public school teachers is that if he or she gives students lower grades, this results in teacher getting a lower evaluation in their Job Performance Report:

My job performance last year was low because of the academic level of my students. Nevertheless, I do not care. (Reem, a teacher at public girls' school in the Border Province, interview, 3 February, 2014)

As Reem describes in the previous quotation, public school teachers have employment conditions that make them less vulnerable to pressure to give higher grades. By contrast, teachers in private schools are bound by their employment conditions. The contractual conditions of private school teachers affect the integrity of their teacher evaluation. If students fail to get the grades they want, it might affect the teacher's career. Two teachers in different private schools describe how profits threaten teachers' careers:

Honestly, one teacher has been told that the owner of the school values money as his main concern. That is if students obtain lower grades, he could be fired. This really creates job security issue. (Moussa, a teacher at a boys' private school in Riyadh, focus group discussion, 1 January 2014)

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<sup>3</sup>In 2011 the Ministry of Education set a minimum wage for teachers in private school at 5000 SR per month (1 US dollar equals 3.75 Saudi riyal).

Here, I am working in a profit organisation which means profits first then anything else follows. (Ismail, a teacher in a private boys' school in the Border Province, Interview, 27 January, 2014)

The employment conditions highlighted previously negatively affect teachers' work at private schools. It means private school teachers set examinations and teach in a different organisational culture to their peers in public schools. Similar evidence has been highlighted in the UNESCO Global Monitoring Report for 2009. The report points out that employment conditions play a crucial role in the performance of teachers. The evidence is from different countries such as Togo, West Africa, and Cameroon, which suggest contract teachers face employment security that affects their ability to give high-quality education (p. 173).

One example from my fieldwork could explain the difference between teachers in private and public schools and the impact of temporary contracts on their performance. When I entered a private boys' school for the first time, I saw a student shout loudly at his teacher. The teacher was standing in front of him without any reaction. The teacher was embarrassed when I saw him in that situation. This was the opposite in public schools. I had not noticed disrespectful behaviour from students to their teachers when I visited public schools. Teachers in public schools seem to be more powerful. Meeting teachers in private schools confirmed my observations:

Teachers in private schools are missing the similar power to what teachers in public schools have. (Marwan, focus group discussion with teachers at a private boys' school in Riyadh, 1 January 2014)

Salem: We do not have power! No powers to correct students' behaviours nor to maintain discipline in the classroom so students can respond to our teaching.

The researcher: Is this issue affects students' future?

Salem: Not all the students some of the students. The dominant phenomenon in classrooms is some student do not respond to the teacher. They do not care about him. There is no respect for the teacher. Where some students are excellent. (Salem, a teacher at a private boys' school in the Border Province, focus group discussion, 28 January, 2014)

The implication of the lower power of private school teachers translated to lower control over the outcomes. The lower control over the outcomes takes many forms. The first way is that teachers are promoted to give less content and higher grades to satisfy students. As discussed previously, teachers and student report the widespread use of textbook summaries in private schools. As a result of their employment, a private school teacher is encouraged to do so. This situation of dumbing down learning in schools is best described by Huda, a teacher at girls' private school. She highlighted that they are forced to summarise textbooks:

The co-researcher: Do you think that your school prepares students well for the future?

Huda: Look, I will be honest with you. It is rare in private schools. Some private schools look for profit; other few elite private schools look to educate students. Schools like our school have the goal of profit. Teachers here do their best to teach very well, and 95% have training courses. However, at the end of the term, we give students 5 to 6 pages to study.

- The co-researcher: are you forced to do this?  
 Huda: Yes, we are forced.  
 The co-researcher: But students will graduate know nothing.  
 Huda: It is okay for them. The most important thing they are looking for is to get certificates.  
 The co-researcher: But this will create a failed generation.  
 Huda: Yes of course.  
 The co-researcher: Does the school administration knows about this?  
 Huda: Of course. I told you before this school is a profit organisation.  
 (Interview, 30 December 2013)

The other way of limiting the impact of students' learning in private schools is when teachers are encouraged to turn a blind eye against student cheating. This situation is reported by students and teachers in private schools. They also report that this is not common in public schools:

In the final exam at the end of the school year there are some students who cheat, but the exam invigilator does nothing to them. If this happened in a public school, the observer would prevent them from continuing, and this results in failing the exam as a punishment. (Ahmad, a student at a private boys' school in Riyadh, focus group discussion, 23 December 2013)

Schools are not free of risk for teachers, especially in private schools. As we can see and hear now and in the last few years, if a teacher gives a student lower grade or does not give him the chance to cheat he attacked him with a knife or a firearm. This is not appropriate for the teacher (Ashraf, a teacher at a private boys' school in Riyadh, focus group discussion, 1 January 2014).

As power and profit affects teachers' evaluations, students and their families believe paying for their education entitles them to achieve success in terms of achieving grades without spending much effort.

'Parents believe that they have pay higher fees so their children deserve getting higher grades', says Marawan, a teacher at a private boys' school in Riyadh (Focus group discussion, 1 January, 2014).

One survey among Saudi families finds that 92% believe that private schools give higher grades to students than public schools (Asharq Al-Awsat Newspaper, 29 May 2011). One private school teacher confirms this finding:

If the students went to public school they would get bad grades. (Ibrahim, a teacher at a private boys' school in Riyadh, focus group discussion, 1 January 2014)

Meeting students confirms what teachers report about why some of them prefer private education over free public schooling. Students were frank about their reasons for choosing private education. The first private school I visited was located near another public school. The public school had a bigger campus and free education. So my first question to students was why they were attending a private school and not the public school located nearby. Two students answered:

Hamza: Public schools are harder places to achieve higher grades. They give you what you deserve, but here in a private school, it is easier.  
 Ahmad adds:

There are some students who are absent many times, but their GPA at the end of the year is still high around 93%. Students who are in public school who attend all school days cannot get such higher scores (Focus group discussion with students at a boys' private school in Riyadh, 23 December 2013).

On the other hand, students in public schools complain teachers are being restricted:

There are some teachers even I attend every school day and do all my homework; they will not give me the grades I deserve. When I asked them why? They told me, you need to work harder. (Abeer, a student at a girls' public school in Riyadh, focus group, 23 February 2014)

The easy way to get grades in private schools is quite appealing to students, especially at high school. This is because academic scores are not only important for success; they are also important for further education. In Riyadh, some students mentioned in focus group discussions that they have studied intermediate school in public school and moved to a private school to complete their secondary education. In the Border Province, the head of a boys' private school told me that they have a long waiting list especially for the final year in high school. While I was waiting in his office, a number of parents and students from other public schools came to register, and he apologised to them as the school did not have places for them. In the girls' private school in the Border Province, one teacher said:

The English language lab can be used by up to 15 students. I have no problem with students from the intermediate level because their number is few, but with high school students, I have to divide them into two groups. (Latifah, Interview, January, 2014)

Furthermore, the official data from the Ministry of Education indicates that the number of students in high schools has more than doubled compared to the number of students in intermediate schools even though the number of private high schools is lower than schools in the intermediate level. See Table 12.4.

It is apparent from Table 12.4 that the number of students is more than double in high school. This table also reveals how the number of female students is very low compared with male students. This percentage does not reflect the number of female students in public education which is higher than male students. A similar note has been made by Al-Seghayer (2011, cited in Deraney and Abdelsalam 2012) that the number of male students in private schools is almost twice the number of female students. This inequality of private education may reflect gender roles (Kabeer 1994) in the wider community and how parents are willing to pay more money for their sons to guarantee higher opportunities for them in higher education.

When the issue of learning evaluation in private schools emerged during the fieldwork, I raised this concern with the head of the private education office in the

**Table 12.4** Number of students in private schools at intermediate and high schools levels

School level	Gender	Number of schools	Total
Intermediate schools	Male	506	65,312
	Female	430	33,753
High schools	Male	485	154,053
	Female	356	71,178

Source: Ministry of Education (2014)



education department in the Border Province. He recognised the issue in high school, but at the same time, he refused to accept the claim at the primary and intermediate levels. He said:

This may be true in high schools. However, in the primary and intermediate why students are looking for grades. This means it is not only for grades students go to private schools. (Rashed, a policy officer at the education department in the Border Provinces, interview, 28 January 2014)

What Rashed believes, according to the previous quotation, is there are many reasons that influence parents' decisions about sending their children to private schools other than grades. However, reported quotations from teachers and students, and secondary data about the number of students in private high schools, suggest that the less transparent system of learning evaluation is the most significant factor. One teacher comments on how the less transparent system of learning evaluation in private schools attracts many students:

The biggest proof in our school is we have a very large number of students in high school compared to the intermediate level' said Huda, a teacher in a girls' private school in Riyadh.

She adds:

Why families choose private education for their children in high school? Because they want them to succeed and get higher grades. (Interview, 30 December 2013)

As students in private high schools are almost guaranteed higher marks, they pay less attention to their learning and focus on something else they believe is more important:

In private schools, grades are almost guaranteed. Our big focus is on aptitude test. (Youssef, focus group discussion with students at a boys' private school in Riyadh, 23 December 2013)

As Youssef, a student at a private school, has highlighted, their focus is on the General Achievement Test (GAT)<sup>4</sup> rather than learning in their school. The General Achievement Test (GAT) is weighted 70% for university admission; the rest is in school grades. Here private schools help students by practicing the General Achievement Test (GAT) regularly. This practice creates many benefits for private schools. It can attract more students and at the same time bring the name of the school up in the school rankings.<sup>5</sup> Therefore, the reputation of the school will be positively affected. Public schools are less interested in this practice as more students do not mean more income for the school. Maha, a head of a private girls' school, explains the way they help their students to achieve better results in General Achievement Test (GAT). She says:

I want my students to be successful in aptitude tests so our outcomes and our reputation enhanced.

She also adds:

We raise our students' awareness of how to get a high score in aptitude tests. Lessons for each level. We add more lessons so they can achieve excellent results. (Maha, a head of a private girls' school in Riyadh, interview, 2 January 2014)

<sup>4</sup>General Achievement Test (GAT) is an aptitude test students perform after they finish high school.

<sup>5</sup>The National Centre for Assessment in Higher Education updates schools' ranking according to students' results regularly in its website (<http://www.qiyas.sa/Pages/default.aspx>).

Students and teachers in private schools report that this practice of teaching the General Achievement Test is at the cost of learning. A student in one private school says:

Youssef: To get the university, my results in schools is weighted for 30%. The rest is based on General Achievement Test (GAT). Now, I am studying for the Aptitudes Tests more than the school curriculum because there are books that teach you how to succeed in aptitude tests. I am less dependent on my school learning. All my focus on the aptitudes tests. If I achieved 90% or above, I can enter the Faculty of Medicine. If less, I will go to lower options, for example. (Focus group discussion, 23 December 2013)

Ismail, a teacher in another private school in the Border Province, describes this negative impact on learning in private schools:

Ismail: Education hit hard when the Ministry announce that the high school exams is from schools.<sup>6</sup> For example, in the final year of high school, you found that student who graduates from good schools and worked hard get lower scores. By contrast, students at bad schools give their students very high scores.

He also adds:

Look, smart parents take their children to a private school so their children guarantee very high results. Here their children just focus on learning how to succeed in Achievement Tests. They just study Achievement Tests so they get higher results in National Achievement Tests and take the opportunities from other students who work hard studying school curriculum. This is how it works, and I have many examples. Students are absent for weeks to study National Achievement Tests at the expense of their learning at schools. (Interview, 27 January 2014)

The previous quotations show that information manipulation in private schools also includes aptitude tests. Information manipulation produces unequal opportunities for higher education between students in private schools and their peers in public schools. Also, the lesser amount of attention students give to learning in private schools suggests they will face more serious challenges in achieving the intrinsic role of education (Sen 1999). Indeed, the previous discussion in this section and the previous sections in this chapter suggest students at private schools face more challenges to be critical and become productive thinkers. The next section compares the study results from private schools with other studies in Saudi Arabia and other countries.

### ***The Cost of Education Privatisation***

The previous discussion in the last section highlighted how the employment conditions in private schools and manipulation of results are problematic. The easy way for assessment manipulation at private schools suggests that students in private

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<sup>6</sup>Few years ago, all students in the final year of high school performed national assessment test. Questions were developed and graded centrally. This was the case when I was a student. The final exam was a fateful step in my studies. I recall now whole year of preparation and great amount of worry and stress. In 2007, the Ministry cancelled the national tests which created a mixed response among students, families, and educators at that time.

schools face more risk of learning capability failure (Sen 1999; Nussbaum 2011). This capability failure has a direct result to their personal futures and the common good for the country of having well-educated citizens.

The quality of education in private schools is rarely addressed in previous research. There is a lack of studies that compare public to private schools in Saudi Arabia. This lack of research also has been highlighted by Deraney and Abdelsalam (2012: 3). However, the limited work on public versus private schools produces similar results of what the study found. Al-Rashed (2004) compares achievement in science between students in public schools and students in private schools in Saudi schools at the intermediate level. He found that students in public schools have higher skills in information application and inductive skills than their counterparts in private schools. A recent study by Deraney and Abdelsalam (2012) showed an overall positive impact of public schooling compared to private schools. The study compared academic performance of female high school graduate students in a private university in Saudi Arabia. They found that public school students have overall better academic performance and exceed students who have graduated from private schools.

This study and previous studies suggest that learning in private schools has become the victim of education privatisation. Boys and girls trade off the intrinsic value of education (Sen 1999) in return for instrumental goals in terms of certificates. The cost is their learning capabilities, learning that is essential for the process of the well-informed citizen. In particular, it costs them reasoning as a critical thinking capability (Nussbaum 2011). The employment conditions and manipulation of results are problematic and do not result in well-rounded students.

Results from comparing the academic performance of public school students to private schools' students are not consistent with other studies in other countries. In Australia, the work of Cobbold (2015) reviews previous studies that compare public to private schools and found that most studies show evidence of better performance in private school students. Jimenez et al. (1991) compare public and private high schools in Colombia, the Dominican Republic, the Philippines, Tanzania, and Thailand. The results showed that students from private schools outperform their peers in public schools. Another study from Indonesia by Bedi and Garg (2000) involved graduates from public and private secondary schools. They found a positive private school effect on their graduates in the labour market compared to public school graduates. In the United States, Bryk et al. (1993) found similar results. Their 10-year study on private Catholic high school demonstrates that private schools achieve better outcomes compared to public schools.

The previous studies show that the results from comparing private schools with public schools in Saudi Arabia do not support much of the existing international evidence. It shows the limited success of the potential private education can play in advancing students capabilities similar to other countries such as Australia and the United States (Cobbold 2015; Bryk et al. 1993). To understand this difference, critical systems thinking (CST) suggests locating the issue in its context (McIntyre-Mills 2006). The context of private education in Saudi Arabia emphasises grades success in exams rather than lifelong learning. Therefore, students enrol in private

schools due to the pressure of achieving higher grades. The demand for better outcomes strongly limits the potential of private education. This context is also influenced by internal factors. Employment conditions in private schools jeopardise the integrity of evaluation and do not support the process of cultivating lifelong learning capabilities.

Results from private schools also raise concerns about policy and governance standards. To achieve ‘accountable systems of educational governance and management’ (UNESCO 2000: 19), the policy and governance aspects should provide better accountability and ensure that the staffing conditions of private schools do not jeopardise the integrity of the evaluation system. The Ministry needs to set up transparent assessment across schools in the public and private system for both genders. Therefore, equitable learning outcomes could be obtained across schools.

### **Strengths, Weaknesses, Opportunities, and Threats: SWOT Analysis for the Central Learning Policy**

The central learning policy plays a critical role in shaping students’ futures. In particular, as discussed earlier, the central policy plays an important role in the four key challenges that face boys and girls in achieving their learning goals. Firstly, it shapes the way learning is measured in schools. Learning measurements lack rewarding students’ progress in many aspects. Learning evaluation focuses on the standard curriculum and does not reward many other formal and informal opportunities. One important implication is the lack of reading among students. Students deprived of building reading habits as part of their learning evaluation do not appreciate wider reading and focus only on standard textbooks. The second role central learning policy plays is by creating pedagogical challenges in the classroom. The top-down approach to learning creates an environment for passive learning where teachers’ roles are to pass on knowledge and for students to accept it without critical understanding. The top-down approach to learning also limits opportunities for students to test out ideas in a critical way that informs understanding (Churchman 1971; Nussbaum 2011). The other aspect is the lack of standardised assessment across schools. This limitation means employment conditions plays an important role where teachers in private schools face more pressure to teach less content and give higher grades.

In Table 12.5, I discuss in details strengths, weaknesses, opportunities, and threats (SWOT) for the central learning policy. The analysis looks at internal factors (strengths and weaknesses). It also looks to external factors (opportunities and threats). The purpose of this analysis is to enrich our understanding about ‘to what extent are students able to achieve their learning capabilities?’

The previous analysis highlighted a number of internal weaknesses and strengths that the Ministry of Education has more control over. The Ministry could enhance the role of central learning policy by working on its strengths and overcoming its

**Table 12.5** Strengths, weaknesses, opportunities, and threats analysis for central learning policy

Strengths, weaknesses, opportunities, and threats: SWOT analysis for Saudi public education
<i>Strengths</i>
<ul style="list-style-type: none"> <li>• The ministry prints free textbooks for private and public schools. These textbooks are developed nationally and internationally according to learning standards that make sure students learn key subjects</li> <li>• Central learning policy mainstreams opportunities for boys and girls. It ensures similar subjects and regulations to make sure no region or specific school is left behind. The mainstream approach to learning is to some extent similar to the 'no child left behind Act' in the United States that supports standard learning across schools</li> <li>• The Ministry of Education as part of the central learning policy provides professional development for teachers, teaching and learning aids, and supervision. This reflects a strong commitment to advance learning in schools</li> <li>• The central supervisory system could be used to implement new learning initiatives across schools</li> <li>• I have perceived strong commitment for change among policy-makers and policy officers and in schools. This commitment could enhance the central learning policy role if the ministry adopts a more inclusive approach</li> </ul>
<i>Weaknesses</i>
<ul style="list-style-type: none"> <li>• The centralised learning policy provides less opportunity for stakeholders to have input in the process, especially teachers and students. Central learning policy needs to be inclusive and participatory so that the service users (students) and providers (teachers) are included at all stages of the process</li> <li>• Limited learning evaluation does not include many skills. Evaluation needs to address more integrated ways of measuring learning progress (Stiglitz et al. 2010). It needs to include a variety of integrated measurements that appreciate the instrumental and intrinsic role of education in students' current and future lives. The grading system needs to be more responsive to a range of capabilities. It needs to measure both quantitative outputs and qualitative outcomes, in order to foster the wellbeing of students and future generations. Also, centralised grading systems should reward creative teaching and learning that goes beyond the limits of the curriculum and reward critical engagement that fosters lifelong learning capabilities. This could supplement the more traditional grading system and could be used to encourage students to address wider areas of concern such as building an awareness of social and environmental rights and responsibilities</li> <li>• Learning in school is constrained only to the national standard textbook. This control over knowledge limits students' opportunities for more independent learning and developing critical consciousness (Freire 1970; Kincheloe 2008). Learning from specific material that is developed centrally also may lead to issues of relevance, and students tend to memorise concepts and ideas that do not allow them to reflect critically on what they have learned. Students need access to a wider body of knowledge that links students to their culture and creates a learning environment for dialogue and problem posing (Freire 1970; Giroux 2011; Wink 2011)</li> <li>• There is a tendency among officials in the ministry to narrowly perceive passive learning as an issue around teaching styles. Policy around teaching methods could be useful if it includes more teaching and learning autonomy for teachers and students. Teaching and learning autonomy could be used to overcome the issue of relevant education and create more opportunity for discussion and dialogue in the classroom instead of the current one-way communication practice from teachers</li> </ul>

(continued)

**Table 12.5** (continued)

Strengths, weaknesses, opportunities, and threats: SWOT analysis for Saudi public education
<ul style="list-style-type: none"> <li>• Lack of standard assessments across schools could lead to less objective evaluations. The potential for less transparent assessment increases in private schools. Emphasis on profit and on keeping the numbers up means that students get the advantage of higher grades at the expense of their actual achievement. The ministry needs to work on developing more transparent standard assessment across schools and to ensure that the staffing conditions of private schools do not jeopardise the integrity of the evaluation system</li> <li>• Teacher's employment in private schools plays a big role in the transparency of learning assessment in schools. The employment conditions and manipulation of results are problematic and do not result in well-rounded students. The ministry needs to improve employment conditions for private school teachers to address staff wellbeing and the quality of education</li> </ul>
<i>Opportunities</i>
<ul style="list-style-type: none"> <li>• Saudi Arabia has diverse cultures across different provinces. The central learning policy should appreciate diversity and should encourage diverse cultural groups to support their social and natural environment. Each specific culture has a particular understanding of the local environment and how to respond to that environment. That diversity is enriching, and education could be used to link students to their learning and the environment in a way that enhances learning and at the same time builds on efforts for a more sustainable future. Relevant education could be used to build an economy that does not exploit the natural environment and to find ways to protect the environment and appreciate different ways of knowing about plants and animals and how to survive in a very dry climate, in particular learning about the management of seed diversity and the management of water that is relevant for life in an arid environment. The Saudi education system needs to enable more interaction and agency in the classroom through workbooks that foster participation by the students and teachers</li> <li>• Advances in technology could be used in creating a learning community and connecting with communities that are increasingly diverse. Also, better use of digital information technology could enhance students' opportunities for more open learning, learning at their own pace, discovering new ideas, and linking up with students in different parts of the Saudi provinces. Education policies should appreciate the digital era by thinking about what has been taught and how it has been taught</li> <li>• Saudi Arabia has achieved good progress in the last 20 years in terms of economic development. The opportunity for increased income needs to be directed to sustainable development and developing education policies that emphasise on graduating well-rounded students</li> <li>• The international agenda places education central to the movement towards a more sustainable future. It is expected that the new sustainable development agenda (sustainable development goals) by 2030 will impact positive changes in education policies to respond to increased environmental challenges</li> <li>• Strong commitment from the government to fund learning projects. Funding opportunities could enhance the probability of education policy success if it is used properly to address different needs for students through a more inclusive approach.</li> <li>• Opportunities to learn from the best practice internationally. Advances in technology and communication open more channels for learning from best practices in learning and learning policies</li> </ul>

(continued)

**Table 12.5** (continued)

Strengths, weaknesses, opportunities, and threats: SWOT analysis for Saudi public education
<i>Threats</i>
<ul style="list-style-type: none"> <li>• Saudi Arabia in the last 2 years has started facing a fiscal deficit. The deficit was mainly because of the fall in oil prices. In 2015 it reached 97.9 billion US dollars, and the estimated deficit for 2016 is around 87 billion US dollars (Ministry of Finance 2016). Government budget cuts could affect many central learning projects such as free textbooks or partnerships with international textbook developers</li> <li>• The increased number of international schools is associated with many enrolments from Saudi citizens. The number of Saudi students in international schools jumped from 5% in the last few years to reach 30% in 2014 (Makkah Newspaper, 22 October 2014). Families may choose international schools looking for better learning opportunities for their children. The central learning policy needs to represent learning needs from the community and improve education quality to regain more confidence from students' families. The increased number of Saudi students in international schools also may create challenges for integrating the new generation, as the international schools do not teach Arabic language and Saudi history at the same level as private and public schools</li> <li>• Education policy works in a context where education is perceived more as an instrument for employment and economic growth. (This context creates more challenges for the process of preparing students to be a good citizens in the future (National Education Policy 1969)</li> <li>• Widespread use of technology could have a negative impact on learning in schools. It could mean less impact of public education on the digital generation. This challenge puts pressure on policy-makers to rethink what has been taught and how it has been taught. The advances in information and communication technology should be celebrated in schools. The education system needs to be agile and innovative to respond to the pressure of increased and diverse ways of knowing in the new information age</li> </ul>

weaknesses. Overcoming weaknesses can improve students' learning capabilities and reflect positively on the outcomes. For example, instead of measuring learning only from textbooks, learning measurement needs to reward creative teaching and learning that goes beyond the limits of textbooks. Broadening the view to measuring learning in schools could also be used to advance other skills such as communication, problem-solving, and other creative and critical thinking skills. Active forms of education could be achieved through relevant education and giving teachers and learners more autonomy to be creative. The standard assessment could be used to enhance the chance for more transparent assessment across schools for both genders. Also, it could enhance employment conditions for private school teachers for their wellbeing and a more quality education.

## School Design

Students go to schools to be better equipped for the future. Part of their development is to play and laugh. Children need to enjoy their childhood and create life skills. Therefore, it is crucial for schools to work in improving the potential of schooling

by providing space and equipment that helps students to develop their life skills. School design plays an important role in advancing human development in schools. However, through my observation and from what participants' report, the current school design limits the potential for education for human development. School design is currently designed to support the narrow functional view of education. School design in Saudi Arabia focusses more on learning in the classroom. Usually, there is a limited space for students to run, to play, and to enjoy more social and physical activities (Ministry of Education 2011: 26, 2013: 107). The following quotation from one policy-maker describes the limitation schools face in terms of the way it has been designed:

Our schools do not help in achieving education goals. School buildings can help students to develop psychological and social aspects of their lives. The school design needs to take into account the psychological pressure that students face. It is necessary that school buildings have a gym, a prayer room, and a theatre. Our schools have high school walls, while schools in other countries such as the United States and Australia, the school have no walls, so students have more freedom to move. (Hassan, a policy-maker at the Ministry of Education's head office, interview, 11 December 2013)

Figures 12.6 and 12.7 also show the limitations of school's design described in the previous quotation.

The issue of school design was also raised in my second visit to the field in January 2016. During the focus group discussion with policy-makers in the Ministry of Education's head office, Abdullah recognises the issue of school design in public schools. He said:

The schools described as government buildings in actual fact have been designed in a way that does not take into account students' needs, for example, a child's right to play. Our buildings do not have enough space and equipment for play. Even though some schools have an open yard, the hot weather in our country prevents students from using its benefits. The solutions include building multi-purpose halls. (Abdullah, a policy-maker at the Ministry of Education's head office, focus group discussion, 5 January 2016)

Girls face more challenges in terms of school design. As discussed earlier, girls lag behind in terms of play and physical education. One implication is that their school



**Fig. 12.6** Closed school design. Source: Ministry of Education (2011: 110)





**Fig. 12.7** Small hall for school's activities. Source: Ministry of Education (2011: 23)

designs lack a sports field or school gym. This means education in girls' schools is limited to the classroom with some space in the school hall. Girls almost have no place other than the school halls to play or to socialise. School design limits girls' time to develop personal agency through play and bodily health (Nussbaum 2011). One female teacher best describes the limitations of girls' schools design:

Our building needs to have a big hall and nice view so girls enjoy and relax. However, what we have are small spaces for everything. Small prayer room. No play room. Girls come to school and should have sports to develop physical energy and health. (Hayfa, a teacher at a public girls' school in the Border Province, focus group discussion, 3 February 2014)

Despite the limitation on school design in public and private schools, there are some variations. For public schools, the Ministry of Education has a central department that is responsible for building public schools for boys and girls across the country. The centralisation in terms of building public schools means one finds similar school buildings in all the different provinces. The central department for school building applies similar designs for boys' schools and other designs for girls.

Centralisation in building public schools is the opposite of private education. For private schools, one can find big, medium, and small schools. However, the number of big private schools is very few. For example, in Riyadh City, which has 33.3% of private schools in the country, most of the schools are in small and medium buildings, and 70% of these schools are in leased buildings (Riyadh Chamber of Commerce 2011: 11 and 73). It is quite interesting that most of the private schools do not exceed the limitation on the way schools are designed. Sami, a policy-maker in the Ministry's head office, acknowledges that most of the private schools do not

have good school buildings that can be used to help students to achieve their life goals:

Here in Riyadh, we have very limited number of private schools that have a good school building, good staff, and good learning environment. I wish public schools can be like the elite private schools. I do not want to compare public schools to the rest of private schools. If we want to improve public schools, we need to look to the best examples. (Interview, 19 January 2014)

The private schools that the study includes have smaller campuses compared to standard public schools. This means that private education in Saudi Arabia faces challenges not only regarding employment and learning evaluation but also in providing adequate school buildings that can expand students' capabilities (Sen 2003). Expanding students' capabilities requires more than standard learning in the classroom. It requires more facilities for students to develop social and personal skills beyond academic achievement. However, in the narrow view of education, other aspects of students seem less important. In the narrow functional view to education, one head of a private school believes she still can achieve a good education in her school even without laboratories and playgrounds. She said:

I believe the most important thing for the success of education is the teacher and teaching style. Sometimes we hear about students who learn in a very poor school environment, and they become doctors, engineers, and geniuses. On the other hand, some students studied in high standard school environment, but the content and teaching were poor. So, I believe if laboratories and playground do not exist will not have a high impact on the learning process. (Interview, 2 January 2014)

The previous quotation from the head of one private school describes how private education perceives students' schooling. The head of the girls' school believes she can achieve good education even though laboratories and playgrounds are not available. This view undermines other aspects of students' development. Nevertheless, girls and boys are not a means to an end. They are human beings who have basic needs that need to be respected and protected without justifying its instrumental benefits (Sen 1999: 18; Nussbaum 2000: 71–72). As Nussbaum (2011) wrote in *Creating Capabilities*:

What play and the free expansion of the imaginative capacities contribute to a human life is not merely instrumental but partly constitutive of a worthwhile human life. That's the sort of case that needs to be made to put something in the list. (p. 36)

Despite this deficiency in private schools, they attract many students every year. As mentioned above, there are an increased number of enrolments in private schools, and some schools have a long waiting list. The number of private schools is also increasing. It increased from 3059 in 2008 to 4032 in 2013 (Ministry of Economy and Planning 2010: 390; Ministry of Education 2015). The increased enrolment in private school despite limitations on its infrastructure could be explained as students have a common interest in passing grades and achieving specific outcomes. It means that school fees have not been paid to achieve well-rounded students due to the narrow definition of education to achieve success and specific outcomes.

The limitation on private schools' infrastructure, despite the increased number of enrolment, provides more evidence for the narrow functional view of the system. Therefore, if we need to improve the system, we need to change the assumptions that shape education policies and people's views to education. Parents need to get the message that school fees are about more than high scores. It needs to be based on a human Capabilities Approach (Sen 1999; Nussbaum 2011). As Sen (1999) argues, 'the capability approach has a breadth and sensitivity that give it a very extensive reach, allowing evaluation attention to be paid to a variety of important concerns' (p. 86).

### ***Leased School Buildings***

The previous challenge of school design in public and private schools are more serious in leased buildings. This is because rented schools are designed for other purposes and not necessarily for learning. It usually provides small spaces and few larger shared spaces or outdoor areas for physical activity and play. In this way, it provides a real challenge for students to achieve their learning and personal human development. Those conditions limit what Sen (1999) and Nussbaum (2011) describe as providing a real opportunity for students to achieve human capabilities. Thamer, a policy-maker at the Ministry's head office, recognise the challenge Saudi education face in terms of rented schools:

We have very large number of rented buildings that are not suitable to be schools. (Thamer, a policy-maker at the Ministry of Education's head office, interview, 15 December 2013).

Mansour, a teacher, also based on his personal experience, said that a rented school provides a poor environment for learning and personal development:

Rented schools is not suitable for the education. The student will not react good interaction with the teacher. In this environment teachers are frustrated. They do not develop themselves and do not look to achieve their goals. However, good learning environment leads to interactive teachers who willing to help their students. (Mansour, a teacher at a public boys' school in the Border Province, interview, 3 February 2014)

Leased buildings are a challenge that faces private and public schools. However, each one has different reasons for having education in this unpleasant situation. Leased buildings for public schools are temporary buildings that the Ministry has leased to overcome the challenge of an increased number of students in the country. The number of student increases from 536.4 thousand in 1969 to 5.4 million students in 2013 with a yearly growth rate around 5.4% (Ministry of Economy and Planning 2014: 155). Here Sultan, head of a public school, describes this challenge:

We have a population explosion. Also, rural migration to cities. Thus the number of students increased and creates pressure on schools. (Sultan, head of a public boys' school in the Border Province, interview, 29 January 2014)

Abdullah, a policy-maker, made the following comments during my second visit the Ministry's head office:

The Ministry has opened a large number of schools in the country to provide free education to all. Unfortunately, this was at the expense of school buildings. The Ministry have no choice but to rent temporary buildings to provide education around the country. Now the Ministry faces a huge challenge to replace those buildings with new buildings. It is a national challenge, and it is beyond our abilities. We need national policies and more funds to overcome this challenge. (Abdullah, a policy-maker at the Ministry of Education' head office, focus group discussion, 5 January 2016)

Table 12.6 gives an overall picture about the challenge the Ministry faces in building and providing good schools for the fast-growing generation.

The government provides generous funds to alleviate this issue. For example, in 2014, the government allocated 800 million US dollars to build new public schools (Ministry of Finance 2016). As a result of this huge spending on building new schools, the Ministry has a rate of gaining four new buildings per day (Ministry of Education 2011: 109). However, overcoming the challenge of leased buildings for public schools seems far from reach in the near future as a result of a huge number of rented schools highlighted in the previous table. One policy-maker highlights how the issue of rented school will still exist in the near future:

Even if the Ministry made some progress, rented schools remain a big challenge for the Ministry in the next ten years. (Thamer, a policy-maker at the Ministry of Education's head office, interview, 15 December 2013)

For the private sector, renting a school building is for economic reasons. Investors in private schools usually look for inexpensive choices to start their business.

**Table 12.6** The number of government and leased buildings in provinces by gender group

Province	Number of Schools		Government buildings		Leased buildings		Percentage government buildings	
	Male	Female	Male	Female	Male	Female	Male	Female
Riyadh	1699	1853	1163	1009	536	844	68%	54%
Mecca	1647	1744	1000	895	647	849	61%	51%
Medina	668	661	421	241	247	420	63%	36%
Al-Qassim	658	783	428	406	230	377	65%	52%
Eastern	955	1048	751	713	204	335	79%	68%
Asir	1097	1239	696	603	401	636	63%	49%
Tabuk	324	308	255	131	69	177	79%	73%
Ha'il	405	334	208	96	197	238	51%	29%
Northern	301	257	244	203	57	54	81%	79%
Jazan	445	455	111	107	334	348	25%	24%
Najran	136	146	107	66	29	80	79%	45%
Al Bahah	569	368	426	190	143	178	75%	52%
Al-Jouf	281	219	161	112	120	107	57%	51%
Total	9185	9415	5971	4772	3214	6643	65%	51%

Source: The Ministry of Education, Kingdom of Saudi Arabia (2011: 26–7)

Secondary data suggests that the issue of leased buildings in the private sector is more serious than in public schools. In Riyadh, for example, 70% of private schools are leased buildings (Riyadh Chamber of Commerce 2011: 73). The higher number of rented private schools provides more evidence on the way education is perceived. Private schools work in the culture where learning is more to be perceived in the classroom. From a human development perspective, education needs to be perceived as a process of the development of well-rounded and lifelong learners. Such understanding could influence the way private schools work including providing a good learning environment.

### *Classroom Design*

With the narrow focus of learning only in the classroom, students spend almost all the school day sitting at their desks. The functional education view limits their opportunity only to learn from the central curriculum. This challenge is more evident in girls' schools as they face more socio-cultural challenges (Hamdan 2005; AlMunajjed 2009), for example, limited opportunities for out-of-school learning and a lack of sports and physical activities.

Despite a high dependency on learning in the classroom, they have not been well prepared to facilitate education for human development. Classroom design rarely supports two-way communication and dialogue which are critically important for education that supports human development (Freire 1970; Giroux 2011). The layout of chairs is in fixed rows which tend to make students silent and limit their chance for communication and discussion (Hannah 2013; Gaurdino and Fullerton 2010; Grubaugh and Houston 1990) (Fig. 12.8).



**Fig. 12.8** The standard classroom design. Source: Ministry of Education (2011: 99)

As can be seen from the previous picture, students are sitting behind each other in rows. This classroom design plays against human development in many ways. The first implication is it supports one-way communication and less active approach to learning. When students sit behind each other, they cannot engage effectively in discussion. Indeed, it serves the function of banking education (Freire 1970) where students cannot easily communicate with each other or with their teacher. To learn how to 'sweep in' and 'unfold values' around social, cultural, economic, and environmental dimensions of an area of concern (McIntyre-Mills 2006), students need more opportunity for dialogue and communication.

I have experienced the traditional classroom design for all of my public education, and I can see its impact on dialogue and communication. In actual fact, the traditional classroom design is the best recipe to silence students and demotivate dialogue. From my learning experience, the front of the classroom is owned by the teacher. If the teacher is sitting in this area, he or she holds the attention of the classroom. It is like being on the stage in front of a big audience. For learning and interaction, it means students are separated from their teachers. One way is it creates many disruptions between teacher and students and affects student concentration. This is the opposite to design that supports learning for human development where the design gives the teacher the opportunity to teach well and students to learn better.

One way to change the seat arrangement is by working in groups. Some teachers have tried to challenge the standard design by doing so. Their main motivation is to mitigate passive learning and increase social interaction in the classroom. However, their efforts do not have much results:

Even if the teacher is trying to be creative in teaching, she cannot because of the classroom design. To divide students into groups, the teacher cannot divide them into more than two groups or maybe three groups, but the teacher cannot move in the classroom between students. The classroom is a big reason for teaching to be more passive. (Lubna, a teacher at a private girls' school in Riyadh, interview, 30 December 2013)

The current classroom is wrong. I have tried to apply active learning strategies, but we need another classroom design where desks support more interaction. (Reem, a teacher at a public girls' school in the Border Province, interview, 3 February 2014)

The reason this strategy seems not to be working is that the original design does not support group arrangements. Khaleel, a teacher in another boys' public school, holds a similar view to Reem that classroom design is one of the main reasons teachings become less interactive:

Sometimes when the number of students in the classroom is high, the teacher cannot practice cooperative learning. There are many factors which limit the way we teach in the classroom. The teacher cannot do anything. Those factors are the number of students and the classroom itself. (Interview, 4 March, 2014)

The other way the standard design plays against human development is that it does not provide equal learning opportunities for all students. If a student is sitting in the last row, he or she can barely see the blackboard or hear the teacher:

My chair is in the back so sometimes I come to the front so I can see the blackboard. (Jawahir, a student at a public girls' school in Riyadh, focus group discussion, 23 February 2014)

The unequal situation for learning in the current classroom design also includes the way the teacher engages with students. Teachers usually engage and support students sitting in the front seats. Little attention is usually given to other students sitting in the last row. Moreover, teachers usually believe the stereotype that students sitting in the back are lazy students (Shamim 1996: 138). When I was a student, learning opportunities and my image in front of my teacher were highly dependent on where I sat. If I was sitting in one of the front seats, teachers usually assumed I was a good student who was willing to learn. If by chance I could not find a place in one of the front seats, some teachers assumed the opposite. This unequal situation for learning and building students' personalities in front of their teacher and their classmates is best described by one teacher interview. I met Mustafa, a teacher at private boys' school, in a classroom similar to the one in the picture (6). During our interview, he recognised the negative impact of the traditional classroom design on equal opportunity for students:

- The researcher: If I am sitting on the back of the? Will my learning be affected?  
 Mustafa: Yes. Of course.  
 The researcher: who decide for the student to be in the front or far in the back of the classroom?  
 Mustafa: It depends on the student. Students choose where they can sit.  
 The researcher: If I came too late and found some student occupied all the front seats. Is this means I will be sitting in the back with some students who are not willing to learn?  
 Mustafa: Of course student's learning will be affected. The surrounding environment has a great impact on students learning. (Interview, 1 January 2014)

The previous discussion provides evidence for how the layout of chairs in fixed rows tends to limits students' learning and development. For equal learning opportunities and to advance thinking in the classroom students, classroom design should support learning for human development where the design gives the teacher the opportunity to teach well and students to learn better.

## Safety and Mobility

The study found that students' life capabilities are affected by their level of safety and mobility. In schools, students report issues of bullying that harm their learning and development. Out of school, students face issues of safety and mobility. Male students face many risks out of school as a result of their greater level of mobility. Girls, on the other hand, have very restricted roles regarding their movement with more opportunity for safety out of school. All these challenges are discussed in detail in the next sections.

## ***Bullying in Schools***

In schools, bullying has been reported by students to be an issue that affects students' psychology and learning. Bullying includes violence and abuse, all of which harm human development, in terms of students being safe and enjoying a life free of insult (Nussbaum 2011). Nussbaum (2000, 2011) claims bullying negatively affects bodily integrity. Bullying also affects students' opportunities to attach positive emotions and hope towards their learning and their schools. One student describes this effect:

This [bullying] cause having fear from going to school. You will be stressed, lacking self-confidence, fear from everything. (Nawaf, a student at a private boys' school in Riyadh, focus group discussion, 23 December 2013)

The previous quotation highlights the learning and psychological impact that students may face when being the victim of bullying behaviour. Students should be able to have a school life free from risk or insult. A safe learning environment enables students for being and doing which is essential for human development (Sen 1999; Nussbaum 2011), in particular protecting students' bodily integrity and enabling them to create positive emotions towards schools. Nevertheless, findings suggest that students face bullying issues that create many challenges for them to achieve their central capabilities. Widespread bullying issues were reported from public and private schools for boys and girls. However, findings suggest that life capabilities are more affected by bullying at boys' schools. Boys report different types of bullying and more serious impacts than at girls' schools. By contrast, the reported bullying from girls' schools is mostly verbal abuse rather than physical:

Sometimes issues of bullying happen between girls but because they girls it is not serious like boys. (Huda, a teacher at a private girls' school in Riyadh, interview, 30 December 2014)

while in boys' schools, it includes verbal and physical assault:

The researcher: Do you have bullying issues in your school?

Akram: Yes.

Tala: It causes student hate the school. It causes fear.

The researcher: Does it include physical insult?

Akram: Yes. Many times. Some students threat you in the school and when the school finish he attacks you. (Focus group discussion with students at a private boys' school in Riyadh, 23 December 2013)

Physical fighting and violence among students happen in our schools. Almost 3 to 4 times a week. (Suleiman, a teacher at a public boys' school in Riyadh, interview, 30 December 2013)

Also, the extent of effects of bullying was reported higher in boys' schools. Girls downplayed the effects of bullying in their schools as normal issue they can cope with:

Yes, there is [bullying] but the second day we went to school normal as nothing happen. (Khadija, a student at a private girls' school in Riyadh, focus group discussion, 20 February 2014)



The co-researcher: Do you have bullying issue?

If there is an issue it can be solved. (Lamia, a student at a public girls' school in the Border Province, focus group discussion, 5 February 2014)

On the other hand, boys reported serious impacts in a way that limits their chances for learning and development:

Sometimes it prevent us from taking part in the class because if you talk he [the bully] may tease you. (Akram, a student at a private boys' school in Riyadh, focus group discussion, 23 December 2013)

Some group in the class put pressure on you. It happens from class to another. They stress you and threaten you. (Fawaz, a student at a public boys' school in the Border Province, focus group discussion, 2 February 2014)

The difference between gender groups in bullying in Saudi schools is also evident in the work of Hussein (2010). In his comparative studies across gender groups in Saudi schools, he found that bullying is more serious in boy's schools (p. 57). This finding also corroborates the findings of a great deal of previous research on gender and bullying in schools (Rigby and Slee 1991; Siann et al. 1994; Scheithauer et al. 2006; Smith et al. 2012).

### *Mobility and Safety Out of Schools*

The study found that life capabilities of students are affected by their safety and mobility out of schools. However, there is a significant difference between boys and girls. Male students have the freedom to travel from and to school by car or walking. This privilege is not available for female students. The privilege for boys and limitations for girls affects their mobility capability. As a result, safety functioning for both genders is affected in completely a different way.

Boys have greater mobility than girls do. They enjoy wider opportunities to move from and to schools. Options for male students include going by car, walking, or using the school bus. However, public transportation is not common in Saudi Arabia which makes cars the most popular form of transport:

85% of my students use their cars to come to the school. (Muhsin, a head of a private boys' school in Riyadh, interview, 31 December 2013)

Student is independent on themselves for transportation. He comes by his car. Some may come with other students or his family take him to the school. (Mansour, a teacher at a public boys' school in the Border Province interview, 3 February 2014)

The higher level of mobility for male students' costs them their safety and sometimes their lives. The legal age to drive is 16 years in Saudi Arabia. This age is lower than the majority of countries, which is 18 years. With the lower age for driving, it is familiar to see teenagers parking cars in front of boys' schools during the school day. A large number of students' cars makes it difficult for me to find a parking space when visiting boys' schools.

Based on my interviews in boys' schools and my observations, I found that boys' schools face very similar issues for safety out of school. This similarity rather than difference is because safety for male students out of schools is related to a wider context more than the school itself. The first challenge boys face is safety issue around their schools. With the absence of pedestrian crossing signs and pedestrian crossing line marks on the road, crossing the road is dangerous. I faced similar danger when I had no option except to cross the road at my own risk. Lack of road safety is associated with number of accidents reported in front of boys' schools:

Recently there was car accident in front of our school. (Saleh, a teacher at boys' public school in Riyadh, focus group discussion, 29 December 2013)

Rakan, a student, referred to this issue during a focus group. He said:

The real risk is out of school. There is no parking. As students, we face the risk when we cross the road. (Rakan, a student at a private boys' school in Riyadh, focus group discussion, 23 December 2013)

Two students died in front of Rakan's school when they were crossing the road 2 years before I conducted the focus group. The sad thing is they had been killed by the carelessness of one of their classmates:

Two years ago, two students died. My brother saw them and the driver who kills them was a student from our school. (Akram, a student at a private boys' school in Riyadh, focus group discussion, 23 December 2013)

The previous quotation shows not only the risk that boys face but also the risk they can cause to the community and other students. Participants in schools also reported the abuse of car use from some students. The issue of car use abuse is common among teenagers in Saudi Arabia, and students start to become involved in those risky activities at school age (Ramisetty-Mikler and Almakadma 2016). The car abuse usually occurred when students drift their cars in front of their schools:

Hamza: There are student drifting in front of other students. He causes danger to himself.

Akram: The student drifting and he may kill you will you crossing. (Focus group discussion with students at a private boys' school in Riyadh, 23 December 2013)

The problems is not inside the school. It is outside. Drifting usually happen during students finish their school. (Yasser, a teacher at a public boys' school in Riyadh, focus group discussion, 29 December 2013)

Boys' mobility causes other problems for themselves and nearby neighbourhoods. Living close to a boys' high school is a nightmare many Saudi families are willing to avoid. After school care is not common for boys especially in high school students. This means students will wait outside in a way that may threaten their safety and engage in risky behaviours like smoking or drugs because it happens away from the eyes of their school teachers and administration. Participants from boys' schools report that students sometimes engage in fighting and brawls after school hours. This is one example:

There are other students who physically assault us outside of the school when we finish. (Akram, a student at a private boys' school in Riyadh, focus group discussion, 23 December 2013)

While male students face real risks out their schools, their schools deny any responsibility:

I will be honest with you. We do not control students out of the school. We may cooperate with them but our responsibility is inside the school, and we only monitor them inside the school. (Bader, a head of a public boys' school in Riyadh, interview, 30 December 2013)

Another example is from a private boys' school in the Border Province. In the morning, which was around 7:30 am, I noticed some students gathering in groups outside the school. The school started almost 45 min before, but students seemed to be enjoying being outside and laughing. I raised this issue on the same day with the teacher who volunteered to be part of the study. He denied any responsibility, and the reason according to him was:

Those students are still outside they did not enter the school. (Amjed, a teacher at a private boys' school in the Border Province, interview, 27 January 2014)

Khaleel, a teacher, admits the lack of policy that protects student outside the school is a problem that needs attention:

The problem is that according to the current system, the school is not responsible for issues that happen to students out of school. (Khaleel, a teacher at a public boys' school in Riyadh, interview, 4 March 2014)

As a result of the absence of policy protecting students outside the school, my data reveals that schools may try to delay bullying issues until they happen outside their walls. Then no one can blame the school. This quotation explains how schools shift issues outside of their walls until it happens in the street:

Hamza: If students fight each other here, the school said go outside the school and fight each other. We do not care, but here no fighting.

Akram: They said to us fighting is outside not here. (Focus group discussion with students at a private boys' school in Riyadh, 23 December 2013)

It may also encourage students to solve their conflicts with others after school in a violent way instead of asking help from their school. Here is one example:

The researcher: Do you have risky behaviours in your school?

Amjed: No. Minor violence sometimes and this rare. However, it happens out of school. The student waits for his classmate until he gets out of school. (Amjed, a teacher at a private boys' school in the Border Province, interview, 27 January 2014)

The lack of safety of male students out of schools requires intervention policy that takes into account students' safety in and out of schools. Nussbaum (2000: 82) comments on the role of public policy to evaluate and take action to address the social challenges that the government can control. In the case of boys' safety out of school, social policy intervention is crucial.

Students also face other risk associated with their higher level of mobility. When students drive to and from school, they face the risk of car accidents. Amjed, a teacher at private school in the Border Province, reported one sad story:

Most students own cars. Some of them are good drivers, and some of them are not. The sad thing is - and this is a phenomenon - almost each year we lose at least one student. He died

when he is driving from or to school. (Amjed, a teacher at a private boys' school in the Border Province, interview, 27 January 2014)

Girls' safety is not only higher during the commute to school. Girls' schools do not report any issue of safety outside of school like drifting and fighting. Girls' schools also, private or public, provide free after-school care. One teacher usually stays in the school supervising girls after school hours until parents or care givers come to pick them up. This chance is not available to boys. Here are two examples from private and public girls' schools:

One teacher stays with girls after school. (Mariam, a teacher at a public girls' school in Riyadh, focus group discussion, 17 February, 2014)

Every school day we have a teacher and administrative staff for after-hours care. (Iman, a teacher at a private girls' school in the Border Province, interview, 2 February, 2014)

The study found that the limitation of being able to be mobile has a positive impact on girls' safety and bodily integrity. This positive impact on female functioning is consistent with Nussbaum (2000: 2) when she mentions that issues that women face sometimes have positive outcomes. However, human development is not concerned only with functioning but also if functioning is achieved in a human way that respects people's dignity (Nussbaum 2000: 87). There is a need for education policy that takes the concept of human development from rhetoric to reality by giving students more opportunity for safety without sacrificing their freedom and mobility.

## Conclusion

This chapter investigates challenges students face to maximise their human potential; challenges that students face to enjoy a healthy life, to be able to play and create, and to be safe; and challenges that need to allow students to have the opportunity to feel positive emotions and create hope towards their own learning. In this regard, the study found four key challenges. The first challenge is time constraints. Time create constraints on students' achievement of a number of central life capabilities (Nussbaum 2011) especially health and play. Schools start early in the morning which give students less time for sleep and healthy nutrition at home. Schools also provide less time for play and social activities. The second challenge is the lower level of students' empowerment. The study found a lower level of students' empowerment in schools with students lacking control over their learning environment and having few opportunities to voice their needs. The third challenge is school design. School design provides limited space for students to run, to play, and to enjoy more social and physical activities. This situation is worse in leased buildings which are usually designed for other purposes and not necessarily for learning. The fourth challenge is related to safety and mobility. The study highlighted a number of issues around safety and mobility in schools. The gender difference is evidence in bullying and out-of-school safety.

The second challenge is the heavy reliance on passive learning in schools. In the top-down approach for learning, teachers and students have less opportunities to be active and more creative. The third challenge is the absence of standard measurement for learning outcomes. The absence of standard measurement threatens the integrity of evaluation across schools. Teachers face pressure from students, students' families, and school administrations to give high grades which may not reflect student performance. The fourth challenge is related to the conditions of employment in private schools. Private school teachers are employed by the school, and the demand for high grades affects their career and the integrity of their evaluations.

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# Chapter 13

## Researching the Impact of the South African Kha Ri Gude Mass Literacy Campaign: Considering the Support for Those Otherwise Marginalized in Economic, Social, and Political Life



Veronica I. McKay and Norma R. A. Romm

**Abstract** In this chapter, we explore how the South African Kha Ri Gude mass literacy campaign, flowing from and drawing on the experience of the an earlier national literacy campaign, was developed to support those otherwise marginalized in the South African society. We explain the aims of the campaign as furthering the goal of ‘Literacy Plus’ (i.e. Literacy Plus enabling increased participation in economic, social, and political life). We explicate how a range of (mixed) methods was used for soliciting feedback from learners (as well as from educators and coordinators) throughout both campaigns and further to this in an assessment that took place (2013–2015) by the Adult Basic Education and Youth Development Department at the University of South Africa. We indicate how, in the assessment, we considered ourselves to be involved in a relationship of reciprocity with the (sampled) participants as we explored the impact of the Kha Ri Gude campaign from their perspectives (as developed/recounted through the interactional encounter with us).

**Keywords** Kha Ri Gude literacy campaign · Community development workers · Economic development · Environmental awareness · Feedback from learners · Mixed methods research · Research as shaping/forming outcomes · Politics of life · Sustainable development

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## Introduction

In this chapter, we reflect upon how the *Kha Ri Gude* (KRG)<sup>1</sup> campaign in South Africa (2008–2016)—which followed on from an earlier government literacy initiative, the South African National Literacy Initiative (SANLI)—can be seen as having offered support for those with little or no education who were economically, socially, and politically marginalized in postapartheid South Africa. Our discussion is based on detailed understanding from an ‘insider’ perspective of the intention and operations of the campaign (with McKay being CEO of the campaign), grounded in feedback received from a variety of sources during the running of the campaign. For much of this campaign, from its launch in February 2008 up until October 2012, McKay continued to be CEO, before returning to her ‘academic’ post at the University of South Africa.

The chapter shows how the KRG campaign built on the *Literacy Plus*<sup>2</sup> experiences and reflections of the earlier SANLI initiative, and how through linking with the new echelon of Community Development Workers (CDWs) the ‘Literacy Plus’ component of the KRG campaign was enhanced. We also offer detailed information which relates to the involvement of the ABET and Youth Development Department at UNISA in conducting an assessment of the impact of the campaign (2013–2015) with illustrative examples—arising from our ‘mixed method’ approach to soliciting feedback from various participants, which point to how the ‘Literacy Plus’ process operated to support personal and community growth, and goals of furthering an inclusive wellbeing (including the wellbeing of ‘mother earth’) as part of sustainable development initiatives. We point to some ways in which we believe that (university-based) researchers can interface with participants in a relationship that becomes mutually supportive, also contributing to the kind of relationality which the KRG campaign aimed at enhancing as one of its values.

## Background

Twelve years after South Africa’s first democratic election in 1994, the country was faced with the decision as to whether or not to embark on a literacy campaign because the national system of Adult Basic Education and Training (ABET) had not made any significant impact on reducing the number of adult illiterates. After 2 years of research and preparation, the South African KRG national literacy campaign was launched by the government of South Africa. The campaign was launched

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<sup>1</sup> *Kha Ri Gude* is the Tshivenda for ‘Let us learn’. A decision was made to use the Tshivenda terminology as a way of accentuating the minority status of the language.

<sup>2</sup> *Literacy Plus* meant that classes were encouraged and supported in forming small and microenterprises as an output of the social and educational rationales. (The term ‘Literacy Plus’ was coined in the Indian literacy campaign.)

at a time when literacy and basic education were considered essential enablers for human resource development, and for opening possibilities for expanding life choices for South Africa's poor (DoE 2000, 2006). The campaign ran from 2008 until 2016/2017, when a phase-out plan was adopted at the parliamentary portfolio committee (11 March, 2017: see [pmg.org.za/files/170314kharigude.ppt](http://pmg.org.za/files/170314kharigude.ppt)).

The KRG campaign was built on the human and intellectual capital of the SANLI campaign, which was run on behalf of the National Department of Education (DoE), by the University of South Africa's (UNISA's) Institute for Adult Basic Education. The same university department was responsible for training a cadre of Community Development Workers (CDWs) whose role was to act as participatory agents of change providing a platform for self-sustainable development in communities (Department of Public Service and Administration, DPSA 2007). This chapter draws on the work done within these three campaigns, all spear-headed by government with UNISA playing a seminal role in providing training, human resource development, and oversight and management.

McKay (2012: 5) states that the policy commitment to adult basic education and training implied more than just literacy. It was regarded as the foundation for justice and equality and as contributing to the core values adopted for South Africa: for democracy, through enabling adults to participate actively in the social aspects of their lives; for access to learning and other social institutions aimed at redressing historical imbalances; and for development, both personal and socio-economic, through skills development and more specifically intended to serve a range of social, economic, and developmental needs. Basic education was expected to provide people with the basic foundation for lifelong learning and to equip them with the skills and critical capacity to participate fully in the society. The National Education Policy Act (27 of 1996) stresses the importance of targeting women (and, in particular, rural inhabitants), out-of-school youth, the unemployed, prisoners, and adults with disabilities. Moreover, the provision of basic education was constitutionally enshrined as a basic right of all citizens and a legal entitlement to which every person has a claim (Section 29 of the Bill of Rights in the Constitution of the Republic of South Africa 1996), in order to enshrine 'the right of every person to basic education and equal access to education institutions' (National Education Policy Act (27 of 1996) (cf. McKay 2012: 5–6).

### ***KRG Campaign in Relation to SANLI and the Community Development Worker Program: Toward Generating Community Wellbeing***

The launching of the KRG campaign relied heavily on the newly established echelon of CDWs who were drawn in to assist with mobilizing communities and learners to participate in the campaign, assist learners to obtain registration documents,

access social grants, and deal generally with social problems of learners as well as with monitoring of the implementation of the campaign. The trained cadre of CDWs<sup>3</sup> were required essentially to carry out mobilization and advocacy activities conducting door-to-door and referrals of learners to the campaign. The campaign also provided the CDWs with sites for disseminating information on, for example, employment generating schemes, health campaigns, as well as for assisting with income generation projects.

In her report to the Education Portfolio Committee of Parliament, McKay (2009a) states that from its onset, the campaign benefited from supportive stakeholders who had hitherto supported the SANLI—such as chiefs, mayors, local business, a range of community-based and nongovernment organizations, as well as other government departments, including the CDWs (who worked across tiers and sectors of government) that were mobilized to support the campaign. With this support, she pointed out, the campaign was poised to make a range of impacts which, she foresaw, would go far beyond learning the skills of reading, writing, and calculating. The entire operations of the campaign centred on the activation of agency among participants and among supportive stakeholders in communities. This is consistent with Giddens' view as expressed in an interview with Peter Kolarz (2016) that people are 'not just the playthings of larger social causes'. Giddens feels it is important in his Sociology to consider ways of transforming what he calls 'communications and connections', because he believes that 'the transformation of everyday life and identity is as important as the more large-scale systems and problems that we try to deal with'. In response to Peter Kolarz's question: 'So if there were one element in your body of work that you would consider most important for those pursuing social and political change, what would it be?', Giddens responded that:

It would be the format that we're talking about: the immense subtlety of the interaction between how people make their own lives and at the same time are creatures of the larger structures of which they are part. That's as true in politics as in other areas.

The KRG campaign, in all its operations, was infused with McKay's sociological understanding of the role of 'agency' in people together 'making their lives' as part of communities. Bowl and Tobias argue that it is important that critical theoretical understanding consciously underpins the provision of adult education, so that 'a progressive vision of education for democracy and equality' is constructed and engendered via the adult education programs (2012: 279). Torres adds that it is also important theoretically to ensure that a 'conventional deficit rationality' of 'developing countries' (countries situated in 'the South') does not underpin education and learning paradigms (2002: 3). Merriam and Key (2014: 141) make a similar point when they connect literacy to wellbeing.

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<sup>3</sup>The CEO of the literacy campaign (McKay) had previously presented the training courses for the Community Development Workers under the auspices of the University of South Africa. It was therefore possible for her to draw them into the literacy campaign ensuring a synergistic relationship between them and the campaign. There were about 4000 of them, and they were drawn in (as part of the launch of KRG) as interministerial stakeholders.

UNESCO (2016) refers to the way in which the KRG campaign fostered community cohesion and peaceful co-existence through its creation of learners' groups which brought together people with a common goal and vision for themselves and their communities. As they state, 'besides the actual literacy learning experience, a lot of program participants come for the social aspect. They meet new friends, and learning groups help to overcome loneliness'. UNESCO goes on to say (2016) that in the process, they establish social groupings which cooperate in a range of socio-economic activities guided by reciprocity. Hanemann and McKay (2015) emphasize (citing Wagner 2015; Ghose and Mullick 2015) that when assessing the value of literacy initiatives/investments one should not reduce 'targets for literacy' to 'quantitative goals', as this does not do justice to how participation in literacy programs can 'help shape the trajectories of lives' (2015: 5). This does not mean to say that 'quantitative' assessments are of no value, but they need to be combined with alternative ways of measuring the worth of the program. As can be seen from the way in which we draw on a variety of sources of feedback in the discussion below, we were alert to identifying different sources of 'evidence', so that meaningfulness to participants could be assessed.

### Education and Life Politics

Both of the literacy campaigns (SANLI and KRG) were geared to instilling the skills of creative citizenship, which are fundamental for life politics (defined by Giddens 1991, as individuals being able to create a meaningful life within their communities). To this end, the curricula of both the SANLI and the KRG campaign were underpinned by the Millennium Development Goals (MDGs, UN 2000) and subsequently the Sustainable Development Goals (SDGs, UN 2015), aimed at poverty reduction, economic development, and the consolidation of efforts to overcome the HIV/AIDS pandemic in the developing world. The Millennium Development Goals (MDGs) drew attention to a new and expanded remit for literacy, in that literacy is seen as an essential tool for survival as well as participation and development. Its goals are for active citizenship, gender equality, improved health, and better livelihoods (McKay 2012: 8). It is in these arenas that the *life politics* has a crucial role to play in enabling adults to acquire the knowledge, skills, and confidence to creatively craft their own futures. In both campaigns, the target group comprised the unemployed and rural and urban poor, a large concentration of 'needs without a voice', of adults who were under-represented in social dialogue and from processes with and in institutions.

The KRG literacy campaign, flowing from and drawing on the SANLI, aimed to improve the quality of life for the poor, and as the quotations offered below show, it tried to offer hope in situations which were seemingly hopeless—akin to what Freire (2006) terms the 'pedagogy of hope'. (See also Botman 2010). As Tuchten (2012: 119) reminds us 'education and training is never neutral, and ... the whole person is relevant in AET [adult education and training] programs'. Tuchten is

concerned that there may be a tendency for educators to ‘assert a kind of moral superiority over adult learners’ in their efforts to ‘transform the person, his/her perspectives, interaction with society, or society itself’ (2012: 119). It cannot be denied that the KRG campaign was built on ‘transforming people’ and their interactions with ‘society’; but the idea was to enable a transformation of people’s lives in a way which they would experience as *meaningful for their own and for community growth while advancing sustainable development*. We would suggest that just because adult education and training is indeed never neutral (as noted by Tuchten), it was important for the campaign organisers to consider *what values were to be encouraged via the campaign* (while also encouraging educators to pay close attention to the needs of learners as expressed by them but also *extending learners’ visions of ‘what was possible’* in terms of future possibilities). It was for this reason that KRG embedded the values enshrined in the MDGs/SDGs within its core materials (Osman 2009).

## Conceptualizing the Core Materials to Support Sustainable Development

Following the SANLI, endeavours were made in the KRG campaign to design the campaign’s core materials in order to promote progressive democratization through the dissemination of civic education and which would improve civic awareness. A major consideration was how literacy and numeracy teaching could address the social needs of the learners and contribute to learner empowerment. A parallel concern was that the campaign should be directed at what Giddens terms, *emancipatory politics* which supplies the foundation for the emergence of *life politics*. As he puts it, ‘it prepares the stage for life political concerns’ (1991: 223). Life politics as the politics of self-actualization, he argues, is concerned with questions of rights and obligations and how, in an arena which professes to be democratic, *structures* exist to support the exercise of democracy<sup>4</sup> in order that individuals can intersubjectively exercise their rights (1991: 223–225). This view suggests that social structures (and institutions) are in themselves unable to guarantee democracy in the absence of human participation. The campaigns’ practices, processes, and materials aimed to enable learners to acquire the skills and abilities (and the consciousness) with which to participate in the democratic processes.

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<sup>4</sup>These may include constitutional rights, human rights, balloting and regular elections, the availability of social services, etc.



### ***Kha Ri Gude and the MDGs***

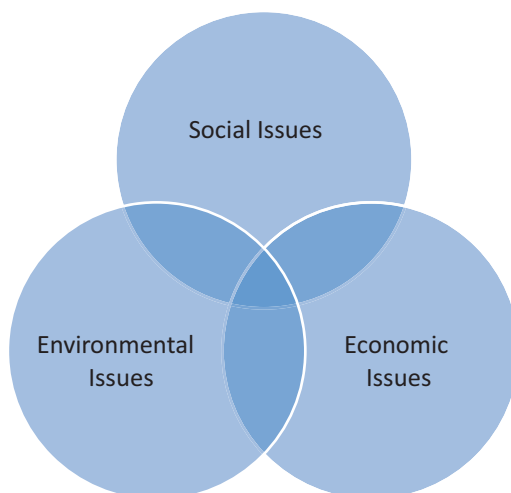
The campaign opted for the development of core national materials which were versioned to cater for various language and cultural differences and regionalized insofar as languages were regional. The materials development team also ensured that the lessons were themed according to MDGs (as precursors to the SDGs), and the national and provincial development strategies were infused into the themes.

Although literacy was not mentioned directly as part of the UN MDG agenda, and only tangentially in the SDGs, it is recognized that literacy is a prerequisite for achieving all the MDG/SDG goals (Hanemann and McKay 2015). The KRG thematic component of the curriculum was thus designed to optimize the social, economic, and developmental opportunities of literacy by ensuring that MDG-/SDG-related issues were presented across the curriculum, with specific lessons addressing health, HIV/AIDS, gender, democracy, the world of work, human rights, and environmental awareness, which can be represented as follows (Fig. 13.1):

In addition to the design of the core materials, the way in which the two campaigns were ‘rolled out’ offered many advantages with regard to the enhancement of community participation. Both campaigns used a cascade model which relied on volunteerism and community participation. (The mass KRG campaign required some 40,000 volunteer educators to form the backbone of the teaching network.) In both campaigns the coordinators were responsible for organizing various communities and were required to profile each region in order to identify stakeholders who might assist with advocacy and the monitoring of implementation in the district.

Supplementary to providing literacy for approximately 4.7 million South African adults who had little or no schooling, the UNESCO Institute for Lifelong Learning

**Fig. 13.1** Three dimensions used to guide materials development



points out that the KRG campaign enabled learners to acquire basic literacy skills including basic spoken English. This has enabled hitherto illiterate youth and adults to be more independent in conducting daily business including undertaking shopping errands and travelling, etc. In addition, program graduates have also been empowered to engage in more profitable income-generating activities or to improve the profitability of their existing projects. Essentially therefore, the program enables both employees—most of whom had been unemployed—and learners to be self-reliant and to contribute toward their families' wellbeing and living standards. (Retrieved June 16, 2017, from <http://litbase.uil.unesco.org/?menu=13&=ZA&programme=69>).

### *Curriculum Issues: The Thematic Approach*

In the interest of directing its program toward a developmental agenda, McKay (2015: 370) indicates that the KRG literacy campaign applied a thematic approach to the teaching of reading, writing, and numeracy. The materials are designed to optimize the social, economic, and developmental opportunities of literacy acquisition by ensuring that MDG-related issues are infused into the curriculum, with lessons specifically addressing life skills concerning health, hygiene, nutrition, entrepreneurship, HIV/AIDS, gender, democracy, human rights, and environmental awareness. These social issues are mainstreamed across the curriculum and encourage learners to think about related matters, make applications to their everyday lives, and broaden the choices and opportunities available to adults. Each of the predesigned lessons aimed to enhance learners' understanding of their rights and responsibilities while they learn the mechanics of reading, writing, and numeracy. At the same time, the lessons are constructed to enable learners to become competent in the learning outcomes described and targeted in individual national unit standards. Osman recognizes this when she points out that the KRG campaign offers evidence that:

Education is not simply a tool for the 'production of human capital' but carries the promise of 'transformation' provided it is aligned to the various levels of education and training sector to achieve both equity, social and economic goals. It can also establish and protect cognitive functions throughout life including in early childhood by forming literate and informed parents and grandparents. (2009: 4)

McKay (2008c, 2015) refers to the KRG curriculum that was specifically designed to teach toward the achievement of the United Nations (2000) MDGs and targets, in particular MDGs 1, 3, 4, 5, and 7, which also find expression in the United Nations 2015 SDGs (UN 2015).

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**MDG 1: Eradicate extreme poverty and hunger**

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When adult literacy and skills training programs such as farming skills are coupled, it enables learners to increase their self-reliance. Moreover, participants are better able to handle money and feel less vulnerable to being cheated in monetary transactions. This is a key gain for learners who are micro-entrepreneurs since it enables them to better manage their businesses, micro-credit, and informal sectoral activities (cf. Pieck 2002; Preece 2013)

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**MDG 3: Promote gender equality and empower women**

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Since the majority of KRG learners are women and heads of households, the program was intended to develop women's confidence and increased their decision-making roles and increase their participation in community affairs (cf. Messina 2002; Woldegies 2016)

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**MDG 4: Reduce child mortality; and MDG 5: Improve maternal health**

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Literacy programs have been linked specifically with MDGs 4 and 5. Participants show increased likelihood of improving the health and nutritional practices of their families. The KRG learning materials tackle these issues directly as part of the curriculum and, in this way, support other government interventions (cf. LeVine and Rowe 2009)

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**MDG 7: Ensure environmental sustainability**

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While literacy education is strongly correlated with environmental sustainability, the KRG program addresses the environment directly through its curriculum and thereby develops a stronger awareness (cf. McIntyre-Mills 2014; Wals 2007)

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McKay (2015: 372) explains that the material development team also ensured that the lessons were themed in accordance with MDGs and that the relevant national and provincial development strategies were infused into the themes. While the thematic approach provided the general context for literacy, the methodology for the core materials was informed by research into the efficacy of the methodology in the SANLI. The themes collectively resonated with the MDGs and the emergent SDGs. The gist of the thematic topics as expressed in McKay and Sekgobela (2015) is discussed below. But first we offer a sample of the kinds of pictures that were used in the Kha Ri Gude workbooks to stimulate class discussion around values implied in the pictures. The following pictures were drawn by the artist Jacques Coetzer (commissioned by the Department of Basic Education) for the learner literacy workbooks (McKay 2008b) so that readers can gain a sense of how the workbook pictures functioned as part of the material, to aid learners' understanding of the MDG-/SDG-related themes (Figs. 13.2, 13.3, 13.4, 13.5, 13.6 and 13.7).

Below follows a summary of the themes that were explored within the Kha Ri Gude curriculum:

## **I Am Learning**

This theme was intended to encourage and motivate adult learners to start learning and to continue persevering. It aimed to keep the learner in class, to destigmatize the need for adult basic education, and to encourage learners to participate in their own learning. Much of the voluntarism arising from this was demonstrated with learners



**Fig. 13.2** Men and women are here seen as working together on the land (the learners were taught how to plant and also the importance of developing food security as part of their living together in rural areas as well as townships and informal settlements)



**Fig. 13.3** The hazards of a fast-paced urban lifestyle with no spaces for communal living were depicted so as to be discussed in the classes



Fig. 13.4 The pollution of settlements was discouraged via this (grim) picture



Fig. 13.5 Informal sector work and small business development were encouraged as part of the 'Literacy Plus' agenda



**Fig. 13.6** Farming (and gardening) was encouraged in the workbooks, along with a nurturing and caring for Mother Earth

taking control of finding learning venues, preparing and arranging the venues for lessons, and visiting and supporting learners who did not attend classes or who were disabled and unable to attend without assistance.

This theme was in line with SDG 4: Quality Education and ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

### **My Family, My Home**

This theme focused on families taking cognisance of the migrant labour system of the time and explored gender roles thus resonating SDG 5, which aims at ensuring achieving gender equality and empowering women and girls. The theme aimed at ensuring that adults were aware of gender-based violence and of the agencies in place for combating gender discrimination and violence—including individuals own agency. Often the messages of gender equality were portrayed via the artwork in the KRG material, which included pictures depicting men cooking or supervising children’s homework.

### **Living Together**


This theme focused on building communities and on the importance of community cohesion. The theme resonated with SDGs 4, 5, and 11, directed at building sustainable communities and human settlements that are inclusive, safe, resilient, and sustainable. Subsequent to the end of apartheid, it was necessary to ensure community

8  English extension

Read Maria's story and then answer the questions.



My name is Maria. I am 27 years old.  
My baby is six months old. I live in Alexandra in Johannesburg.  
I come from Mozambique.  
Last night I had to leave my home. The people I live with chased me out of my home. My husband ran away because they wanted to kill him.  
They called us *mkwerekwere*.  
I was scared and went to a camp to sleep.  
It was very cold and raining. We had no blankets. There were many other women from Zimbabwe, Mozambique and from the Congo. Our babies cried because they had no food. Today my husband came to the camp. He had a big cut on his head. He told me they stole our things and burnt our house. I am very sad. I want to go back to Mozambique.




**Fig. 13.7** As part of the Kha Ri Gude programme, learners were encouraged to answer questions concerning their ways of relating to (and caring) for others via their having to engage with this story taken from McKay (2009b)

cohesion for peace, justice, and the promotion of peaceful and inclusive societies. The materials dealt with human rights and how to access systems of justice, how to hold municipalities and even politicians accountable, how to access free medical care, and also how to apply for social grants.

## Health

The section on health resonated with SDG 3, which focuses on good health and wellbeing. The goal is to ensure healthy lives and promote wellbeing for all at all ages. Topics pertaining to healthcare, going to the doctor or clinic, filling in the relevant clinic forms, reading a child's vaccination and weight chart, and medication were topics that featured in the theme. Also relevant was nutrition, eating a

balanced diet, and supporting this by encouraging and teaching learners how to grow one's own vegetables—even in contexts where there was no running water (and people needed to rely on rivers and/or tanks for water supply as expressed in SDG 6).

### **The World of Work**

This theme focused specifically on issues of poverty and pointed to different survivalist-oriented business activities—here resonating with SDGs 1 and 8 calling for an end to poverty in all its forms. It aimed to promote sustained, inclusive, and sustainable economic growth, full and productive employment in the society, and increased awareness about decent work for all (i.e. work that issues in a quality living standard)—specifically by focusing on the skills for establishing small businesses and working together to establish cooperative enterprises with the aim of promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

### **Mother Earth**

This theme focused on possibilities for ending hunger, achieving food security, and improved nutrition via, inter alia, promoting sustainable agriculture, which included a care for Mother Earth. It is emphasized that Mother Earth gives life and should be understood (and treated) accordingly. Lessons were designed on clean water and sanitation, sustainable consumption and production patterns, taking action to combat climate change and its impacts, conservation of marine resources, and promoting sustainable use of terrestrial ecosystems at a learning level that was accessible for learners—which coalesce with SDGs 18, 19, 20, and 21 with a view to responsible consumption and production patterns and conserving and protecting sustainable use of terrestrial ecosystems.

### **Our Country and the World Around Us**

This theme aimed to create awareness of the need to reduce inequalities within and among countries and to focus specifically on recognizing South Africa within the context of the continent and the world. Learners are encouraged to interact with people from different walks of life (and who may have different cultural heritages) in South Africa and beyond as part of building the 'rainbow' nation and interacting across borders. Material adapted from Nelson Mandela's epic *Long Walk to Freedom*, which expresses his understanding of humanity and the need to foster equality, is included. Notions of Ubuntu and respect for others underpinned the materials in this section, which resonate SDGs 10 and 11 with the view to reducing



inequality within and among countries and making cities and human settlements inclusive, safe, resilient, and sustainable. (cf. Commonwealth Secretariat 2018).

The MDGs and SDGs, against the backdrop of globalization, draw attention to the new challenges for literacy which are reflected in the new and expanded remit for literacy. In this sense, literacy is seen as an essential learning tool necessary to enable people to *survive, participate, and develop* in the world. Its goals are for *active citizenship, improved health and livelihoods, and gender equality*. It is necessary to help individuals and communities to identify, understand, interpret, create, and communicate; and literacy is the foundational skill for enabling these processes (Hanemann and McKay 2015).

### *Literacy, Household Security, and Food Sustainability*

In her report for the Government's War on Poverty Campaign, McKay (2008a: 2) argued that the KRG campaign brought with it many possibilities for addressing key areas of poverty and could in many ways be regarded a crucial weapon in the government's war against poverty (as also advocated by Preece 2013). In terms of social and political development, literacy education has been shown to enhance confidence, contribute to personal development, and promote improved hygiene, nutrition, health, and social and political participation (Stromquist 2005: 2; Tett 2013: 278). It can also contribute to increasing the effectiveness of investments in other development sectors.

Through its classes, KRG has direct access to the poor and vulnerable, penetrating the poorest areas of the country. The main areas of KRG's operations are the rural areas and (urban) informal settlements where poverty is most acute. Through its curriculum, the KRG program teaches learners about good nutrition to assist those living with HIV, and the KRG materials stress that good nutrition is especially necessary for those receiving treatment for HIV/AIDS. The five essential food groups are taught repeatedly as the basis for good nutrition and indigenous nutritional food equivalents are discussed. Furthermore, educators are encouraged to invite staff from health clinics in the area to address the learners and to access additional materials that might be of benefit for learners (McKay 2008c: 2).

The importance of a household/communal food security program being integrated into the KRG program cannot be over emphasized as it was this, we argue, that assisted thousands of people to enjoy healthier, more hopeful lives (as evidenced also through the portfolio responses of learners which were collected throughout the campaign and as expressed also in interview and focus group material which was also collected).

The KRG (as with the SANLI) classes are 'formations of people'—groupings that opened the way to a range of possible interventions. These formations provide hubs that were used as a basis for food security interventions—to improve household food security for the rural and urban poor—for enabling communities to improve their access to food and to enhance their own household food security.

While most households targeted by the two literacy campaigns subsist on one or other of the social grants, it is possible to enable these beneficiaries to increase household food security and to market any surpluses via (women's) cooperatives which the CDWs assisted in establishing together with KRG coordinators, educators, and learners. The two campaigns utilized a multipronged approach to assist its beneficiaries to cope with a range of social problems they encounter on a day-to-day basis.

One of the outcomes of the *Literacy Plus* program initiated by the SANLI was the establishment of food gardens which could immediately mitigate hunger and food insecurity. The following case study refers to one attempt to establish a communal garden (SANLI 2003: 18) which provided a model for the later KRG implementation in informal settlements:

Tshepison (which means 'place of promise') is an informal settlement in Soweto. The classroom is a dark shack which comes alive with a vibrant group of learners who break into a song thanking God for their classes. The newly formed class has, in fact, become a strong community group which has taken on various other issues in the informal settlement. They women the show their vegetable garden. Their coordinator Mam Lindi, tells us she wanted the residents to see that the soil is not as barren as it looks. 'Now they can start food gardens at home', she says, triumphantly. 'How do you get the water here?' I ask. 'We each carry a bucket of water with us to class so we can water the garden three times a week', explains one of the learners. As the class leaves we see them carrying their chairs, and I understand how they came to have chairs in their 'classroom'. (Tshepison, Soweto)

Thereafter the same SANLI coordinator assumed a coordinator position in the KRG campaign where she inspired and established a food gardens across the district under her jurisdiction in Gauteng, where poverty and hunger were identified as being particularly important specifically in informal settlements with high population density and little agricultural space. Similar projects were established across all provinces where educators identified a need for more communal agricultural programs to help learners to grow vegetables for their own use and/or to share or sell surplus produce and also to supplement the school feeding of local schools. In the face of rising food costs, it was necessary to mitigate hunger and malnutrition by linking with other government and developmental programs in order to address food security in vulnerable communities. The CDWs proved to be immensely useful in linking the Department of Agriculture with KRG to establish food gardens. As CDW Mthethwa (DPSA 2007: 18) points out with regard to gardening projects, she established in KwaZulu Natal, 'despite being labour intensive, are a fairly straightforward means of breaking the vicious cycle of unemployment, poverty and despair', making the CDWs a natural partner for the KRG from 2008 onwards.

Both the SANLI and the KRG campaigns prioritised teaching learners the basics of planting and growing vegetables via the core literacy curriculum (which included pictorial representations of 'how to plant'), and both campaigns linked with authorities about the use of communal and government land. The KRG had the benefit of input by the CDWs who played an important role in the practical implementation of establishing food gardens, (women's) cooperatives, and outlets for selling produce.

Many of the income-generating projects were geared to encourage and stimulate these groupings to begin family and communal gardens, to encourage small livestock farming, to improve food security, to increase crop yields, to improve their storage capacity and irrigation techniques, and even to market surplus products. Such projects improved family income levels while at the same time targeting those most vulnerable to malnutrition (infants, young children and the immune compromised) through nutrition training and supporting positive nutrition models within the local community.

### ***Literacy and Livelihoods: Some Feedback from SANLI, Which Helped to Shape KRG***

Much of the discussion on literacy speaks about the *social and individual rationales* underlying literacy practice. Osman (2009) points out that the KRG campaign recognized that the social and economic rationales are *inextricably intertwined* and must therefore be addressed in as integrated a manner as possible. She points out that literacy and numeracy skills are foundational skills and precursors for skills training and hence closely related to the social rationale. It is recognized that the ‘social’ rationale is a powerful determiner of what is seen as ‘economic’. Educational status is a powerful determiner of economic power:

- There is a high correlation between literacy and GDP.
- Each year of schooling/learning contributes to increased income levels.
- Literacy has been linked with livelihoods and basic income generation.
- Basic literacy and numeracy are foundational competences for skills training.

Both campaigns aimed at engendering ‘Literacy Plus’, which meant that classes were encouraged and supported in forming small and micro enterprises as an output of the social and educational rationales. Through targeted core literacy materials, the programs taught learners how to better understand how to manage their own budgets and their social grants. This skill could be capitalized on by encouraging the formation of cooperatives to make their social grants ‘go further’ to support households, which by and large include orphans and other vulnerable household members.

Both the SANLI and the KRG campaigns took inspiration from the Indian National Literacy Mission (1988–2000<sup>5</sup>) and the Total Literacy Campaign, under the National Literacy Mission Authority. The SANLI and subsequently the KRG drew upon the Total Literacy Campaign’s approach to training educators, and the interventionist methods employed for monitoring and evaluating as explicated by Shar (2004); and both campaigns were inspired by the ‘Literacy Plus’ component which was introduced to SANLI in 2002 by Govinda and Bordia (see Bordia 2002) and carried through to KRG. Through this, McKay (2004: 134) states that ‘all learners are taught about possible income-generating opportunities and do a course in

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<sup>5</sup> Continuing via other NLM-inspired missions.

small business development—a course that is fondly referred to as the ‘SANLI MBA’. In both campaigns, this gave rise to skills development such as beadwork, basket/mat making, agriculture, stone craft, sewing, woodwork, building, and other development training such as building pit latrines and boreholes and repairing schools as well as training all participants in setting up micro enterprises (cf. DoE 2006: 34–38; Hanemann 2016: 64; McKay 2004: 131–136; SANLI 2003; Shar 2004: 56–57).

Across the SANLI and KRG programs, learners are encouraged to go beyond literacy and to start income generation projects. The two campaigns focused on developing entrepreneurial skills albeit at a basic level. Coordinators, supervisors, or educators who had skills were encouraged to share these with their learners and to cross pollinate other classes.<sup>6</sup> The skills set included sewing, catering, child caring, gardening, shoemaking and repairing, and singing for a fee at weddings and funerals. Insights into the benefits of the classes were captured in SANLI (2003), of which we offer illustrative examples below.

Monica, whose class was born [in terms of birth dates] in the early decades of the 20th century, around 1938, points out that the main stumbling block for her learners which has been their failing eyesight. But the learners have, through sheer determination, mastered the art of reading and writing despite this problem. According to her learners, their quality of life has improved dramatically:

- They can read their bibles
- They can understand TV and radio programs that are broadcast in English
- They are able to write to their children who live far from their province
- And they can conduct business without suspecting the other party of trying to cheat them.

Monica, Ga-Mothopo District (SANLI 2003: 12)

Louisa, a volunteer educator, starts her class (of women) with a song, the lyrics of which are a special feature. They mobilize the women to learn to read and write and to work in teams, instead of as isolated individuals. All the women are engaged in subsistence farming for their households’ consumption, and learning to work in teams has been beneficial for them. According to Louisa, an outstanding feature of this group is the growth they have experience in self-worth and self-esteem and their discovery of the self in late adulthood. She says that since discovering their potential through learning, they started to participate in other activities and are more involved in the community and in improving the environment (Louisa, Masioneng Village (SANLI 2003: 12)).

Site visits by SANLI coordinators were undertaken as part of SANLI (a process carried through into KRG). Responses to the question asked by the SANLI site visitors ‘How do you want your life to change now that you are learning to read and write?’ ranged from personal reasons to better economic opportunities, as reported in SANLI (2003), for example:

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<sup>6</sup>In later assessments of the campaigns, many learners pointed to skills that they had learned this way.

Knowing that she could read and write 'increased my confidence and improved the way I felt about myself'. Another learner said she 'wanted to be a better person and improve my role in the church with the ability to read the Bible.'

Dreams of improving one's economic lot were expressed by Sophi as follows, 'With the knowledge I have, I would like to start my own business, like a day care facility. I will be able to record payments of fees'. Kalafong Hospital, Pretoria (SANLI 2003: 15).

The benefits of literacy impacted also on incarcerated learners who point to its role in mitigating recidivism. This is captured in a report of a site visit to the Krugersdorp Prison.

On arriving at the Krugersdorp prison, a loudspeaker blares, calling inmates to attend to visitors. The steel gates clang and people shout and hurl abuse at one another. Yet somewhere in the mayhem, there is a classroom. The educators who work in the prisons are used to these conditions. In this desperate situation, many men and women, young and old who are serving a prison sentence, have become literate. Many are happy or even proud that they can write a letter home to show that they have learnt and achieved. Their tutors (who are also inmates), are equally focused and dedicated and teach every day. The literacy program eases some of the pain of incarceration. 'I can now read my letter for myself without the risk of being lied to,' says a 40 year old learner. Many of the inmates make a similar comment and emphasize the importance of the self-sufficiency that comes with being literate. Form many of these men, learning to read and write will open the way to a new, more hopeful world. They believe there is even the prospect of developing new skills and techniques change their lives. A 25 year old who is about to complete his term of imprisonment comments that 'reading and writing are skills that are relevant for getting jobs.' As one of the educators explains 'Attending classes reduced our chance of getting involved in unacceptable behavior, which in turn increases our chance of getting parole.' Krugersdorp Prison, Male Section (SANLI 2003: 2)

The feedback and information obtained from learners and educators in the earlier SANLI campaign shaped the design of the KRG campaign which was conceptualized to build on aspects that worked and aspects that learners found to be meaningful for them on their path to becoming literate. Indeed, the terms of reference for the Ministerial Task Team on Literacy necessitated a review of the SANLI, so as to 'locate this review and recommendations emanating out of it within the context of what has been tried and done in South Africa (relating to both successes), e.g., what could be learned from the SANLI process?' (Department of Education (DoE) 2006: 1).

The Ministerial report concluded that the SANLI had:

... mastered the process of recruiting and pre-testing 343,000 adult learners (some 3.2% of whom had some form of physical disability), running more than 7,000 literacy units, warehousing, packing and delivering packs of materials for each learner, testing the use of materials, capturing data for learner records, training and deploying 10,000 volunteer educators drawn from the 60,000 UNISA trained ABET educators (a national resource that can be mobilized for the proposed South African campaign), monitors and coordinators, providing ongoing monitoring and evaluation of the program, as well as providing integrated and continuous assessment of learners and an expanded number of contact hours (in order that learners might be sustainably literate at the end of the program).

It concluded that the SANLI experience sufficed as an adequate pilot for KRG since:

This pilot, based on the original fully utilisable SANLI plan, was recognized as having established parameters for large-scale delivery in South Africa. In addition, the UNISA SANLI roll-out addressed certain 'literacy-plus' income generation, development and life skills (including teaching about HIV and AIDS).

The SANLI model of ongoing active research was built into the KRG as a permanent feature, comprising monthly data reports on attendance and drop outs, monthly reflective journaling, and monthly community of practice (COP) meetings with educators and coordinators, in addition to audit and impact reports, the findings of which fed into the ongoing and progressive design of the campaign. The knowledge generated via the above impacted progressively on project design as the reports and data were shared at interprovincial workshops where COP clusters were represented—thus feeding information into the central National Campaign office in the Ministry of Education. Hanemann refers to the way in which the insights of the educators in the COPs impacted on the National Campaign policy and on strategic planning involving 300 provincial coordinators, which she observed in 2011. As she states about one of the annual workshops:

A workshop was organized by the *Kha Ri Gude* management to jointly develop a campaign manual on the basis of good practice and to plan the program activities for 2011. This participatory process involved a review of what worked well during 2010 and which aspects of the campaign needed improvement. These constituted the building blocks for the [national training] manual. Then the participants worked in teams (per language and province) to develop their Action Plans for 2011. (Hanemann 2011: 3)

The interconnected COPs played a critical role in the implementation of the campaign, affording educators the opportunity to recognize their potency for action and to overcome social constraints as ideas in action, or what Torbet (1981: 142) terms 'experiments-in-practice'.

In these various ways, the findings from quantitative and qualitative data sources and discussion around them informed the progressive design or experiment-in-practice. In the next section, we offer some feedback obtained from learner assessment portfolios (LAPs) which were developed to assess each learner's achievement of learning outcomes, as a tool for formative as well as diagnostic purposes (McKay 2015: 379) as discussed below (with reference to the 2010 cohort of learners). Further to this, we offer an account of how we also sought detailed feedback through focus group discussions and through site visits to projects during our assessment (2013–2015) of some of the impacts made by the KRG campaign.

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<sup>7</sup>The KRG LAPs were based on the design of the LAPS administered in the SANLI. In both campaigns, they were administered each year, to each of the learners.

### *Indicators Sought Through Learner Assessment Portfolios*

The design of the LAPs<sup>7</sup> included three main components. Firstly, they included each learner's biographical information including age, home language, type of residential area (informal settlement, village etc.), whether they had prior learning and if so for how long, employment status, gender, and so on (DBE 2009: 2). This enables correlating the data and showing trends and areas for further intervention. Secondly, the LAPs contained 20 assessment standardized and graded assessment activities. Thirdly, the LAPs included an 'entry' interview which asks each learner about their specific learning needs, and an 'exit' interview' conducted after the assessments are completed, to determine each learner's perceptions of the impact on literacy and numeracy on their own lives.

As part of the exit interview with each learner, educators are required to indicate which of the 24 indicators the learners perceived to be improved as a result of their literacy. The teacher is required to administer the following exit interview so that he/she can explain the wordings to the learners. The teacher is advised to:

Read each of the following statements to the learner. In each case the learner must tick the aspects in which KRG has made an improvement in his/her life. Tick those that the learner agrees with.

I feel more self-confident	1	I feel that people treat me better	13
My life in my family has improved	2	I feel more respected in my family	14
I feel more respected in the community	3	I have more friends	15
I share what I learn with my family	4	I ask my family to help me with my learning	16
I take part in more community issues	5	I can more easily solve problems	17
I better understand my child's schooling	6	I understand the importance of eating correctly	18
I can help my child with education	7	I have started growing vegetables	19
I attend school or other meetings	8	I have improved my position at work (if he/she works)	20
I better understand health and health care	9	I have started some work that helps me to earn	21
I can manage money better	10	I would like to carry on learning	22
I can use cell phone, or ATM or other device	11	I have encouraged others to join kha ri gude	23
I have more books or magazines in my home	12	Other (fill in)	24

Source: DBE (2009: 2)

Based on a sample of 600,000 learners (across all 9 provinces) in 2010, some of the findings showed that:

- 86% wished to continue learning.
- 86% felt they were better able to manage own money.

- 86% felt more self-confident.
- 83% felt better able to understand health messages.
- 83% felt more confident to attend child's school meetings.
- 76% have more books at home since they joined the campaign.
- 69% started work that enables them to earn.
- 59% improved their job position at work.

It was found that 69% of the learners stated that they had 'started earning' since enrolling for the KRG program. While it is recognized that they may not have been referring to jobs in the formal sector (since only 10% were formally employed<sup>8</sup>), 'starting to earn' refers to other informal/survivalist work activities that these learners had become engaged in since the start of their literacy training. Of those who were employed, 59% stated that their job positions had improved as a result of their becoming literate (McKay, report to the Minister of Basic Education 2010).

Some of the types of livelihoods that the learners referred to were also highlighted in the COP 'action research' meetings where the educators' journals were discussed with their peers and supervisors. Whilst the journaled topics included a range action-oriented issues pertaining to activities both inside and outside the classroom, the following relates specifically to 'Literacy Plus' matters which included reference to the various types of livelihood activities:

My learners are happy to be able to write. They even have thoughts of opening Spaza shops because they can count, read and write.

My learners are now able to participate in community projects like farming.

My learners can now count the numbers of eggs laid each day for selling.

My learners demand to be taught to sew. They want to sew and sell. The supervisor had to explain the importance of learning to read and write first.

Learners have started to learn skills like beadwork and sewing.

My learners were often absent until I started teaching them to crochet. They are now motivated to come to class. After learning they make things to sell.

The learners in our classes started a bead making project and they sell beads to help themselves.

Business learners started to make beads which we are going to sell. They make beads for their hands and for the neck and heads.

I have a good relationship with my learners. They can now bake bread and they learned how to sew clothes.

My learners have set up a vegetable gardens and their family gets vegetables from this garden.

Her learners help the community by moulding clay posts and sell them to the community.

I taught my learners to make shoes. They are planning on buying their own materials in order to use their shoemaking skills that I taught them.

They have formed a group for growing vegetables together and will take them home and sell them.

The types of projects mentioned above were projects inspired via the Literacy Plus agenda, and by the 'World of Work' theme included in the core materials. Both

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<sup>8</sup>As was indicated from the data captured on the learner registration forms.



literacy campaigns encouraged people (educators, supervisors, artisans in communities or the CDWs) to share skills with the learners for their own entrepreneurial projects. In the SANLI, a booklet entitled *Talking about BIZNIS* was used to stimulate learners to think about possible market-related products or services that the learners might sell as part of the Literacy Plus component. This idea was incorporated into the KRG core literacy materials. Osman refers to the benefits of what she termed a balanced literacy approach through which:

Learners acquire a balanced literacy in the sense that there is a combination of skills that are solicited whilst delivered in the context of relevant thematic units, such as ‘family’ or ‘health’ or ‘finance’, that can benefit a wider group beyond the individual. Through the MLC [KRG], learners and communities develop better capacity to support families; as well support children’s learning and development. (2009: 29)

Preece (2013: 314), in her discussion of the role of adult education in reducing poverty, points to additional benefits derived from adult learning—she points out that there is evidence that different forms of learning (e.g. community-based education) can impact on self-esteem, health, wellbeing, civic participation, and progression to other forms of learning. When people have more self-confidence, their ability to take more control over their lives also increases. As she states:

People in poverty need learning that supports all aspects of their lives and develops [social] capital that enhances personal identity and social solidarity as well as human capital. (2013: 314)

It was this that the two campaigns were aimed at enhancing.

We have focused above on offering some data pertaining to people’s conceptions (recorded quantitatively and qualitatively) of the meaningfulness of SANLI and KRG to learners’ lives as solicited during the running of the campaigns (and as assisting the direction of the implementation of the campaign). We now turn our attention to the assessment of some of the impacts through a research study undertaken by the ABET and Youth Development Department at UNISA, which took place after learners had completed their literacy learning, in the period from 2013 to 2015, and which spanned three provinces (KwaZulu-Natal, Limpopo, and the Eastern Cape). (We chose just three due to financial constraints.)

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<sup>9</sup>The visit in which Romm participated to KwaZulu-Natal (2013) was with Akwasi Arko-Achemfuor and Joyce Dhlamini. (Arko-Achemfuor was the project leader for the whole KRG assessment.) The visits in which Romm participated to the Eastern Cape were with Mpho Dichaba and Mfungulwa Anakoka (2014) and the following year (2015) with Akwasi Arko-Achemfuor (with the latter visit being a ‘small business training’ visit).

### ***Assessment of Impact from Point of View of Learners (Graduates): Research Undertaken from 2013 to 2015 Across Three Provinces***

In this section we concentrate on focus groups and on a subsequent additional visits undertaken by teams involving Romm (who visited KwaZulu-Natal and Eastern Cape) so as to provide authenticity to the ‘findings’ as expressed.<sup>9</sup> Admittedly, we do not claim that the findings can be regarded as a value-neutral account of people’s experiences of the campaign and its impact on their lives, as the findings are made up of memories of learners (and of educators and coordinators) and also reflect their way of ‘telling’ to us as facilitators. Interactions between researchers and participants constitute an interactive event, which includes the various parties’ responses to each other and to the research context (Hesse-Biber 2010; Liamputtong 2011; Lincoln and Guba 2013; McKay and Romm 2015; McKay 2017; Mertens 2014, 2016; Romm 2001, 2014, 2015, 2017; St. Pierre 2017). In the case of our facilitation of focus group sessions, and subsequent project visits and discussion around them, we tried to keep the interactions ‘informal’ so that the researcher/participant divide would not be too distinct (see also Chilisa 2012; Chilisa and Preece 2005; Kovach 2009; Ndimande 2012). As can be seen from one photograph below (taken at a site in KwaZulu-Natal after a focus group discussion), the participants felt comfortable with expressing their pleasure at the fact that the group session had been held. The paper plates that they are using as part of the dance were supplied when we had supplied food too as part of our way of thanking them for their participation. It should be noted that in this case the discussion had been held outside under a tree (although in other sites it was in places such as school classrooms and churches) (Fig. 13.8).

The photograph shows focus group participants dancing together at the close of a focus group session in KwaZulu-Natal (Fig. 13.8).

The ABET and Youth Development Department at UNISA undertook the assessment of the KRG campaign in order to assess primarily how KRG graduates felt about their learning from their involvement in the KRG campaign. To this end, various members of ABET visited the three provinces and facilitated focus groups with KRG graduates from previous years while also conducting additional conversation with certain learners, educators, and coordinators. The focus group (FG) discussion sessions were aided by local language translators in cases where the facilitators were not conversant with the local language.

In each province, the visits included FG visits to three different sites in the province, where samples of learners (graduates) had been recruited to participate (with the aid of KRG coordinators). It also included a subsequent ‘member checking’

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<sup>10</sup>As it turned out, these also became occasions in which participants/members indicated to us what further support would be helpful to them, some of which we tried to take up ourselves and some of which McKay transmitted to the Ministerial Committee at the ‘phase-out’ stage of KRG. See also Section 8.3.3.



**Fig. 13.8** Dancing after a FG session



**Fig. 13.9** Dancing together with ABET team member Mpho Dichaba—the one in flowery dress—after a FG session in the Eastern Cape

visit where we discussed with participants our draft syntheses of what we thought they had highlighted during the FG sessions and asked them if they wished to change (modify, erase, or add) any information.<sup>10</sup> And on both types of visit, we were taken to sites where projects (e.g. vegetable gardens and vegetable farms in many cases, a bakery in one case, a pre-school in another case) had been set up by learners, in conjunction with their volunteer educators (and with coordinators at times also being involved).

The FG questions which were to guide all the facilitators across all of the provinces were codesigned by the team involved in the research. We used as basis for these questions some of the aims as specified in KRG campaign literature as being the goals of the campaign. The scope of the campaign was also summarized in the government's Portfolio Committee Meeting of 2017 (at the point at which the project was being phased out) and refers to the campaign as having been intended to cover the aims outlined in the report of the Ministerial Task Team (DBE 2006) as:

- Enliterates adult learners who are 15 years and over, proportionally across nine provinces
- Caters for people with disability
- Provides learners with literacy and numeracy materials and assessing and certifying learners
- Promotes the right of all citizens to gain access to basic education in their own language (according to the 11 official South African languages)
- Empowers socially disadvantaged people to become self-reliant and uplift their living standards of poverty (Ministerial Portfolio Committee meeting 2017)

In terms of aims such as these, we developed a guide of the following questions to be posed (by facilitators) during the FG discussion sessions in the various provinces:

1. Since you have been in the Kha Ri Gude campaign, have you been able to start a community project, for example, vegetable garden, etc.?
2. Through engagement in the campaign, what type of community participation are you involved in, for example, church activities, political involvement, volunteering work, etc.?
3. Since you have been in the campaign have you been able to start your own or with others a business enterprise, income-generating activity, or did you find work or promotion (or just work better with others at work) because you can now do your work better?
4. Has your involvement in the Kha Ri Gude campaign contributed toward you assisting in your child's or grand child's school work and/or participating in the SGBs [School Governing Bodies]?
5. Are you able to look after your health better now and the health of others after attending the Kha Ri Gude campaign?
6. Have you considered studying further to ABET level 2 and maybe until you obtain matric?

7. Please let us know if there is anything else that you can think of where the Kha Ri Gude has impacted on you and/or on the community.
8. What do you think could be done to extend the campaign in the future and also what can be done to support you more in the future to improve your lives (and the quality of life in the community)? What do you think is still needed?

Finally, we stated:

We very interested to know how you experienced the discussion today. Do you think you learned from one another? Please give examples if so. Do you think you learned from hearing our questions and creating answers? Did our questions help you to think about the way in which the campaign has an impact? We are interested in any comments that you have about the session today! Who wants to start?

Of course, space in this chapter does not permit a display of all of the 'data' that was generated arising from these questions. But below we isolate a few answers provided by participants during the course of the FG discussions, which give an idea of how the KRG classes had led to their becoming involved in projects and also to give an idea of how it had led to their increased involvement in community and political life. It is noteworthy to mention at this point that most of the participants in the FG sessions, as in the campaign, were women, but there were also some men; the ages of participants ranged from 18 to 70 years old. We have not tried to isolate all of the responses from the individual participants, but answers were given by different ones, who all participated in the group discussion.

**1. *Since you have been in the KRG campaign, have you been able to start a community project, for example, vegetable garden, etc.?***

Yes, since I joined KRG I was encouraged to start baking, working with my children to sell cakes and got money for the family.

Through KRG I learnt how to sew, and sell the items to the community. I have some of the work at home; should I go fetch it now so that I can show you my work? [Here the facilitator indicated that she could fetch it later.]

*How did KRG help you to sew?*

Our teacher encouraged us to do things for ourselves. She told us to group ourselves and start to work as small groups in different small projects like baking, gardening, sewing and many more. Also from the skills we learnt and shared amongst each other.

*How did you learn how to sew?*

Our teacher encouraged us to start working, doing things for ourselves, those who are able to perform a certain skill should work with others to as a group.

I also learned bead work. Our teacher encouraged me to help others to learn bead work because I knew it, we then came together to form a group to do bead work.

*Is it only learners from this class who is doing bead work or maybe there are others outside from this class?*

Now there are no people from outside our class, it is only us as members in this class who formed the bead work group. We do the work and sell it to other people in the community. Those who have talent helped and teach others various skills.

*Was that encouraged by the teacher?*

Definitely our teacher encouraged us a lot also by supervising our work.

**2. *Regarding reading and writing skills, how do you feel about your reading and writing?***

Previously, I did not know how to read and write. If for example there was somebody at home who wanted or came with the information to read, I would be in trouble because I had to ask my children to help me with the writing. But now I can write and read for myself.

I gained a lot when it comes to reading and writing. I do not rely on other people anymore but I am now able to do my own reading and writing.

*How does the reading and writing skill help you?*

I am able to read around our area the road signs. I can now read the prices of items in the shops when I do groceries. I am able to write my things and no longer bother other people to read and write for me.

One gentleman said, 'I am so much pleased because I am able to read and write, able to do banking on my own and not ask other people to do it for me'.

*How does numeracy/counting help you?*

I know now that if I withdraw so much from my bank account, this will be my balance, also when doing the banking,

When I came in KRG I didn't know English but now I can understand a little of it. When watching the soapies on TV (Generations and Muvhango) the mix with English, I would not understand. I am happy that now I do understand.

One old lady said: At church when people opened their song book was to sing. I would move my lips and look on the song book as if I am reading, but now I can open my song book and read with others from it. I used to be embarrassed with my ignorance, but today I have developed confidence in myself.

**3. *Through engagement in the campaign, what type of community participation are you involved in, for example, church activities, political involvement, volunteering work, etc.?***

Mam it is a problem when I am looking for a job. I am able to speak English when looking for employment. When the employer asks my name, I am able to say my name; What's your surname? I can answer; Where do you stay? I would say Hambanathi. When you are looking for a job you must be able to communicate with the owners.

*Were you able to get a job somewhere?*

Yes, a garden job in the nursery to plant flowers.

As I am able to sew, I can now help other people in my community. If I observe that there are need people in the community, depending on the material, I am able to sew something for this person and help to donate.

*Do you think KRG has helped to help the poor in the community?*

Yes, it has enabled me with this skill to be of help to my community.

I learnt how to do my garden and whatever I get out of my garden, I am able to share with others who do not have.

I participate in the community projects. I have been elected in the old aged organization in the area to come and assist the elderly to do some exercises.

I conduct a certain program for them. I think it is through KRG that I was encouraged to participate and contribute in my community without expecting any payment. I am responsible for the sports section in the organization.

*How did KRG help you in this participation?*

KRG has contributed by giving me confidence on myself and be able to participate in this community engagement. I used to be shy to talk and help others, but KRG has helped to talk to other people and to realize the importance of helping others.

*Are you getting any payment for the work you are doing?*

No, this is a voluntary work. I feel so excited to help other people in my community.

I also got a job of arranging cards and packaging of items in another industry, it was just a once off job its now over.

**4. *Since you have been in the campaign, have you been able to start your own or with others a business enterprise, income-generating activity, or did you find work or promotion (or just work better with others at work) because you can now do your work better?***

KRG has helped me to be able to read directions. I was once engaged in a community prayer project. I was only given directions to get to the area.

Through KRG I was able to get there and formed part of the group.

*How many of you are employed or working somewhere, what has KRG helped to get the job?*

*No one else here got a job in some organization as the gentlemen has got a job at some stage. Is there anyone else who managed to get the job?*

Most of us started own business, like sewing, baking, beadwork.

My social life has improved. Coming to school [KRG classes] and share our experiences helps a lot to handle our own individual challenges, from our different families like family misunderstandings.

### *Extract from a FG Discussion in KwaZulu-Natal*

The FG discussion outlined in this section took place in 2013 in Hambanathi (in KwaZulu-Natal) and was with eight graduates from the previous year. It was conducted (in a school classroom also used to conduct KRG classes) in isiZulu. The facilitator—staff member of ABET, Joyce Dhlamini—also did some simultaneous translation into English, which led at some points to Norma Romm suggesting some additional probing questions to be asked. Some of the responses in the extract below give an indication of how the educators had tried to encourage ‘self-reliance’ (including in groups where people shared skills) while teaching reading and writing skills; and they also offer an indication of participants becoming more involved in social and political community life. We concentrate below on the discussion around some of our questions in this regard (as transcribed by Joyce Dhlamini).

The discussion then proceeded more or less according to our FG interview guide, but these are less relevant to the substance of this chapter, so we are not recording them here. Instead we turn to offering some reflections.

#### **Some Commentary/Reflections**

The gist of this discussion from this extract (from a FG discussion in KwaZulu-Natal) indicates that as far as work life was concerned, people stated that rather than managing to get jobs in formal organization, most had managed to start some sort of business. They also proudly displayed their beadwork, shoemaking, and other sewing products to us. (The shoes were made from recycled plastic, also evidencing that they had been aware of the importance of recycling as part of environmental awareness as taught through one of the themes in their learning material and that they had innovatively created shoes from strips of plastics.) (Fig. 13.10).

And we were also shown a vegetable garden which had been established by the learners and educator. In discussion between McKay and Romm (on reflecting on this kind of data), McKay indicated that learners and teachers were encouraged across the campaign to share skills that they may have—so that others could benefit from them and so that the campaign could enskill people in more than reading, writing, and numeracy. Also, as they shared skills, so they often were able to form cooperatives in which they could all participate. Nafukho (2006: 412) suggests that this is consistent with what he calls a core tenet of the African philosophy of Ubuntu, which tenet is that ‘learning and work in the traditional African societies were accomplished through peer alliances’. He indicates that when peer groups are formed, they become economically self-reliant. This is not to say that all the participants felt that their skills base was sufficient. Many participants (in all the groups across the selected provinces) pointed to the need for further skills training. For example, some stated that although, say, they could sew aprons, they needed further sewing training; and likewise with other skills, such as shoemaking, they wished to further advance their knowledge. Many of the participants also stated that they





**Fig. 13.10** Display (on the floor) of table mats, mobile phone covers, and shoes: these FG participants showed to us their handiwork made from recycled plastic (of which Norma bought some items, also as an expression of reciprocity)

needed more skills in small business development. While we could not offer support from our side for the specific skills that they mentioned that might be helpful to them (in regard to advanced sewing and shoemaking, for instance), we could offer help in the general setting up and sustaining of small businesses.

In order to try to offer help in this regard, we arranged further visits to the three provinces (as part of the community engagement portfolio at UNISA) to offer some skills training in small enterprise development and project management. This effort on our part (which included 2–3 day visits again to the sites visited) was spear-headed by the original coordinators who had arranged the site visits for us. This was an(other) way of our inputting into the community, as advised as part of a relationship of reciprocity by those calling for a relational ethics in research practice (cf. Chilisa 2009, 2012; Kovach 2009; Mertens et al. 2012). In these visits, we took care not to advance what Baatjes and Mathe (2004) call a neo-liberal conception of productivity as tied to the exercise of maximum profit making, but more as tied to trying to create sustainable employment, ideally in cooperative enterprises.

Aside from this involvement in further ‘training’ in small enterprise development, some of the ABET team members also helped certain participants (in Limpopo province) to work out how to construct funding proposals which they could prepare to ask businesses in their areas for donations (e.g. to build a fence and/or buy a tank or pump for their cooperative gardens). The proposals which were developed turned out to be successful. (This also gives an indication that these businesses in the community were committed to some corporate social responsibility.)

***Extracts from Interview/Conversation with Monitor  
and from a FG Discussion with Learners as Translated  
by Her (Eastern Cape)***

We now turn to an example of a small cooperative bakery which was being run in a district in the Eastern Cape which we visited. The extract immediately below is based on an interview/conversation held in 2014 with the monitor of the area here named as MB (also a founder of the bakery in a place called Qandu where the interview occurred), with Norma named as NR. Following this extract, we turn to the way in which MB translated the FG questions which we asked (through MB) of the learners who had been sampled to participate in a FG session from this area. There were nine learners (KRG graduates) who participated in the FG.

**Discussion with Monitor in Relation to the Bakery**

We then went on to consider together that they may be able to still negotiate with some schools in the district to continue to buy their bread, after which we began the FG session, as detailed below (Fig. 13.11).

**NR:** This bakery seems to be a successful project. How did it start? Did it arise as a result of KRG?

**MB:** Before 2008, we had already started from our own pockets [during the SANLI initiative], but things started materialising from 2008 [with KRG].

**NR:** That is when you started to get the learners together.

**MB:** Yes, those who are working at the bakery should raise their hands.

**NR:** But can you tell me something, who are you baking for?

**MB:** For the community. Look here at this bread, yesterday these shelves were full. Things are different in the morning when they want to have breakfast. They buy the whole lot.

**NR:** Do they come here or they do you sell out on door to door.

**MB:** Do you see this lady? This lady is my successor. She is the principal [of a school where bread is delivered]. She followed me [as principal]. I was a principal at the school. So we spoke to her because she knows us. She allowed us to deliver bread to her school last year for her students.

**NR:** Is it part of the school feeding scheme?

**MB:** Sort of, when I left the school, I had built another school as a finishing school for those learners who have failed standard ten to help them to get the metric certificate. So those are attending at 2 p.m. So that is where the need is for them to eat. We are transporting this bread for them.

**NR:** Who pays, is it the government feeding scheme or the parents?

**MB:** No, what is happening, out of the funds of the Government, she [the principal] is able to pay the small amounts.

**NR:** Oh, I understand. Mrs. MB if you are getting money from the school can't you pay some of the loan back [i.e. the loan that had been created to start the bakery]?

**MB:** No, they are paying for bread.

**NR:** For the new ingredients?

**MB:** No, it is bread, we sell loafs there, we take this bread to the school so the school pays the bread that's all not the Govt. Meanwhile, there is so much we start paying, e.g. for the watchman, we pay the cleaner and bakers; so it would mean each and every month we would get something like R6 000, but it is not there at times.

I was still showing you something that we do under the baking side, then we will show you under literacy, come. The coordinator for this place is that one who is dancing there: the actual coordinator.

**NR:** Yes, we came with her; we drove with her this morning [we had driven from the area where our accommodation was situated].

**MB:** What is happening in our [KRG] hierarchy is: I am a monitor, then the coordinators, then the supervisors. I wanted to now show you these buns.

**NR:** Are these the ones we ate this morning in your house?

**MB:** Yes, the buns and the scones.

**NR:** Who buys these scones?

**MB:** The taxi man, they come here to buy bread. But what has killed us with the feeding scheme is that the Govt. is of the opinion that they must cook for the learners at school. So they no longer need bread as they used to.



**Fig. 13.11** Cooperative bakery in Eastern Cape (Qandu)

### *A Focus Group Session (in Same Place as the Bakery)*

Further to the conversation with MB in relation to the bakery, we began the FG session with learners (graduates). The transcription below—also done by Joyce Dhlamini who had done the KwaZulu-Natal transcription—does not distinguish between different FG participants, who are all named hereunder as RSP (research participant). What is highlighted here is not the individual contributions, but the gist of the discussion, which was recorded as follows (as translated from isiXhosa).

**NR [speaking via MB as translator]:** Do you have other projects except the bakery that I have seen?

**MB:** They have none.

**NR:** Is it only the bakery?

**MB:** But they do have gardens at home.

**NR:** Did you learn anything from KRG about those gardens at home?

**RSP:** Yes, we can plant cabbage, potatoes, spinach and sell to those who do not want to plant anything.

**NR:** Did you learn anything from KRG, was it to plant, cultivate, or anything?

**RSP:** KRG taught us that when we plant, how must we take care of our garden/plot, preparing the soil and how to feed the plants and even the spacing between the plants.

**NR:** Did you learn that at KRG? Oh that's a good thing.

**MB:** Yes, yes.

**NR:** Next question: Through your engagement in the campaign, what type of community participation were you are involved with like in the church, political involvement, meetings and volunteer work?

**RSP:** We go to different churches. We preach the gospel of the Lord in our communities, visiting of the sick. We are also involved in politics.

**NR:** In what way?

**RSP:** We get involved because as community members we need to belong to something so that in political meetings we have something to hold on.

**NR:** Are you confident to speak now in meetings?

**RSP:** Yes, we do stand up and talk as women.

**NR:** Do you think it helps? Are the people listening?

**RSP:** Yes, we do although sometimes they mumble, but they do listen to us.

**NR:** And does it make different services?

**RSP:** We do not have flushing toilets as yet, but the construction has started in our community. Even the road construction is happening, it is better this year.

**NR:** Do you think it happens because you have been more active?

**RSP:** Yes, because we talk about them and we ask for those services in meetings.

**NR:** That has helped, then. I am not going to ask about the business because we know about the bakery. Are there any other places or venues?

**MB:** Yes, there are others that are working in the CPWU. He is working on the road construction.

**NR:** Did KRG help you [this worker] to get the job or a better position or work better with other colleagues?

**RSP:** Yes.

**NR:** In what has it helped?

**RSP:** People on the road are very easy to work with because you just show them how to fill in the potholes. Initially I was a quiet person, but through involvement in KRG I was able to talk.

**NR:** Did you gain more confidence?

**RSP:** Yes.

**NR:** Has KRG helped you to assist the children or grand-children with school work or participate in School Governing Bodies (SGBs)?

**MB:** 4 of the participants here are involved in SGB.

**NR:** All got involved after being involved in KRG?

**MB:** Yes, they were chosen because they were becoming cleverer now.

**NR:** Are you also helping your children, grand-children, or other children with their school work?

**RSP:** Yes, we help them with their school work. I start by cooking breakfast for them before they go to school. When they come back from school they must show me their books and I would help them.

**NR:** Is this the only person who is helping children, what about all of you?

**RSP:** We help them all of us.

**NR:** It's helpful then; there is a lot that you are doing. In terms of health, are you better able to help yourselves and help the others after joining KRG?

**RSP:** Yes, we help others who are sick with High blood pressure and diabetic.

**NR:** How do you help them, to get to the clinics?

**RSP:** It is so near; we accompany people to go the clinic. We even wash them as neighbors.

**NR:** Has this to do with KRG?

**MB:** Yes.

**NR:** In what way?

**RSP:** They taught us in KRG how to take care of others, ensuring that each and every person/patient is taking medication every day.

**NR:** Are you helping the community in other ways?

**MB:** Yes, we do the voluntary work.

**NR:** Are you more respected in the community since KRG?

**MB:** Yes.

**NR:** Have any of you considered studying further to ABET level 2 maybe up to matric?

**RSP:** Yes, we do want that.

**NR:** So you have got a lot of desire; and is there anything else we have not thought of in this set of questions that might have an impact in the community?

**RSP:** Yes, we can do many things like reading and writing. They taught us good things. We are now beautiful, neat; we can make things with our hands like scones for our families to eat and for selling.

**NR:** This is about extending options in the future, what can be done for your future lives? What could be done although we know this could be problematic? What could be done to support in the future to improve lives, and what more is needed?

**RSP:** We would like to get better work.

**NR:** How would they get better work?

**RSP:** By, for example, furthering our studies also in English.

### *A Note Regarding Participants' Expressed Wish for Further Study*

Earlier sections of this chapter drew attention to the fact that across all the provinces (according to 2010 data that we used as an example), 89% of learners indicated in their LAPs their desire to continue with further learning but were prohibited due to a range of challenges. McKay (2012: 22), in responding to the DHET Green Paper (2011a), recommends that the proposed differentiated college system makes provision for learners wishing to access vocational or bridging programs or foundational and other skills at the basic levels (see DHET 2011b). She argues that exploratory research of each of these mandates is needed to refine each of the proposed institutional types, as follows:

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**Community learning centres**

These centres offer literacy and ABET to adults and youth who have less than grade 10. The available research is silent on what happens to learners who have attended ABET and FET programs. Do they enter the job market? If so, what types of jobs do they get? If not, what should be done to assist them to join the economy in either the formal or informal sectors?

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**Kha Ri Gude learning network and database**

The mandate of the KRG campaign could be expanded so that its network of 40, 000 operatives is used to provide literacy and ABET programs as well as the full range of community education, voter education, and even early childhood development (ECD) training programs and, as such, support other state departments and spheres of government.

As already emphasized, much research would be required in order to understand the needs and aspirations of the learners entering and exiting the KRG system, and ways of expanding and integrating the campaign's network into the post-school system would also have to be researched. Here, too, KRG has much to offer: Of the many institutions operating in this sector, it has possibly the best database on its learners, with data on more than two million learners and a further 700, 000 learners in the pipeline [at that stage in 2012]. It contains biographical information, assessment data, as well as data on how learners perceived the learning to have impacted on their lives and their learning aspirations. If analysed, this primary data can provide useful insight into the lives of the learners. Correlating these three data sets with a tracer study could give a rich portrait of who these learners are, what their aspirations are, what impact learning has had on them, and what their future learning needs might be.

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**Adult and community learning institute<sup>11</sup>**

The nature of this institute and the needs that it will serve should be researched. There is a gap in the research as to the models used by similar international institutes. These should be examined in order to inform policy and implementation.

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**Community colleges**

Community colleges should provide formal and non-formal learning programs, offering vocational and occupational skills programs as well as ECD, home-based and primary healthcare programs. Community colleges should be dispersed across the regions and should present programs that lead to employment or that articulate with universities. However, the model for community colleges will have to be better explored so that the mandate and interfaces of these colleges may be more clearly defined. The international models of community colleges which provide academic and technical and vocational programs could be usefully explored.

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**Every workplace a training space**

Finally, the green paper emphasizes the importance of improving the system of vocational and professional training by ensuring a combination of classroom-based and workplace training. Both industry and government will have an important role to play in providing basic education. The green paper points to the need to build on the National Skills Accord to ensure that all employers provide workplace experience in the form of apprenticeships, learnerships, and internships. This role is not confined to private enterprise: State-owned enterprises, the public service, municipalities, and other organs of state (e.g. police, defence force) should all ensure that their workplaces are also training spaces.

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Subsequently, the DHET White Paper (2013: 20) states that the adults (mainly women) who attend the DBE's KRG mass adult literacy initiative and some of those who attend Public Adult Learning Centres (PALCs) often find that there is no oppor-

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<sup>11</sup> If it is possible to establish an efficient Adult and Youth Community Learning Agency, consideration could be given to locating KRG within its ambit. However, the KRG network is a highly efficient delivery system which should not be tampered with.

tunity to continue their education. The expansion of educational opportunities at which this White Paper aims cannot be achieved only by existing educational institutions. A new type of institution has to be built and supported, one that can offer a diverse range of possibilities to people for whom vocational and technical colleges and universities are not desirable or possible.

Many of those who have not completed school need a second chance to do so. Others may want to continue their education in other ways, learning skills which will empower them to enter the labour market. Others may have lost their jobs or were made redundant by new technologies and seek to reskill themselves. We should also face the fact that, given the current high levels of unemployment, many have little chance of entering the formal labour market as employees and need to find alternative ways to earn sustainable livelihoods.

## Concluding Note: Our Approach to the Mixed Methods Research

We have tried to illustrate in this chapter how our approach to the mixed methods research using a range of data sources contributed in this case to the development and assessment of the KRG campaign, in close cooperation with participants whose feedback was sought at all stages. We have also tried to offer an indication of how our ethical stance of relationality (to be furthered in research and in social life) affected the way in which we interacted with the participants to try to show care while interacting with them and to take seriously the importance of establishing a relationship of reciprocity in the research process. We have not in this chapter discussed how we undertook research in relation to the goal of the campaign to cater for those with ‘disability’. In McKay and Romm (2015), we focus on this, with special reference to the contribution of the blind practitioners in the campaign, who served the community of blind adult learners whom they recruited.

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**Part IV**  
**Policy Directions to Promote Social and**  
**Environmental Security**

# Chapter 14

## Cascading Risks of Climate Change Political and Policy Dynamics of Water Crisis: ‘Consequences of Modernity’ and Implications for Transformative Praxis



Janet McIntyre-Mills and Rudolf Wirawan

**Abstract** The chapter underlines the importance of sociological research across boundaries and the so-called Mode 2 knowledge production (Gibbons et al., *The new production of knowledge*, Sage, London, 1994) based on systemic approaches that span conceptual boundaries and support working across disciplines and sectors in order to respond to the cascading consequences of modernity and to address the new cascade economics (Pauli 2010) that maximise opportunities in new creative ways that flow from an ecosystemic approach. Giddens stressed in the ‘Consequences of Modernity’ that trust is contingent and that risks escalate when transfers are dis-embedded from local contexts and local controls. The systemically interconnected nature of social, economic and environmental danger and risks are explored elsewhere (McIntyre-Mills, *Planetary passport*, Springer, New York, 2017). In this paper, I draw on Giddens (*The consequences of modernity*, Stanford University Press, Palo Alto, 1990: 71) in terms of the crisis of trust and rising risk and discuss the water crisis in the city of Cape Town as a symptom of convergent challenges associated with the way in which the nation state interacts with the global economy, in line with the international division of labour and in the interests of military power and capability.

**Keywords** Cascades · Risk · Connections · Trust · Regeneration

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## Introduction

The paper makes policy suggestions as to how the commons could be protected. We suggest that the development of engagement software *could* extend triple bottom line accounting and accountability (see Elkington 1997; UN Local Agenda 21) by addressing social, cultural, economic and environmental indicators that enhance transparency and that this would help to build trust.

Rapid adaptation to conserve water in Cape Town has been achieved through a combination of (a) fear for the future, (b) a desire not to be shamed through a transparent water management mapping system as well as (c) through generous donations of water by farmers within the region and by NGOs across South Africa. The change in behaviour can be attributed in part to governance through mapping water usage on an Internet website. Despite initial misgivings, the use of the transparency tool helped to restore a sense of community trust, because piped household water consumption could be monitored. Inglehart (2016) made the case that increased disparity in wealth and life chances leads *to less support* for democracy and that post-material values are *less likely* to be adopted by people with low incomes. But this is not (as yet) the case in Cape Town. The Capetonian response to cascading risks has avoided worst-case scenarios (Bond 2018) and has drawn the community together to eke out the water supply until the next rains and until better adaptation strategies are implemented with the state and private sectors. Water saving and water donations from the ‘Gift of the Givers’ and from farmers have helped to stave off Day Zero in Cape Town.

Inglehart’s (2016) essay on democracy makes the case that democracies are more robust in contexts where the divide between rich and poor is low. He follows Stiglitz (2010) in arguing that populist responses are more likely to occur when the 1% makes self-serving decisions rather than in the interests of the common good. But democracy prevailed in Cape Town through greater transparency in the use of resources and by assurances that everyone would be subject to the same sanctions for misusing water. The potential for rapid adaptation aided by a water management map has been demonstrated in Cape Town (at least in the short to medium term). Capetonians have responded to a shared sense of risk and a common goal to save water. The challenge is to enable monitoring and transparency from above and below. It is suggested that training in the use of engagement software in schools and community contexts needs to occur in order to compare and contrast the participating communities.

Environmental changes at a global level are associated with increased risk of drought and consequent **food and water insecurity** as detailed by the UN-Habitat report (2016). These events are more than one off droughts and as such pose an ‘existential risk’ (Bostrom 2011). The most marginal groups (the poor) are most likely to encounter water and food insecurity (Figures 2015).

## Socio-Political Context of the Water Crisis in South Africa

The United Nations report in January 2018 stresses that we are fast approaching critical levels in temperature and cites the Secretary-General's Special Representative for Disaster Risk Reduction, Robert Glasser:

“A 3-year streak of record hot years, each above 1° Celsius, combined with record-breaking economic losses from disasters in 2017 should tell us all that we are facing an existential threat to the planet which requires a drastic response... We are getting dangerously close to the limit of the 2° C temperature rise set out in the Paris Agreement and the desired goal of 1.5° will be even more difficult to maintain under present levels of greenhouse gas emissions,” he underscored.”<sup>1</sup>

Environmental changes at a global level are associated with increased risk of drought and consequent food and water insecurity as detailed by the UN-Habitat report (2016). These events are more than one off droughts and as such pose an ‘existential risk’ (Bostrom 2011). The most marginal groups (the poor) are most likely to encounter water and food insecurity (Figueres 2015). This chapter aims to explore plausible regional pathways to wellbeing and resilience. A highly urbanised, environmentally affected region of the Western Cape and Cape Town is addressed in this paper and the cascading impact on the habitat across the continuum from domestic, liminal, agricultural and wild animal life (to draw on Donaldson and Kymlicka (2011).

The transfer of dammed water to the metropolitan area has staved off Day Zero, but the drought impacts reliance on springs and may place increasing pressure on animals. Dirk (January, Dirk 2017) stresses in her article that whilst bottled water has been donated through volunteers to the Western Cape, the impact on animals has not been thought through. She makes a plea for more water and feed for animals and highlights how the drought has already impacted farm animals in other areas. She stresses:<sup>2</sup>

Farmers in Namaqualand and Kalahari have had to feed potatoes to their cattle to keep them alive. Other farmers have had to kill their animals because they cannot afford to feed them. “It is heartbreaking to see a calf look for shade in which to die because its mother has starved to death,” said Gerber. ... 2000 bales of hay have been collected and transported to feed these starving animals.

Another problem that has not been thought through (not mentioned in her paper) is the way in which the many plastic bottles are being used to rush water to the Cape. The cascading effects of heavy use of carbon resulting in climate change (Stiglitz 2010) are now leading to reliance on plastic (carbon-based and nonrenewable forms) to provide water in an emergency that could be staved off by using available water more carefully.

<sup>1</sup> UN news 2018 ‘Near-record warm temperatures fuel deadly, costly weather events in 2017 – UN <https://news.un.org/en/story/2018/01/1000721>.

<sup>2</sup> <https://www.iol.co.za/capetimes/news/help-rush-water-animal-feed-to-drought-areas-1968817>

Elsewhere (Chap. 4) I cited Jeranji (2018) who stressed that baboons in the Western Cape are encroaching onto domestic properties as they are displaced from their own spaces. A plea is made to give them time before they are ‘euthanised’ if they are moved away and then return. But the problem is incorrectly represented merely as a need for more time to get used to being displaced. Instead they need secure territory of their own, and they need safe passageways to reach the springs from where they seek water. Another indicator of displacement and loss that is commonly observed in the Western Cape is that large numbers of Guinea fowl are now seeking water in suburban gardens.

Highly urbanised regions in disaster-prone regions convergent challenges of insecurity and are at risk, unless strategies are explored with service users and all levels of government to find better pathways to socio-economic and environmental justice that protects the commons in ways suggested in this volume.

The systemically interconnected nature of social, economic and environmental danger and risks are explored elsewhere (McIntyre-Mills 2017). In this paper, I draw on Giddens (1990: 71) in terms of the crisis of trust and rising risk and discuss the water crisis in the city of Cape Town as a symptom of convergent challenges associated with the way in which the nation state interacts with the global economy, in line with the international division of labour and in the interests of military power and capability.

Neoliberal economics has played out in South Africa in ways that have resulted in protests against the lack of education, services and basic infrastructure.

- Firstly, the problem of water is linked with climate change as although it is the worst drought for more than 300 years, it is considered to be part of a pattern of climate change (UN Habitat 2016).
- Secondly, desalination was considered to be inappropriate due to possible environmental risks associated with raised levels of salinity.
- Thirdly, desalination was considered to be too expensive as a result of rising energy costs and the rolling cuts to power that were experienced, called ‘load spreading’, for much of 2014.

The problem is that with the convergence of social, economic and environmental challenges, governments such as the Provincial Government of the Western Cape were unable to afford desalination plant. At the time when some of the climate change experts advised on a desalination plant, Cape Town (like the rest of South Africa) was experiencing irregular power supply. This was partly because of the mismanagement of Eskom and allegations of corruption<sup>3</sup> that are part of the forthcoming inquiry into state capture that has been initiated prior to Ramaphosa’s becoming president in February 2018. Some reports make it clear that the decision not to pursue desalination was because of the associated costs, whilst other reports stress that advisers considered desalination a risk to the environment. Zille stressed that the refusal to recognise the Cape as a disaster zone at the national level resulted

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<sup>3</sup> <https://www.timeslive.co.za/news/2017-11-18-bongo-tried-to-bribe-parliament-evidence-leader-of-eskom-state-capture-inquiry/>



in a lack of funding to address desalination soon enough. Another argument is that climate change has ‘come sooner’ than anticipated, according to a News 24 report.<sup>4</sup>

Perhaps Bond’s analysis comes closer (January 2018) when he stressed in a Real News interview<sup>5</sup> that Cape Town is one of the most climate-affected cities in the world and one of the most unequal and cited UN-Habitat. His analysis of global capitalism and the inadequate role of BRICS (Brazil, Russia, India, China and, most recently, South Africa) as a network of the global south to stand against the developed world provides a necessary reminder that change needs to occur from below through social movements, in order to hold the state and the market to account.<sup>6</sup> The Third Way approach of Anthony Giddens (2000) has been shown to be lacking as social democracies need constantly to keep the relationships between the state and market transparent through democratic engagement. Agency can and does play a vital role in reshaping the bleakest of analyses of South Africa’s future. South Africa has defied the blood bath scenarios (Bond 2018). Service delivery protests, state capture protests (Bond and Mottiar 2013) and fees must fall protests have resulted in the successful election of a new president of the ANC who has been installed with dignity whilst creating alliances that will enable those who have been left behind (particularly the unemployed young people) who will need to be given a stake in the increasingly divided cities.<sup>7</sup>

The poverty gap is widening in South Africa, according to an Oxfam report (2017).<sup>8</sup>

According to Oxfam, in SA the richest 1% of the population has 42% of the total wealth.

In the latest UN-Habitat report (2016: 206), it is stressed that:

South Africa Cape Town 2005 was listed as 0.67, South Africa Ekurhuleni (East Rand) as 2005 as 0.74, South Africa eThekweni (Durban) 2005 as 0.72, South Africa Johannesburg 2005 as 0.75.

Cape Town is slightly less divided than other cities according to the UN-Habitat figures for 2011 cited a year later by Zille (2012). But the statistics used are for 2005, and they were used in both the UN-Habitat Report for 2016 and the same earlier one to which Zille was referring. I repeat and quote in full so that the point can be made clearly:

All SA cities show a high level of inequality. The measure the UN-Habitat uses is the Gini coefficient, a measure of the inequality of income. A Gini coefficient of 0 means total

<sup>4</sup> <https://www.news24.com/Green/News/for-global-water-crisis-climate-may-be-the-last-straw-20180213>

<sup>5</sup> <https://m.youtube.com/watch?v=SLXByr1ax18> on January 18 Real News.

<sup>6</sup> <https://theconversation.com/brics-needs-a-new-approach-if-its-going-to-foster-a-more-equitable-global-order-84229>

<sup>7</sup> UN-Habitat Executive-Director Joan Clos discusses how cities are affected by climate change—and what they’re doing to lower carbon emissions. Follow our COP23 coverage: [un.org/sustainable-development/COP23](http://un.org/sustainable-development/COP23).

<sup>8</sup> <https://www.businesslive.co.za/bd/national/2017-01-16-sas-rich-poor-gap-is-far-worse-than-feared-says-oxfam-inequality-report/>

income equality—where everyone has the same income. A Gini coefficient of 1 means maximum inequality. One person has it all

She then goes on to cite the report directly in detail, which I check:

A rating of 0.4 is considered the international alert line for high inequality. In South Africa, Johannesburg and East London have an 0.75 rating, the East Rand and Bloemfontein 0.74, Pietermaritzburg 0.73, Pretoria, Port Elizabeth and Durban carry a 0.72 rating, while Cape Town has a rating of 0.67. This clearly shows high levels of inequality in Cape Town, but still makes it lower than other cities.<sup>9</sup> So although Cape Town is not the most unequal in South Africa, it is certainly one of the world's most unequal cities.

In 'Consequences of Modernity', Giddens (1990) emphasises risk and the breakdown of trust in terms that would seem to be too nuanced today as the risks seem to outweigh the opportunities, unless the processes of democracy play a greater role in structuring the relationships in ways that suit a new form of economics that honours cascade economics to counterbalance some of the risks associated with the current structures that allow varying degrees of state capture.

The silencing of the poorest of the poor has resulted in what Bond refers to in this same interview by referring to the way Trump made reference to a developing nation as a 'shit hole' and how political fracas are described as 'shit storm', to use the impolite terminology that is bandied around quite openly in the mainstream media.

When the marginalised are unable to voice their concerns and they become desperate, they will use whatever means possible to symbolise their sense of outrage. In South Africa, the use of sanitation as a symbol of disgust at authority was used by protestors on the University of Cape Town campus. It was also used recently on the cape flats by residents who felt it was their only way to protest their fears about being without water.

Globally water insecurity is increasing in major cities around the world as climate change deepens. The same federated news 24 report<sup>10</sup> cites Emeritus Professor Graham Cogley, of Trent University, Ontario Canada as follows:

Dozens of mega-cities, rich and poor, are sinking: Jakarta, Mexico City, Tokyo and dozens of cities in China, including Tianjin, Beijing and Shanghai have all dropped by a couple of meters over the last century.

The same report then cites Arjen Hoekstra, University of Twente, Netherlands, directly as follows, and I quote it in full as follows:

Half a billion people in the world face severe scarcity all year round... More than one in three live in India, with another 73 million in Pakistan, 27 million in Egypt, 20 million in Mexico, 20 million in Saudi Arabia and 18 million in war-torn Yemen.

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<sup>9</sup> 3rd Dec 2012 Zille says the Cape Town rich-poor divide is narrowest in SA <https://africacheck.org/reports/zille-right-to-say-the-cape-town-richpoor-gap-is-narrowest-in-sa/> These figures refer to 2011 figures but more recent reports from UN Habitat confirm these statistics.

<sup>10</sup> <https://www.news24.com/Green/News/for-global-water-crisis-climate-may-be-the-last-straw-20180213>

## Trust, Politics and Policy Based on Interconnected Knowledge

Giddens (1990) discusses trust as part of the challenge for modernity. Trust in elected leaders is at a low ebb given the extent to which self-interests rather than the public good prevail. An understanding of the commons and the common good is greatly needed. Unfortunately, trust has been eroded by big business from the era when companies operated for profit and in the name of the nation state. The lack of insight into the interconnected context of policy formation and the extent to which politics should strategically support policies that will protect human security is part of the problem.

This morning on the 14th of February, I reflected on the implications of the waiting game as South Africa holds its collective breath: ‘Will Zuma step down’? ‘Will Ramaphosa deliver the State of the Nation Address’?<sup>11</sup>

Since then Ramaphosa has indeed delivered the address and stressed:

We should put behind us the era of diminishing trust in public institutions and weakened confidence in leaders. We should put all the negativity that has dogged our country behind us ...

At this point he is referring to the problems associated with the so-called Zuma era which was characterised as an era of state capture. He then returns to the theme of the leaders who stood for justice and asks for a renewal of the vision of the founder members:

It is a new dawn that is inspired by our collective memory of Nelson Mandela and the changes that are unfolding. As we rid our minds of all negativity, we should reaffirm our belief that South Africa belongs to all who live in it. For though we are a diverse people, we are one nation. There are 57 million of us, each with different histories, languages, cultures, experiences, views and interests. Yet we are bound together by a common destiny. For this, we owe much to our forbearers—people like Pixley ka Seme, Charlotte Maxeke and Chief Albert Luthuli—who understood the necessity of the unity and harmony of all the people of this great land. We are a nation at one.

The symbolism of past heroes of resistance is held up to encourage South Africans to have trust in the future of the ANC. He also stresses the importance of honouring diversity, and in this sense, he follows the ‘rainbow nation symbolism’ of his mentor, Mandela. Ramaphosa then went on to stress the importance of practical engagement to address the problems associated with the current education system that does not provide enough places for vocational training linked with immediate employment opportunities:

Next month, we will launch the Youth Employment Service initiative, which will place unemployed youth in paid internships in companies across the economy. Together with our partners in business, we have agreed to create a million such internships in the next three years

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<sup>11</sup> <https://www.news24.com/SouthAfrica/News/full-text-now-is-the-time-to-lend-a-hand-says-president-cyril-ramaphosa-in-inaugural-sona2018-speech-20180216>

He then goes on to stress the importance of listening to their voices:

If we are to respond effectively to the needs of youth, it is essential that young people articulate their views and are able to engage with government at the highest level. I will therefore be establishing a Youth Working Group that is representative of all young South Africans to ensure that our policies and programmes advance their interests

The need to address sustainable development was emphasised and that those who are displaced and dispossessed ought to have access to land. Food security is one of the other key aspects on which he focused. Much of the policy commentary on News 24 is by white South Africans and the political context of apartheid history is never far away (but goes unacknowledged) as a vital aspect of the current crisis. The Democratic Alliance (DA) has been associated with the old apartheid era. It has been called part of the problem along with ‘white monopoly capitalism’.

The characterisation of capitalism in racial terms is problematic and a result of the lack of real transformation in the lives of many South Africans as stressed by Alexander (2010) in his analysis of the protests linked with the lack of service delivery.

But these political issues cannot escape the fact that the colonial past is one shared by both the British and the Dutch as stressed by Adam Smith (see reference).<sup>12</sup>

The announcement that the NEC of the ANZ has asked Zuma to step down was made by the ANC secretary, Ace Magashule.<sup>13</sup> Clearly, the invitation couched in the language of political brinkmanship underlines the importance of a voluntary resignation and a face-saving opportunity as it was stressed that Zuma needed to step down in the interests of the party. Any allegations of corruption over Nkandla or the allegations of state capture were left out of the request.

The language of ‘monopoly capitalism’<sup>14</sup> is used by Zuma in his response to the request that he ‘step down’.

However, Zuma is hand in glove with private sector companies, and playing the ‘white monopoly capitalism card’ becomes potentially problematic, as does the potential to play the tribal card, given Zuma’s Zulu links.

The request for his resignation has already been tabled by the Economic Freedom Fighters (EFF), the party of ousted Julius Maleme who was once a youth leader in the ANC.

The need for Zuma to step down with dignity was carefully handled by Ramaphosa who won the ANC presidency against the other candidate, Zuma’s ex-wife, Nkosazana Dlamini-Zuma.<sup>15</sup>

<sup>12</sup> <http://www.globalpolicyjournal.com/blog/06/02/2018/bitterness-adam-smith>

<sup>13</sup> <https://www.news24.com/SouthAfrica/News/zuma-has-done-nothing-wrong-but-he-must-go-magashule-20180213>

<sup>14</sup> <https://www.news24.com/Video/SouthAfrica/News/zexit-goodbye-zuma-jacob-zuma-in-his-own-words-20180213>

<sup>15</sup> <https://qz.com/1159766/anc-conference-cyril-ramaphosa-wins-in-rebuke-of-jacob-zuma-south-africa-president/>

Speculation that Zuma had asked to stay on for 3–6 months in order to secure the contested nuclear deal with Russia was also denied. The drought in South Africa has resulted in three provinces<sup>16</sup> being declared disaster zones.

Giddens (1990: 59 see his Fig. 1) outlines four dimensions of modernity, namely, which I draw on closely and to which I add comments and which I extend in square brackets:

- ‘Surveillance (through control of information and supervision of labour and the market)’ [now applied through increasingly formalised means as exposed by Greg Snowden and Julian Assange through in WikiLeaks]
- ‘Military power (control of means of war)’ [through industry with support of capital and the state which explains the importance of weapons races between nation states competing for power and ensuring that they have control through superiority in weapons of mass destruction]
- ‘Capitalism’ [capital for some at the expense of others through competitive labour and markets that explains the way in which people and the planet are increasingly commodified]
- ‘Industrialism’ [through striving to achieve transformation of existing ecosystems through mastery and a non-ecological approach]

The lack of ecological thinking has yet to be acknowledged in current policies in South Africa that focus on nuclear power and deals that support coal at the expense of more renewable options.

Giddens (1990: 171) outlines the high consequences risks as ‘Growth of totalitarian power’, ‘nuclear conflict or war’, ‘collapse of economic growth mechanisms’ and ‘ecological decay or disaster’. Internationally we are on track to experience all these scenarios; however, we do have the potential to redress them through critical systemic intervention.

The chapter makes the case that the so-called double hermeneutic enables us to address the challenge through transformational praxis that makes a difference socially, economically and environmentally through everyday choices. The post-materialist ‘culture shift’ (Inglehart 1997) is both personal and as a result of political shifts brought about by policy transformations. Despite the declaration of Cape Town as a disaster zone by provincial government, Zuma refused to escalate the provincial level declaration to a national level. Without a declaration of national disaster, funds could not be released to assist the province. The management of water provision to address the worst drought in over 300 years requires co-operation across multiple levels of organisation at the local city government level, provincial level and national level. The political dynamics of Helen Zille (DA Provincial leader) and Zuma are partly to blame for delays in responding to risks of climate change and a lack of trust between the ANC leader and the DA Provincial leader.

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<sup>16</sup> <https://www.news24.com/SouthAfrica/News/drought-crisis-3-provinces-declared-national-disasters-20180213>

State capture is the subject of an official inquiry into the role of Zuma's relationship with the Guptas. The issues were raised by the Public Protector and advocate, Thuli Madonsela, who bravely asked questions, despite threats to her safety. The current Minister of Security has broadened the terms of reference.<sup>17</sup> But a balance will need to be achieved to ensure that the focus is on the role of the state in relation to big business.

The importance of sociological research across boundaries and the so-called Mode 2 knowledge production (Gibbons et al. 1994) based on systemic approaches that span conceptual boundaries and support working across disciplines and sectors need to be given more attention by policy makers. This could enable a) better responses to the cascading consequences of modernity and b) to the new cascade economics (Pauli 2010) that could maximise opportunities in new creative ways that protect people and the planet.

Giddens (1990) stressed in the 'Consequences of Modernity' that trust is contingent and that risks escalate when transfers are disembedded from local contexts and local controls. The need for representation and accountability to remain connected to the people has never been more important. As democracy and governance in modern nation states require working across social, economic and environmental boundaries, it becomes important that bureaucracies remain accountable to the electorate. The non-anthropocentric state is supposed to serve the people and the planet who are principles and not the narrow interests of the elites. This is clearly not the case in South Africa at the time of writing.

Amartya Sen reminds us of the importance of representation and accountability for justice. Branko Milanovic in a blog posted on the Global Policy website<sup>18</sup> discusses the aptness of the critique made by Adam Smith of late capitalism in the 'Wealth of Nations'.<sup>19</sup>

Milanovic stresses the way in which exploitation by big companies has resulted in the impoverishment of nations and local economies and how the Dutch destroyed spices and corn in order to keep up prices:

The government of an exclusive company of merchants is, perhaps, the worst of all governments for any country whatever. (Adam Smith, Book 4, Ch. 7, p. 722)

He specifically mentions the role of the Dutch East India Company in Indonesia and India, and although he does not specifically discuss the role in South Africa, the long shadow that colonialism casts, this will be a focus of the current paper and the volume from which it is extracted. My reading of the *Wealth of Nations* (a different copy from his) makes it clear that even during the era of the Dutch East India Company, the exploitation by a company is not good for development as people do not have their independence and are exploited to the extent that it erodes hope and trust in the future.

<sup>17</sup><http://www.thenewage.co.za/widen-state-capture-probe-say-mps/>

<sup>18</sup><http://www.globalpolicyjournal.com/blog/06/02/2018/bitterness-adam-smith>

<sup>19</sup>Smith, A. 1776. *The Wealth of Nations*, Bantam Classic, 2003; edited with notes and marginal summary by Edwin Cannan; preface by Alan B. Kruege. Cited by Branko's *blog*.

The Dutch settlements in the West, as well as those in the East Indies, were originally put under the government of an exclusive company. The progress of some of them, therefore, though it has been considerable in comparison with that of almost any country that has been long peopled and established, has been languid and slow in comparison with that of the greater part of new colonies. (Smith, Smith 1776a, b, c, d: 967)

But I disagree that he was very critical of capitalism. His overall argument is that if capitalism is well organised, it delivers a better quality of life than living in a natural state. This of course depends on what one means by *capitalism* and *the natural state*. Modernisation has moved from extraction of profit in factories and mines at the industrial centres of powerful nation states to the colonial periphery where extraction and profits were enhanced through exploitation of the labour of people and the environment on which they relied. The process of treating people, sentient beings and living organic and inorganic systems as things (reification) to be exploited like commodities has become central to a form of capitalism that evolved through the institution of the welfare state and ebbed through the erosion of the protection it once provided through balancing the state, market and civil society in a form of social democracy that no longer is applied.

Today capitalism needs to be reframed along lines that protect people and the planet through a better understanding of our interconnections as one strand in a living system that has cascading positive and negative effects depending on how it is managed.

Thus new stewardship approaches need to consciously work with ‘sources of abundance in nature’ (Pauli 2010). Although Pauli has much to offer, it is important to place the principles of social and environmental justice at the centre of policy decisions and to realise that democracy depends on constant surveillance or monitoring ‘from below’ as well as global benchmarks set to protect the common good (as per the argument of David Held, 2004 in his work on globalisation: the dangers and answers in which he develops an argument for a Global Covenant to promote a form of social democracy that protects both people and the planet). The balancing process requires that this be done very carefully through working out the social, economic and environmental impact of our choices. This policy stance takes Giddens (1990, 2009) work on the ‘consequences of modernity’ and the ‘politics of climate change’ as a starting point for developing a transformational approach to protecting living systems.

A completely new approach to economics is needed if we are to have a hope of addressing the consequences of the worst aspects of modernity.

The crisis in water delivery in Cape Town is the result of cascading factors which will be explained in this brief paper designed to join up the policy dots and to develop the case for transformative praxis based on the assumption that social and environmental justice rests on an understanding of our interconnectedness. If the UN 2030 development agenda is to be achieved, then widening gap between perceived needs and outcomes will need to be addressed through an alternative approach to representation, accountability and regeneration.

When food, water and energy costs rise, it poses a threat to human security; it is time to question the way in which economics currently values the essentials of

a life worth living. This is a point made by Stiglitz et al. (2010) who stress the importance of supporting a raft of measures to support so-called wellbeing stocks for future generations. This theme was elaborated in ‘Transformation from Wall Street to Wellbeing’ in which I make the case for a new way to address cascade economics by valuing the fabric of life appropriately. Small pilot projects to evaluate alternative ways of engaging the community to think about the social, economic and environmental indicators of wellbeing were tested by means of a prototype. The rationale for a more ethical form of representation and accountability to support cosmopolitan transdisciplinary approach is detailed in *Systemic Ethics*. Then in *Planetary Passport* (McIntyre-Mills 2017), I suggested ways in which the commons could be protected through working across conceptual and spatial boundaries to enable low-carbon, virtuous living in which resources are saved, regenerated to protect current and future generations of living systems. In *Planetary Passport* (McIntyre-Mills 2017) I respond to the 2030 Development Agenda and suggest a way to enhance representation and accountability by extending the Millennium Goals and UN Sustainable Development Agenda. The book reflects on studies of alternative architectures for democracy and governance and suggests a way to extend local engagement in social, economic and environmental decision-making. The book conceptualises new architectures for democracy and better governance through:

- Addressing the issue of a priori norms and a posteriori measures for transformation towards regenerative living
- Finding ways to match social, cultural, economic and environmental decisions to perceived needs with a focus on food, energy and water security
- Narrowing the gap between perceived needs and the way resources are distributed and the way it impacts on service outcomes

Large city populations become unstable when living costs are unaffordable. It is not surprising that the so-called Arab Spring started as a result of rising food costs. In Solo, Indonesia, riots have occurred when living costs and cooking oil become too expensive for the small street traders to survive. The demographic (dividend), namely, high population growth and rising number of young people, could become the trigger for political unrest in rapidly urbanising cities such as in Africa and Indonesia where the rising levels of unemployment and poverty result in the vulnerability of women and children (crime and trafficking).<sup>20</sup>

The need to link positive vocational training with positive digital engagement through social, economic and environmental pathways to wellbeing is very important for human security. The training in joining up the dots is facilitated by the pathways to wellbeing software. All the points are made in ‘Planetary Passport’ and ‘Balancing Individualism and Collectivism’ and elsewhere in these volumes. When human security is threatened by social, economic and environmental pressure,

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<sup>20</sup> In a Spur restaurant in South Africa a toddler was almost snatched by a group of people. Children walking from school in Cape Town have been abducted.



social unrest is inevitable.<sup>21</sup> The point I am making is that the UN Sustainable Living Goals can only be achieved through transformative approaches, such as the ideas we have been discussing. It needs big game changing pilots with government and business and through emphasising the so-called mode 2 type research (Gibbons et al. 1994) within and beyond the boundaries of the nation state to address the ‘consequences of modernity’ (Giddens 1990). Working with international organisations can help to enable us to join up the dots (Zapp 2018), and by working across nations and across organisations, we can strive to ensure that the rhetoric of the 2030 Agenda is addressed.

The neoliberal agenda has pushed developing countries to the brink (Bond and Mottiar 2013). The level of human insecurity and distrust was at its height when this article was written. Nevertheless the agency shown by Civil Society movements, responses (albeit belatedly by the state, despite the political stand offs) set an agenda that needs to be met by innovative economic transformations that are not in line with the same old paradigm that has been emulated by the BRICS network (Bond and Garcia 2015; Bradlow 2017).

In these references, it is stressed that BRICS has done little to address sustainability and has instead repeated the same old messages.

## **Transformative Praxis: The Relationship Between ‘Emancipation’ and ‘Life Politics’ Through Agency**

Giddens (1990: 15) stresses that the so-called double hermeneutic is vital. We are part of our subject matter, and we can transform the ‘real’ situations through reframing and constructive engagement. Emancipation, however, from old styles of left-right thinking needs to be carefully considered.

The left/right dichotomy seems to mean less and less in the political spaces left by monopoly capitalism in a neoliberal nation state that has open boundaries for global capital but closed boundaries for the free movement of people. Examination of the principle values that underpin parties and policies should be a starting point. The extent, to which people and the ecosystem on which they rely are protected, should be the basis for decision-making that is systemically ethical and sustainable. Self-reflection and the ability to think about our thinking and practice are a first step.

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<sup>21</sup> I explained this point at the Flinders symposium Yogyakarta. I also explained these points to the Flinders Chancellor over lunch and shared how in Solo (at a conference on participatory democracy, politics and digital engagement) where I gave an invited contribution a few weeks prior to the Flinders Symposium at Gadjah Madah. In Solo I participated in plenary panel for a Politics Conference (forthcoming citation in ‘Getting Lost in the City’ and stressed the potential for radicalisation. During the break a fellow panelist explained he was en route to hear more about radicalisation from Abu Bakar Bashir with whom he was having a meal. More money and effort is spent on radicalisation than positive vocational education and training.

‘Yes, game changer approach is the way forward ...’, said a colleague

Yes, I agreed: ‘As an academic in the meantime we have to play within the systems and try to push the boundaries through publications on alternative visions, based on small pilots and all pitches need to be framed carefully to match to the level of ability to comprehend’.

## **Social and Environmental Justice Supported by Values-Based Governance**

This is an example of how people can work together to address risks. They have faced a common risk through effort, and despite some outbreaks of violence, water points at springs have been self-managed, based on trust. The spirit of Ubuntu has prevailed despite the risks posed by water insecurity and poverty. As a result of the action by civil society, farmers and civil society together with local and provincial government in Cape Town, they have managed to get people to become water warriors through a combination of factors:

- Reducing consumption to 50 L a day per person (or less)—a digital water map—to show those who are meeting the water restrictions
- Water pricing and policing—to make people value the commodity
- Public education—save water now or queue for water when the taps run dry
- Public-spirited donations of water through ‘Gift of the Givers’, farmers donating their water to Cape Town

## **Integrated Approaches Supported by a Cascade Economy to Support Wellbeing and Resilience**

The most impactful element of a transformative system needs to develop water and energy in combination with food and shelter. Water security exists in parallel with energy harvested and those in combination with food and shelter that enables regeneration of resources to benefit the service users.

Ecosystemic approaches to regenerative service delivery need to work with nature by using natural energy sources and designing rural-urban linkages that support food and water security. These are core to supporting the wellbeing and resilience of living systems.

In his preface to the *Wealth of Nations*, Adam Smith (Smith 1776a, b, c, d: 4) discusses the imbalance in development:

Some nations has given extraordinary encouragement to the industry of the country; that of others to the industry of towns. Scarce any nation has dealt equally and impartially with every sort of industry

Adam Smith (Smith 1776a, b, c, d: 24):

It is not from the benevolence of the butcher the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity, but to their self-love, and never talk to them of our own necessities, but of their advantages. Nobody but a beggar chooses to depend chiefly upon the benevolence of his fellow-citizens.

Enlightened self-interest in today's context would require rethinking the example and rethinking what cascade economics could look like. Low-carbon options may exclude meat, and many cultures will abhor brewing. I find it hard to accept that the time and motion principles (embedded in the *Wealth of Nations*) which were the basis for factory organisation and the commodification of labour and extraction of rent were discussed by Smith without actually attempting to reframe the way in which the economic system operates. He seemed to think that if capitalism is applied in an ideal and organised way, then the profits would flow on to all.

## **Towards Research for Transformation**

According to Boulding's (1956) analysis of the science, the relationship within and across the levels becomes increasingly complex from the inorganic to organic plant and animal life and then social and cultural systems. Although he uses an organic analogy, he divides the science into categorical levels—as if they are rungs of an Aristotelian hierarchy—without explicitly stressing that human beings are indeed animals and that we are hybrid hosts to organic life in the form of a range of micro-organisms. We produce waste materials that in turn provide the organic basis for plant life and we are unable to survive unless we maintain a chemical and mechanical balance. The potential for augmenting our intelligence (or not) by using digital technology connects human beings directly with artificially designed forms that could become post-human (for better or worse). Thus designs and the design choices of human beings are very important for the future of living systems. Whilst general systems theory has the potential to inform our understanding of the world and to alert us to the way in which organic life and intelligence builds as a continuum across inorganic and organic life, it needs to be open to critical revision.

Ariel Salleh (2016) and Donna Haraway (1991, 1997, 2010) analyse the way in which science, politics and ethics are interrelated and gendered. But knowledge discourses as Foucault and Gordon (1980) and Bacchi (2009) have cautioned are also shaped by power imbalances. An intersectional analysis reveals how much worse off a woman can be if she is also working class, destitute, a member of a marginal political group, a refugee or disabled.

Nussbaum's (2006) discussion of the last frontiers of injustice to those who are outside the protection of the social contract, namely, women (in some nation states), young people and sentient beings who are voiceless, is later developed into a plea for rights for all sentient beings (based on an idealist categorical type argument). Without supporting the essentialism of categorical politics, a rights-based argument is vital if we are to extend the ethics of care and solidarity with others beyond the

boundaries of our family, friends and nation state and care about others by virtue of their right to a life worth living.

Identity politics can be problematic if we are striving to build solidarity globally so that we address poverty and climate change. The era of the Anthropocene needs to be seen as the result of unequal power dynamics that are class based, gendered and rooted in a colonial past and a global economy that remains alive and well and persistent in striving for profit at the expense of those who cannot resist dispossession or wage slavery.

Ariel Salleh (2016) stresses that Aristotle developed hierarchical categories that ranked God, man, woman, slaves, animals and the natural world. She stresses that the disassociation of the women's movement from the natural world as a form of resistance is problematic and that ecological feminism is a response to this. By saying god is a woman also falls into the same trap, albeit a satisfactory thought (unless of course she is a femocrat!) Whilst Salleh's analysis demonstrates a deep understanding of the politics of the women's movement and the analysis is sound, her conclusion that all problems can be rooted in masculinity and gendered identity politics is problematic, as it results in her falling into her own trap. Whilst she makes a sound case for fluidity and interconnection, her conclusion reverts to identity politics and categorical thinking.

Dualistic thinking is indeed problematic, and the division of us/them, culture/nature and mind/body is a result of the Cartesian legacy, but women merely change places with men in a hierarchy. Whilst most of the criticisms made by Vandana's critics are easily refuted and clearly rooted in support of the status quo, namely, neoliberal economics and the globalisation of agriculture, the point made by some that her work tends to privilege nationalism and Hinduism is perhaps a little unfair but worth stressing that a postcolonial approach needs to acknowledge the past, namely, that people—women and indigenous women globally—were and are oppressed and dispossessed of habitat. The level of oppression increases with the degree of power imbalance.

But the potential of CSP is that the 'molar' rooted category is seen instead as 'molecular' potential state capable of transformation. This is where the work of Deleuze and Guattari (Bogue 1989) and Haraway (1992, 1997) inform my understanding and where I see the potential of praxis.

Critical analysis needs to be rooted in agency and to learn from lived experience, but it also needs to not be limited by personal (past) experience. Hope for the future rests in the capacity to appreciate potential opportunities (without naiveté and without a critical reading of the social, cultural, political and economic situation).

Boulding is also correct about the importance of values in shaping transformation for the better or worse. My understanding of the potential for cultural change is rooted in an organic appreciation of cross-cutting power dynamics and the potential for bringing about change at a personal level and through political nudges and governance measures to ensure transparency in the use and management of resources.

Unlike Boulding's (1956) approach, a critical systemic approach to thinking and practice (CSP) appreciates that the continuum across organic and inorganic systems

can be better understood as hybrid and interconnected. In this sense the insights of Haraway (1991) and Deleuze and Guattari (Bogue 1989) are key to this understanding of webs and flows that recognise the potential for change. The identity politics of ‘us versus them’ can be used across all political persuasions (including the neoliberal state) to divide and rule. Thus although I accept the argument by Ariel Salleh (2016) that gender is necessary for understanding poverty and climate change, it is insufficient and emotionally bleak to polarise half of humanity when transformation requires a cultural shift of the currently powerful to recognised their shared vulnerability with the (currently) powerless. The role of social movements to create solidarity in cross-cutting intersectional networks without abandoning principles requires balancing individual and collective needs in the interests of living systems.

Socio-economic paradigms as we know them today are merely a reflection of current politics and have the potential for change through drawing on the potential of a new form of ecology and economics.

## **Cascading Risks and Policy Context of the Water Crisis in South Africa**

In Cape Town, however, there is a strong migration from the north. Potential policy pathways need to address displacement and loss that results in a flow of people from North Africa (less developed and more populated) down to Southern Africa (more developed and with a lower population growth rate) (Harper 2016). The push factors from the North are population growth affecting human food security (Harper 2016). These push factors are linked with the political dynamics of social exclusion, crop failure, land grabbing and land loss, food and water insecurity that make people vulnerable to migration or trafficking and the pull of urban life, the so-called Dick Wittington syndrome where life in the city is hoped to hold more opportunities. Thus, the case study focuses on climate change, displacement, loss, unemployment and poverty where drug trade and trafficking the vulnerable exist in the context of social and environmental injustice and insecurity. We are confronted daily of news of displaced people fleeing conflict or natural disaster. In 2018 Cape Town faces a water crisis as a result of:

- Drought and water insecurity associated with climate change
- An energy crisis
- Greater immigration from the north of Africa to the south
- Lack of governance and planning
- Failure in democracy and a crisis in the financial system

Each of these aspects is addressed elsewhere in the volumes. The challenge is to balance the complex individual and collective needs in significant urban centres and the regional heart on which they depend for their survival. If we consider life chances and experiences across cohorts, then we are likely to understand that the

social determinants of wellbeing such as access to safe habitat, housing, home ownership and full time and permanent employment will have an impact on resilience to disaster. Further research is needed to provide a better understanding of the intersections across the ecological humanities and ethics (Rose 2015; McIntyre-Mills 2017), demographics and multispecies ethnography.

According to Purvis (2016),<sup>22</sup> water stress is faced by at least 2.7 billion people globally for at least 1 month every year. In South Africa the drought in the Western and Eastern Cape is thought to be linked with the change in temperature and a high-pressure area that has prevented rain. The cold Benguela current<sup>23</sup> shapes the winter rainfall and summer droughts.<sup>24</sup>

Cape Town, South Africa's largest metropolitan city, faces a water crisis in the rain shadow areas behind Table Mountain that creates upward currents and precipitation. Urbanisation and increased migration to the Western and Eastern Cape in search of work result in increased pressure on water, energy and food. Day Zero has been adjusted at the time of writing from 21 April to 12 April and then to 11 July as the residents of the Cape continued to reduce their water usage to 50 L per person for a household of four people.<sup>25</sup>

This is a sharp reduction from the January usage when many holiday makers visiting Cape Town and 60% of residents living in Cape Town at that stage had not changed the way in which they used water.<sup>26</sup> Without winter rain in June, there could be 3 months without tapped water.

At the time, small businesses such as laundrettes, restaurants, dog washing, hairdressers and nurseries speculated how they would survive. Farmers are struggling to keep their crops alive in the wine- and fruit-growing areas. Others raised concerns about hygiene and the prospect of epidemics.<sup>27</sup> The six dams on which Cape Town relies are together unable to ensure water is supplied once they fall

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<sup>22</sup> Purvis, K. 2016 <https://www.theguardian.com/cities/2016/jul/29/where-world-most-water-stressed-cities-drought>

The Middle East has more desalination plants than anywhere else. Whilst Los Angeles and California have experienced water stress and insecurity in 2014 and 2015, they continued to use water liberally and relied on dwindling underground water supplies, according to Purvis. North Africa, the horn of Africa and Southern Africa (particularly the western and eastern cape) are experiencing the worst droughts in recorded history.

<sup>23</sup> <https://www.britannica.com/place/Benguela-Current>

<sup>24</sup> [http://learn.mindset.co.za/sites/default/files/resourcelib/emshare-show-note-asset/859\\_fdod.pdf](http://learn.mindset.co.za/sites/default/files/resourcelib/emshare-show-note-asset/859_fdod.pdf)

<sup>25</sup> How will Day Zero work? Don't ask the City of Cape Town. Times Live, 20 January, 2018.

<sup>26</sup> Watts (2018) stresses that water consumption by the rich in the leafy suburbs will need to reduce consumption in order to conserve water resources. He includes a video explainer in which Kristy Garden, a UCT academic stresses that the highest levels of consumption are people living in the leafy suburbs. Out of four million people, the one million with higher incomes are the ones who use more water.

<sup>27</sup> Hygiene biggest worry in water crisis Echo Thursday 25 January, 2018.

below 13%. One of the dams is the Theewaterskloof Dam<sup>28</sup> which is so arid<sup>29</sup> that it was used to site a rain dance by a Phetla of the Johannesburg Ballet who invoked the legendary Queen Modjadji of the Balobedu people.<sup>30</sup>

Christine Colvin is a spokesperson for the WWF and member of the mayor's advisory board who stresses that cutting off water to taps to a million homes (75% of all homes) in Cape Town:

It is going to be terrifying for many people when they turn on the tap and nothing comes out.

Colvin continued by explaining that the Cape will be in one of the driest zones as a result of rapid climate change and stresses that planners have been caught out because the diversification of water supplies such as boreholes and desalination plants was only scheduled for 2020.

In Cape Town, drought has resulted in the need to rethink water usage. Recycling and reusing water are a matter of survival, and the new phenomenon of water theft and water smuggling has become part of the struggle. For example, using water in unregulated ways from boreholes and springs became illegal from February 2018.<sup>31</sup>

The donation of water to the city by fruit farmers has enabled Cape Town to push out the date when water would cease to flow from taps. The historical lessons of how to survive sustainably in the Cape need to be revisited along with the latest research on integrated sustainable living approaches (Pauli 2010) and supporting the commons (Bollier and Helfrich 2012) and by learning from Indigenous first nations.

The National Water Act (1998) stresses that bulk water supply is a national government function, but the Department of Water Affairs and Forestry<sup>32</sup> stresses in the Preface of a document detailing responsibilities for local government that:

Since 2002 Local Government has the responsibility to implement water supply and sanitation services and the Department of Water Affairs and Forestry now acts as sector leader, by regulating, monitoring and supporting to ensure effective service provision.

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<sup>28</sup> [http://www.huffingtonpost.co.za/2017/12/13/watch-joburg-ballets-epic-rain-dance-for-cape-town-drought\\_a\\_23305710/](http://www.huffingtonpost.co.za/2017/12/13/watch-joburg-ballets-epic-rain-dance-for-cape-town-drought_a_23305710/)

<sup>29</sup> Watts, J. 2018 <https://www.theguardian.com/cities/2018/feb/03/day-zero-cape-town-turns-off-taps> Watts (2018) sums up the implications of the worst drought in 384 years. All water from the designated water collection points will be free. The number of collection points at the time of writing was revised regularly. Legally they should be no more than 200 metres from a household. The cost of delivering free water will be in the region of 200 million rand. As the water must be delivered free of charge to everyone, this will result in a loss of 1.4 billion rand. Watts (2018) cites the deputy mayor Ian Nielson who stresses that because the city of Cape Town has a budget of 40 billion rand, it will be possible to provide water at the collection points.

<sup>30</sup> <https://www.thesouthafrican.com/joburg-ballet-rain-dance-drought-western-cape-video/>

<sup>31</sup> <https://m.news24.com/SouthAfrica/News/tanker-company-says-it-was-duped-in-water-smuggling-scam-20180202>

<sup>32</sup> Department of Water Affairs and Forestry, Republic of South Africa. Water and Sanitation Business: The roles and responsibilities of local government and related institutions, [dwa.gov.za](http://dwa.gov.za).

According to the constitution of South Africa, it is the right of all South Africans to receive water. The Department of Water Affairs and Forestry<sup>33</sup> (under the Minister of Water Affairs and Forestry):

sets the national objectives for protecting the resources in the national water resources strategy. Each catchment management agency is then responsible for protecting the catchments and aquifers within their water management areas in accordance with the national water resource strategy.

### *Countdown for Change*

On the 21st of January, Zille, Western Cape Premier,<sup>34</sup> made a video saying that she had requested assistance from the Minister of Water and Sanitation but that the minister was out of the country at that time. According to Zille (who was previously the leader of the DA), desalination plants are in progress, and these will produce 16 million litres, but at that time, the city used 600 million litres per day. So pumping aquifers and drilling in the short term which will be critical in the short term.

Major desalination is the only answer in the medium and long term for the Cape. Apparently desalination plans were delayed, because they were considered too costly. This was the wrong decision. The Department of Water and Sanitation has also not offered financial assistance. The talk on the streets and in the digital and print media is that the department is corrupt, that is, mismanages funds, and that politically the DA can be made to look bad as Cape Town is the first large city at risk of running dry. But the Eastern Cape is in a very similar situation, and Mandela Bay is equally at risk.

Zille then stressed that the Constitutional mandate had to be respected and that the National Water and Sanitation Department had not met the bulk water supply. She went on to say that buck-passing was unacceptable and that water must be saved to help stave off Day Zero for as long as possible and that water at collection points must be free and that the drought levy is not an option.

In terms of [Chap. 2](#) of the constitution, human rights are protected through the Bill of Rights. It protects the right to health care, food, water and social security (Moran 1996: 16). In Section 27 page 13 of the Constitution, it states:

the state must take reasonable legislative and other measures within its available resources to achieve the progressive realisation of each of these three rights.

The National Water Act stresses that the responsibility is disaster management and also water treatment, but not the provision of bulk water. Nevertheless, in the past, the city of Cape Town did construct the Berg River Dam, and without it Day Zero would have been earlier.

<sup>33</sup>Department of Water Affairs and Forestry, Republic of South Africa. Water and Sanitation Business: The roles and responsibilities of local government and related institutions, [dwa.gov.za](http://dwa.gov.za).

<sup>34</sup>Helen Zille speaks on Cape Town water crisis—YouTube. 22 January.



The collective level across all the dams needs to be above 15%. When it reaches 13%, the taps will be turned off, and only designated areas in the city centre would continue to receive water. Part of the sacrifice to save water has been made by the agriculturalists who will no longer have enough to irrigate their crops. In 2015 Zille requested that the Cape be declared a natural disaster area, but had to wait until March/April 2017 for this to be confirmed at the national level.

J.P. Smith who heads the crisis team stressed that unless water is saved, Capetonians will need to queue.<sup>35</sup>

The Democratic Alliance has been accused of shifting responsibility for the water crisis.<sup>36</sup> But they stress this is a national responsibility and they have complied with the terms of reference of the constitution and the Water Act. The current Minister of Water and Sanitation Nomvula Mokonyane has not provided any funding for emergency infrastructure to date.<sup>37</sup>

A practical intervention was promised by Ramaphosa at the Davos meeting.<sup>38</sup> Unfortunately water provision had been neglected in the Western Cape. The Democratic Alliance was voted in by Capetonians, and the DA was held responsible for the lack of forward planning to cope with the increased immigration to the Cape and the increase in tourism in the context of climate change.

Water has become a political means to ensure that the DA take sole responsibility for the crisis, despite the boast that the Cape was one of the best run provinces. In Cape Town the Democratic Alliance won the vote, and it is believed that Zuma has politicised his opportunity to block funding to the Cape by not signing the documentation to declare the Cape a disaster zone.

The poverty gap is widening in South Africa, according to an Oxfam report (2017).<sup>39</sup>

According to Oxfam, in SA the richest 1% of the population has 42% of the total wealth.

In the latest UN-Habitat report (2016: 206), it is stressed that:

South Africa Cape Town 2005 was listed as 0.67, South Africa Ekurhuleni (East Rand) as 2005 as 0.74, South Africa eThekweni (Durban) 2005 as 0.72, South Africa Johannesburg 2005 as 0.75.

Cape Town is slightly less divided than other cities according to the UN-Habitat figures for 2011 cited a year later by Zille (2012). However, the statistics used are for 2005, and they were used in both the UN-Habitat Report for 2016 and the same earlier one to which Zille was referring. I repeat and quote in full so that the point can be made clearly:

<sup>35</sup> J.P. Smith answers Day Zero questions: 'it's going to be really unpleasant'. News 24.

<sup>36</sup> Water woes: Maimane, Zille shift blame to Nomvula Mokonyane, News 24.

<sup>37</sup> Our mandate for water provision and support knows no politics – Nomvula Mokonyane, News 24.

<sup>38</sup> 'Ramaphosa to put together team to mitigate Cape Town's Day Zero crisis'. News 24.

<sup>39</sup> <https://www.businesslive.co.za/bd/national/2017-01-16-sas-rich-poor-gap-is-far-worse-than-feared-says-oxfam-inequality-report/>

All SA cities show a high level of inequality. The measure the UN-Habitat uses is the Gini coefficient, a measure of the inequality of income. A Gini coefficient of 0 means total income equality—where everyone has the same income. A Gini coefficient of 1 means maximum inequality. One person has it all.

She then goes on to cite the report directly in detail, which I check:

A rating of 0.4 is considered the international alert line for high inequality. In South Africa, Johannesburg and East London have an 0.75 rating, the East Rand and Bloemfontein 0.74, Pietermaritzburg 0.73, Pretoria, Port Elizabeth and Durban carry a 0.72 rating, while Cape Town has a rating of 0.67. This clearly shows high levels of inequality in Cape Town, but still makes it lower than other cities.<sup>40</sup>

Although Cape Town is not the most unequal in South Africa, it is certainly one of the world's most unequal cities.

### ***The Capetonian Response: Solidarity of Residents Within the Municipality of Cape Town and the Western Cape Region***

Rapid adaptation to conserving water has been achieved through a combination of farmers and NGOs donating water, residents of Cape Town saving water as a result of fear for the future and a desire not to be shamed through a transparent water management mapping system.<sup>41</sup> Consequently, the risk of municipal water supplies running out in the short term appears to have been averted at the time of writing (March 2018). But more needs to be done to achieve a change in values to enable more sustainable living.

The transfer of dammed water to the metropolitan area has staved off Day Zero, but the drought impacts reliance on springs and may place increasing pressure on animals. Dirk (January, 2017) stresses in her article that whilst bottled water has been donated through volunteers to the Western Cape, the impact on animals has not been thought through. She makes a plea for more water and feed for animals and highlights how the drought has already impacted farm animals in other areas. She stresses<sup>42</sup>:

Farmers in Namaqualand and Kalahari have had to feed potatoes to their cattle to keep them alive. Other farmers have had to kill their animals because they cannot afford to feed them. "It is heartbreaking to see a calf look for shade in which to die because its mother has starved to death," said Gerber. ... 2000 bales of hay have been collected and transported to feed these starving animals.

<sup>40</sup> 3 Dec 2012 Zille says the Cape Town rich-poor divide is narrowest in SA <https://africacheck.org/reports/zille-right-to-say-the-cape-town-rich-poor-gap-is-narrowest-in-sa/> These figures refer to 2011 figures but more recent reports from UN Habitat confirm these statistics.

<sup>41</sup> Water usage dashboard [www.capetown.gov.za/dayzerodashboard](http://www.capetown.gov.za/dayzerodashboard) and [water.restrictions@cape-town.gov.za](mailto:water.restrictions@cape-town.gov.za)

<sup>42</sup> <https://www.iol.co.za/capetimes/news/help-rush-water-animal-feed-to-drought-areas-1968817>

Another problem that has not been thought through (not mentioned in her paper) is the way in which the many plastic bottles are being used to rush water to the Cape. The cascading effects of heavy use of carbon resulting in climate change (Stiglitz 2010) are now leading to reliance on plastic (carbon-based and nonrenewable forms) to provide water in an emergency that could be staved off by using available water more carefully.

The impact of the drought on all quality of life of sentient beings (Nussbaum 2006) has been underestimated, and the last ‘frontiers of justice’ need to take into account policies to mitigate and adapt to climate change in the Western Cape.<sup>43</sup> Highly urbanised regions in disaster-prone regions face the convergent challenges of insecurity and are at risk unless strategies are explored with service users and all levels of government to find better pathways to protect human and animal life and their shared habitat. The systemically interconnected nature of social, economic and environmental danger and risks are explored elsewhere (McIntyre-Mills 2017).

I draw on Giddens (1990: 71) in terms of the crisis of trust and rising risk and discuss the water crisis in the city of Cape Town as a symptom of convergent challenges associated with the way in which the nation state interacts with the global economy, in line with the international division of labour and in the interests of military power and capability.

Neoliberal economics has played out in South Africa in ways that have resulted in protests against the lack of education, services and basic infrastructure, but although some protests have been made by social movements (Bond 2012) in the build-up to the climate change conference in Durban in 2011, a carbon-based, anthropocentric approach to governance has prevailed to date.

The carbon economy has been supported by a World Bank loan to set up the Medupi coalmine, despite protests. Bond stresses that government has seen fit to support cap and trade measures to offset dirty coal but that this approach to carbon trading and as yet untried ways to successfully reduce the impact of coal burning emissions is problematic. Coal mining in areas where it is costly to mine has resulted in passing on costs to consumers. Also the lack of forward planning in providing an energy market for rapidly urbanising cities resulted in blackouts in Cape Town and Gauteng. This resulted in delaying the decision to build a desalination plant capable of supporting the needs of Capetonians.

Although Bond (2018) predicted a ‘shit storm’ as Cape Town faces the worst drought in over 300 years, but during 2018 the culture shift to conserve water has been successful. This was driven by a combination of governance changes, such as a Water App (that maps the water usage of households transparently across all the

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<sup>43</sup>For example, Jejani (2018) stressed that primates in the Western Cape are encroaching onto domestic properties as they are displaced from their own spaces. A plea is made to give them time before they are ‘euthanised’ if they are moved away and then return. However, the problem is incorrectly represented merely as a need for more time to get used to being displaced. Instead they need secure territory of their own, and they need safe passageways to reach the springs from where they seek water. Another indicator of displacement and loss that is commonly observed in the Western Cape is that large numbers of Guinea fowl are now seeking water in suburban gardens.



**Fig. 14.1** Water management application map. Source: <https://citymaps.capetown.gov.za/waterviewer/>, <http://www.capetownetc.com/news/green-light-for-cape-town-water-map-despite-objections/>

suburbs of Cape Town)<sup>44</sup>, acts of generosity by farmers who donated water to the city of Cape Town and a mass social movement to donate water to Cape Town. Whilst Bond's analysis of the politics of climate justice is apt (Bond 2012), he is perhaps too pessimistic about the will and capability of people to adapt.

The water management application map in Cape Town enabled people to see the pattern of water usage across Cape Town from the household, to the street, suburb and locality of Cape Town. Although individuals who did not comply are not named, their residences do not appear with a green or pale green dot (Fig. 14.1).

In fact the residents of Cape Town showed more resilience and a greater capacity for adaptation than Bond (January, 2018) expected. The response by Capetonians to the call for change has resulted in successfully pushing back Day Zero to the onset of the rainy season. Whether this will be sufficient remains to be seen. It is an example of effort made by a city residents acting together across the diverse suburbs and the surrounding farming regions. It will require the active support of all levels of government, transparent governance of resources and ongoing mobilisation from below.<sup>45</sup>

<sup>44</sup>Water usage dashboard [www.capetown.gov.za/dayzerodashboard](http://www.capetown.gov.za/dayzerodashboard) and [water.restrictions@capetown.gov.za](mailto:water.restrictions@capetown.gov.za).

<sup>45</sup>Avaaz has called people to support Capetonians and to depoliticise the attitude of the current leader of the ANC. Avaaz has run a campaign to raise awareness and to ask people to declare the Cape a disaster zone:

Despite the legacy of Apartheid, the potential to do things differently needs to be documented as an example of community spirit, albeit driven by a shared fear of the consequences of *not doing the right thing* and by the transparency in water usage provided by the water management map which is readily available on line for all to view.

The point that I made in Planetary Passport (McIntyre-Mills 2017) is that ecological citizenship is possible. The case study in this chapter shows how resource usage can indeed change as a result of *shared will* and a *form of governance* that enables a fair distribution of resources for all.

Bond stressed in a Real News interview January 2018<sup>46</sup> that Cape Town is one of the most climate-affected cities in the world and one of the most unequal and cited UN-Habitat.

The Third Way approach of Anthony Giddens (2000) has been shown to be lacking as social democracies need to keep the relationships between the state and market transparent through ongoing democratic engagement, in order to avoid the most cynical ploys such as carbon trading, carbon sequestration that shifts the burden from developed to developing nations, from the powerful lobbyists to the powerless. Those without access to a strong voice in the market or the state need to rely on using civil society to exert pressure on the state. This requires a careful consideration of the role of law, which can be used progressively to protect the commons or retrogressively in ways that protect what Bond (2012: 54) calls ‘ecological modernization’.

In Australia, the limitations of Environmental Protection and Biodiversity Conservation Act 1999 are evident in managing cascading risks associated with the impact of coal industry on climate change, such as warming temperatures and Queensland’s coral reefs. The probusiness as usual lobbying by Kelly (2018)<sup>47</sup> revealed the inadequacy of the EPA to protect the environment. Kelly wished to highlight the hypocrisy of mainstream political opposition—in this case Labour—but without acknowledging the extensive criticism of the mine and the hypocrisy of job creation. But the point that his article also reveals is that the current law (sup-

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“Day Zero is getting closer and closer—and it will affect every one of us. We all want to help, but real action is being held hostage by political bickering. Together we can still stop the worst by getting Zuma to declare a national disaster—but to break the political deadlock, it has to come from the people, every single one of us. So I’ve just joined this campaign, I hope you will, [https://secure.avaaz.org/campaign/en/day\\_zero\\_11/?knPhtab](https://secure.avaaz.org/campaign/en/day_zero_11/?knPhtab)”.

The Minister of Water and Sanitation at national level will need the support of Ramaphosa to find funding to support infrastructure development. Ramaphosa has stressed at Davos that climate change is a reality that will need to be addressed in the Western and Eastern Cape.

<sup>46</sup><https://m.youtube.com/watch?v=SLXByr1ax18> on January 18 Real News.

<sup>47</sup>According to Kelly, 2018: 15-16: ‘Under the Environmental Protection and Biodiversity Conservation Act 1999 there are precisely defined circumstances that govern suspension or revocation of federal environmental approval. Opposition environmental spokesman Tony Burke told ABC’s (Australian Broadcasting Commission) Patricia Karvelas...that under the law, as ministers ‘you must never prejudice a decision’. If so, you risk legal action from the aggrieved company...’.

posedly to protect the environment) does not sufficiently protect the commons because it is pro-market and controlled by neoliberal market economics.

The Aldani mine is currently being contested by green lobbyists. The mine is protected by market interests and promoted with (false) promises of jobs for the currently unemployed. Analysts, such as Krien (2017) in her essay 'The long goodbye' stressed that jobs are likely to be mostly for professionals, whilst other skilled jobs are likely to be mechanised. The issue of employment potential for indigenous people has been raised by Langton (2012) in her Boyer lecture, but the issues (whilst rooted in neoliberalism and the long shadows cast by or as yet unacknowledged-colonial wars) do not fully explore the long-term impacts on living systems or the extent that all the stakeholders are in agreement (see McIntyre-Mills et al. 2019).

Nevertheless, EPAs can be reframed to protect the environment far more vigorously, and law to protect the commons is an obvious next step. This can only be achieved by active agency.

Boulding (1966) stressed that transformation requires the highest level of response as the level of complexity required for transforming society increases as we move from inorganic to organic life to animal and human life.

Humanity has shaped the environment in ways that were previously inconceivable. As detailed elsewhere in '*Planetary Passport*', '*Systemic Ethics*' and '*Transformation from Wall Street to Wellbeing*' (McIntyre-Mills et al. 2010), anthropocentrism refers to a human-centred approach that disregards other living systems.<sup>48</sup> The key concepts for a transformative educational approach need to be based on non-anthropocentrism. This means focusing on ways to protect the habitat of all living systems. The approach takes the next important step in the research agenda, to link the notion of relationships across humans, animals and the land as a source of Indigenous and non-Indigenous wellbeing and the broader societal need for environmental protection and effective ecosystem management of domestic, liminal and so-called wild or natural habitat (Donaldson and Kymlicka 2011). In the volumes on which this paper is based, it is stressed that we have created the Anthropocene through intervening in nature and we need to restore and regenerate the living system of which we are a strand. The challenge for governing the Anthropocene ethically and wholesomely is one of moving away from disciplinary and functional differentiation to support living ethically in ways that redress the worst aspects of modernisation.

At a personal level, people have managed to change the way that they choose to live their lives by using much less water. J.P. Smith (a member of the mayor's

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<sup>48</sup><https://archive.org/details/VN860553> reconsidering boundaries and what constitutes knowledge.

<https://archive.org/details/VN860546> ethics and design.

<https://archive.org/details/VN860542> Topics [critical systemic thinking and practice](https://archive.org/details/VN860537/VN860535.MP3).

<https://archive.org/details/VN860537/VN860535.MP3> Governance across boundaries.

<https://archive.org/details/VN860540> designing a response to address an area of concern.

<https://archive.org/details/VN860555> wicked problems.

<https://archive.org/details/VN860538> non-anthropocentric approaches.

<https://archive.org/details/VN860534/VN860533.MP3> social and environmental justice.

committee for ‘Safety and Security’) stressed at the time that Capetonians would have to reduce water usage to less than 50 L per day or they would have to stand in a queue:

‘It would be catastrophic if we end up having to collect water at pods<sup>49</sup>’.

The message sent out by Smith, namely, save water now or queue for water later, instilled a new discipline which was widely applied as a result of the water application<sup>50</sup> which mapped the usage of water across households. The importance of emotions on climate change and political action is important (Hulme 2009; Hoggett 2010).

The need to link positive vocational training with positive digital engagement through social, economic and environmental pathways to wellbeing is very important for human security. The training in joining up the dots is facilitated by the pathways to wellbeing software.

This requires simple systems that support representation for enhanced equity, accountability to enhance fairness and transparency and regeneration for the restoration of the commons and the assumptions and values that support it.

Water management systems that rely on performance management by experts and that place a monetary value on the fabric of life do not protect the commons. They commodify it.<sup>51</sup> Thus, the approach I have suggested is to enable local people to think in terms of being the change through being rewarded for living differently. So instead of pricing nature as a commodity, those who live virtuously and well through measuring their personal consumption and demonstrating that they care will be given recognition points that can be exchanged for other services within the local community. By valuing certain kinds of knowledge at the expense of others, human beings have created a new age, namely, ‘the Anthropocene’, characterised by rapid urbanisation and unsustainable development.

## Relevance of Mixed Methods, Critical Systemic Thinking and Practice for Transformative Research

We need to be cautious about the application of use and exchange value to the functionality of the basic fabric of life and stress that we need to attribute a value beyond price. I do not dismiss the concept of ‘wellbeing stocks’, developed by Stiglitz et al. (2010: 15), but instead refer to the need to take on board the points made by Nussbaum (2011) in her work on capabilities about the need to appreciate the

<sup>49</sup>J.P. Smith answers Day Zero questions: ‘it’s going to be really unpleasant’. News 24.

<sup>50</sup>Source: <https://citymaps.capetown.gov.za/waterviewer/> <http://www.capetownetc.com/news/green-light-for-cape-town-water-map-despite-objections/>.

<sup>51</sup>Molinos-Senate, M and Maziotis, A. and Sala-Garrido, R. 2017 Assessing the productivity change of water companies in England and Wales: a dynamic metafrontier approach. *Journal of Environmental Management* 197 1–9.

determinants of a life worth living and the idealism underpinning her approach. This is extended by making a case for rights and stewardship to protect living systems and sentient beings as all life is interdependent. I also draw on Butler and Athanasiou (2013) to stress the need for performative agency to protect the commons and the need to concentrate on dynamic ways of working with others.<sup>52</sup> By addressing so-called wellbeing stocks,<sup>53</sup> a concept developed by Stiglitz et al. (2010: 15) refers to a multidimensional measure of wellbeing spanning social, economic and environmental dimensions they tend to emphasise using value and functionality, which needs to be valued more appropriately, rather than recognising that some aspects of life are beyond price. I caution the application of use and exchange value in terms of measures of only the a posteriori pragmatic, measures of the so-called functionality of the basic fabric of life and stress that we need to attribute a value beyond price. Thus I expand the concept of ‘wellbeing stocks’, developed by Stiglitz et al. (2010), to take on board the points made by Nussbaum (2011) about the need to appreciate the ‘determinants of a life worth living’. Thus the capabilities approach needs to draw on both Amartya Sen’s functionality and Nussbaum’s a priori idealism. In reworking the capabilities approach, I make a case for both rights and stewardship to protect living systems and sentient beings, simply because it is the right thing to do. All life is interdependent and vulnerable, but as human beings, we need to act as stewards as we are responsible for achieving Boulding’s notion of transformative culture (Boulding 1956). I also draw on Butler and Athanasiou (2013) to stress the need for performative agency to protect the commons and the need to concentrate on dynamic ways of working with others.

The case is made that the social, economic and financial crisis is propped up by shifting the burden to the voiceless and powerless in this generation, and future generations by commodifying them. Bond (2012: 63) also stresses that by exploiting the ‘credit system’ where money is borrowed and living costs are funded by debt, the extraction of profit is moved from developed to developing economies and thus it has both a time and a spatial dimension. The ‘Environmental commons’ is exploited through ‘Indigenous economies’ and ‘Women’s unpaid labour for household reproduction’ and through criminal ‘biopiracy’, to mention and extrapolate from some of Bond’s examples.

Both a priori norms to guide development and a posteriori considerations are needed to measure the performance of the UN Sustainable Development goals to protect living systems and the habitat on which we are depend. Resilience is defined as the adaptive capacity of the physical environment, of an individual or of a group.

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<sup>52</sup>The paper by *McIntyre-Mills* focuses on mixed methods at the intersection of demographics and ecological humanities for enhancing social and environmental justice. In Volume 1: ‘We are the land’ Janet McIntyre-Mills addresses metaphors and praxis for weaving together strands of experience. It extends the concept of ‘wellbeing stocks’, developed by Stiglitz et al. (2010: 15) to refer to dynamic ways of working with others.

<sup>53</sup>‘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’.



It concerns factors such as the capacity of members of a community to act together and through creatively transform the current ways in which we live our lives (Rose 2005; Hulme 2009; Shiva 2012).

The United Nations Declaration of Rights of Indigenous Peoples (2007) provides a vital pathway for engagement. Representation, accountability and sustainability challenges need to be met through addressing very unequal life chances (Dobson 2007; Dryzek 2010). The 2030 Agenda is:

The new global framework to help eradicate poverty and achieve sustainable development by 2030. It includes an ambitious set of 17 Sustainable Development Goals.... The 2030 Agenda for Sustainable Development sets out the global framework to eradicate poverty and achieve sustainable development by 2030.

Stiglitz et al. (2010) in 'Mismeasuring our lives' reminds us of the importance of representation and accountability for justice. Branko Milanovic in a blog posted on the Global Policy website<sup>54</sup> discusses the aptness of the critique made by Adam Smith of late capitalism in the 'Wealth of Nations'.<sup>55</sup>

A new approach to economics is needed if we are to have a hope of addressing the consequences of the worst aspects of modernity.

When food, water and energy costs rise, it poses a threat to human security; it is time to question the way in which economics currently values the essentials of a life worth living.<sup>56</sup> We need a human security system to identify social, economic and environmental risks through enabling people to participate in using a resilience scorecard.

<sup>54</sup> <http://www.globalpolicyjournal.com/blog/06/02/2018/bitterness-adam-smith>

<sup>55</sup> Smith, A. 1776. *The Wealth of Nations*, Bantam Classic, 2003; edited with notes and marginal summary by Edwin Cannan; preface by Alan B. Kruege. Cited by Branko's *blog*.

<sup>56</sup> This is a point made by Stiglitz et al. (2010) who stress the importance of supporting a raft of measures to support so-called wellbeing stocks for future generations. This theme was elaborated in 'Transformation from Wall Street to Wellbeing' in which I make the case for a new way to address cascade economics by valuing the fabric of life appropriately. Small pilot projects to evaluate alternative ways of engaging the community to think about the social, economic and environmental indicators of wellbeing were tested by means of a prototype. The rationale for a more ethical form of representation and accountability to support cosmopolitan transdisciplinary approach is detailed in 'Systemic Ethics' (2014). Then in *Planetary Passport* (McIntyre-Mills 2017), I suggested ways in which the commons could be protected through working across conceptual and spatial boundaries to enable low-carbon, virtuous living in which resources are saved, regenerated to protect current and future generations of living systems. *Planetary Passport for Re-generation: knowing our place through recognizing our hybridity*. McIntyre-Mills (2016) responds to the 2030 Development Agenda and suggests a way to enhance representation and accountability by extending the Millennium Goals and UN Sustainable Development Agenda. It reflects on studies of alternative architectures for democracy and governance and suggests a way to extend local engagement in social, economic and environmental decision-making. The book conceptualises new architectures for democracy and better governance through:

- Addressing the issue of a priori norms and a posteriori measures for transformation towards regenerative living
- Finding ways to match social, cultural, economic and environmental decisions to perceived needs with a focus on food, energy and water security
- Narrowing the gap between perceived needs and the way resources are distributed and the way it impacts on service outcomes.

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# Chapter 15

## Innovation for Social and Environmental Justice: A Way Forward?



Rudolf Wirawan and Janet McIntyre-Mills

**Abstract** A prototype for self-managing social, economic and environmental decisions is discussed with the potential for managing household contributions to achieving the UN Sustainable Development Goals and scaling up the engagement through a management application at the local government level.

**Keywords** Sustainable development · Blockchain · Balancing individual and collective needs

### A Way Forward?

The potential for blockchain programming to enable transdisciplinary distributive networks to codevelop and check the way in which users and providers meet socio-cultural, economic and environmental indicators of wellbeing is currently being developed as a pilot through testing distributed hubs in Indonesia.

### *Test Out and Pilot on a New Form of Governance: From Centralized to Distributed Using Hybrid Methodologies to Address an Area of Concern*

Options for governance are explored through considering nodes, networks and distributive webs (see Darien-Smith and McCarty (2017: 16) who cite Source: [http://www.rand.org/pubs/research\\_memoranda/RM3420/RM3420-chapter1.html](http://www.rand.org/pubs/research_memoranda/RM3420/RM3420-chapter1.html)). Centralized options are appropriate for rapid responses, whilst decentralized options are suitable for engagement. An alternative is provided by decentralized networks which provide opportunities for cross-checking and engagement that can be rapidly

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achieved. Each node in the distributive network connects with other nodes to check on information available. A distributed network is characterized by cross-checking and relies on reciprocal sharing of information. An outcome of a distributed network is participatory governance based on transparency and the empowerment of local people who have instant access to verifiable data. The potential for misuse of resources is thus reduced. It could provide a way to protect food, energy and water security through protecting the commons. A completely new approach to economics is needed if we are to have a hope of addressing the consequences of the worst aspects of modernity.

A new approach to economics is needed if we are to have a hope of addressing the consequences of the worst aspects of modernity. The crisis in water delivery in Cape Town is the result of cascading factors which will be explained in this brief paper designed to join up the policy dots and to develop the case for transformative praxis based on the assumption that social and environmental justice rests on an understanding of our interconnectedness. If the UN 2030 Development Agenda is to be achieved, then widening gap between perceived needs and outcomes will need to be addressed through an alternative approach to representation, accountability and regeneration.

When food, water and energy costs rise, it poses a threat to human security and it is time to question the way in which economics currently values the essentials of a life worth living.<sup>1</sup>

The water usage map developed by the Municipality of Cape Town makes usage transparent to all and played a role in reducing usage. In this reflective note, we suggest that the water application could be applied to manage a range of resources towards achieving the Sustainable Development Goals. Social engagement to think about ecological citizenship could enable people to think through the social, economic and environmental consequences of their everyday decisions on production, consumption and distribution of resources. Collective responsibility can be distrib-

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<sup>1</sup>This is a point made by Stiglitz et al. (2010) who stress the importance of supporting a raft of measures to support so-called wellbeing stocks for future generations. This theme was elaborated in *Transformation from Wall Street to Wellbeing* in which Janet makes the case for a new way to address cascade economics by valuing the fabric of life appropriately. Small pilot projects were undertaken to evaluate alternative ways of engaging the community to think about the social, economic and environmental indicators of wellbeing were tested by means of a prototype. The rationale for a more ethical form of representation and accountability to support cosmopolitan transdisciplinary approach is detailed in 'Systemic Ethics' (2014). Then in *Planetary Passport* (McIntyre-Mills 2017), Janet suggested ways in which the commons could be protected through working across conceptual and spatial boundaries to enable low-carbon, virtuous living in which resources are saved and regenerated to protect current and future generations of living systems. *Planetary Passport for Re-generation: Knowing Our Place Through Recognizing Our Hybridity* (McIntyre-Mills 2017) responds to the 2030 Development Agenda and suggests a way to enhance representation and accountability by extending the Millennium Goals and UN Sustainable Development Agenda. It reflects on studies of alternative architectures for democracy and governance and suggests a way to extend local engagement in social, economic and environmental decision-making. The book conceptualizes new architectures for democracy and better governance through:

- Addressing the issue of *a priori norms* and *a posteriori measures* for transformation towards regenerative living
- Finding ways to **match** social, cultural, economic and environmental decisions to *perceived needs* with a focus on food, energy and water security
- Narrowing the gap between perceived needs and the way resources are distributed and the way it impacts on service outcomes.

**Table 15.1** Options for decision-making based on ‘unfolding values’ and ‘sweeping in’ social, economic and environmental considerations (Churchman 1971; Van Gigh 2003)<sup>a</sup>

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- *I have* the following social, economic and environmental resources—each of which appear as a drop down menu to act as prompts to which people can add new categories or subcategories plus comments

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  - *I need* the following social, economic and environmental resources

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  - *I will add the following contributions*

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  - *I will discard* the following

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  - Self-reflection on *the turning points* for the better or worse—hope that consumption can be replaced with greater sense of attachment to others and the environment

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  - *Consideration of the barriers* that currently exist and consideration of what could be done to transform society and our relationship to the environment

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<sup>a</sup>A score card has been piloted (see McIntyre-Mills and De Vries 2011; McIntyre-Mills et al. 2014). The aim is to make policy recommendations by exploring what works, and why and how through the local lived experiences of people who participate this is an attempt to address the issues (McIntyre-Mills et al. 2014, 2017a, b); see [https://ia801606.us.archive.org/20/items/pathway\\_DEMO\\_1/pathway\\_DEMO\\_1.mp4](https://ia801606.us.archive.org/20/items/pathway_DEMO_1/pathway_DEMO_1.mp4)

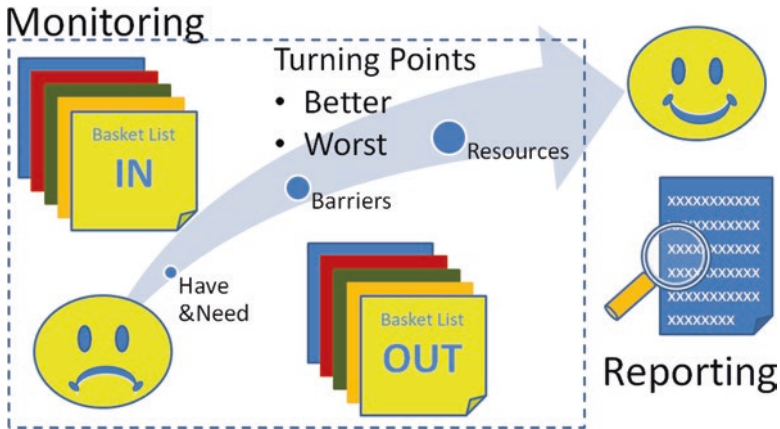
uted through this form of engagement from below so that local people can control decisions to enhance greater social and environmental justice for all (Table 15.1):

We suggest the potential for blockchain programming to enable transdisciplinary distributive networks to co-develop and check the way in which *users* and *providers* meet *socio-cultural, economic and environmental* indicators of wellbeing. This provides an alternative to the so-called *Surveillance State* where monitoring *from above* leads to big data sets being used to manage *from above*. The exposure of Cambridge Analytica (Cadwalladr and Graham-Harrison 2018) and the routine surveillance of citizens and targeted surveillance of the Uyghurs in China provide examples that indicate the extent of the risk globally in both old democracies and one-party states and the need for bottom-up participation in democracies. The way that economics currently operates places society at risk. Economists recognise that climate threat poses a threat to our way of life (Carney 2018), but the current structure of economics remains unchallenged. Stokols (2018 cites Goldstein et al. 2008) shows how caring behaviour can be contagious, because it shapes norms and expectations. The idea is to use engagement to self-monitor and advertise positive outcomes to others through a transparent online household management system. This could be scaled up at the local and regional level to enable the fair, transparent use and distribution of resources.

Blockchain<sup>2</sup> can be used to manage any resources from below defined in the pathways to wellbeing prototype software. Using the concept of ‘haves and needs’ and ‘barriers and resources’, pathways can be self-monitored, and progress can be reported. The self-monitoring is iterative, and at each stage, their progress towards supporting wellbeing is reported. Information is stored on a distributed network and relies on consensus across the network to support validity claims. The advantage of this decentralized approach is that items of data cannot be altered without alerting

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<sup>2</sup>Blockchain 101 - Part 1 - A Visual Demo web address [https://www.youtube.com/watch?v=\\_I60oMzblY8&t=2s](https://www.youtube.com/watch?v=_I60oMzblY8&t=2s) by Anders Anders Brownworth, Published on Nov 5, 2016. Accessed 12/06/2018.



**Fig. 15.1** Ecological citizenship means monitoring change from below to take rapid steps towards a more sustainable future based on the United Nations Sustainable Development Goals

the whole network. In this paper, blockchain technology is suggested as being suitable to present indicators of wellbeing and related information. The following diagram depicts the concept.

We need a human security system to identify social, economic and environmental risks through enabling people to participate in using a scorecard that maps social, economic and environmental accountability from below and above to balance individual and collective needs.

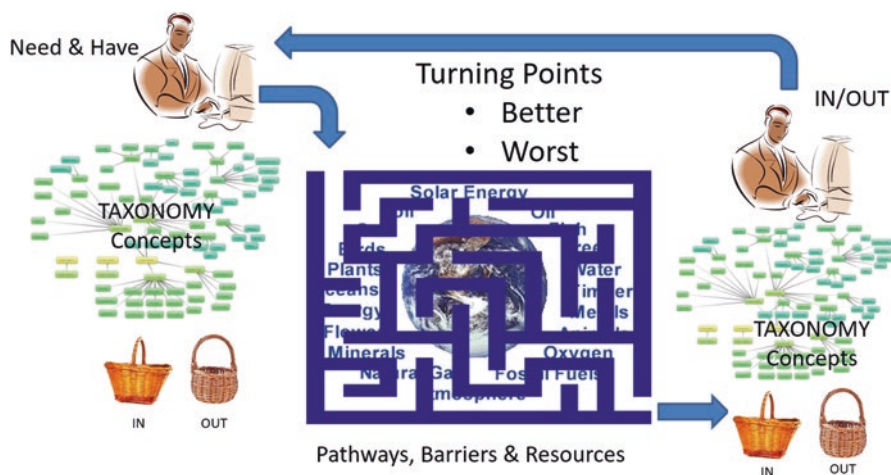
The potential for blockchain programming to enable transdisciplinary distributive networks to codevelop and check the way in which users and providers meet sociocultural, economic and environmental indicators of wellbeing is currently being developed by Wirawan as a pilot through distributed hubs, called village IT or Kampung IT in Indonesia.

Using blockchain, information is stored on a distributed network and relies on consensus across the network to support validity claims. The advantage of this decentralized approach is that items of data cannot be altered without alerting the whole network. In this chapter blockchain technology is suggested as being suitable to present indicators of wellbeing and related information, for example, monitoring and managing water, food and energy. The following diagram depicts the concept (Fig. 15.1):

An example of this is the path to saving water as suggested in this paper.

Participants can list their household needs and what they are prepared to do to save water. They can share that they have a family of five and that each person will need to save a certain amount from their water allocation for their gardens. The barriers they list may include a lack of subsidy for installing water tanks or solar panels which would help them to save money that they could use to make their households more resilient as detailed in *Transformation from Wall Street to Wellbeing* (McIntyre-Mills et al. 2014).





**Fig. 15.2** Self-managing to address the barriers to achieving the United Nations Sustainable Development Goals

Using the concept of haves, needs, barriers and resources as depicted above, ecological citizens can self-monitor and manage their progress from one stage into the next in an iterative fashion (Fig. 15.2).

As can be seen from the diagram, the maze of options facing us in life poses many challenges for decision-making. Before re-entering the labyrinth to take decisions, the participant is asked to think through three scenarios, namely, ‘business as usual’ or ‘making small changes’ or taking more rapid ‘steps towards supporting ‘wellbeing stocks’.<sup>3</sup>

The following diagram describes three scenarios spanning ‘business as usual’, ‘small changes for the long haul’ as well as ‘sustainable futures’. These scenarios cover the three potential options (Fig. 15.3).

Participants can add or discard ideas, skills or attributes that do not contribute to the success of the outcome. Their deliberations add to the growing database. The process will be repeated iteratively until the desire goal for each participant has been achieved. The software is designed to prompt participants to think in ways that are non-anthropocentric and thus to consider the implications of their decisions for others and the environment.

A generic application platform can be customized to a specific research type, such as mixed methods, by means of predesigned template, as depicted in the following diagram (Fig. 15.4):

Since the software is based on a platform designed in a generic manner, it can be used to enable participants to manage water and to address the size of one’s carbon footprint.

<sup>3</sup>This scenario approach was inspired by the Mont Fleur scenarios (see <https://www.youtube.com/watch?v=f92RYCZMwEk>).

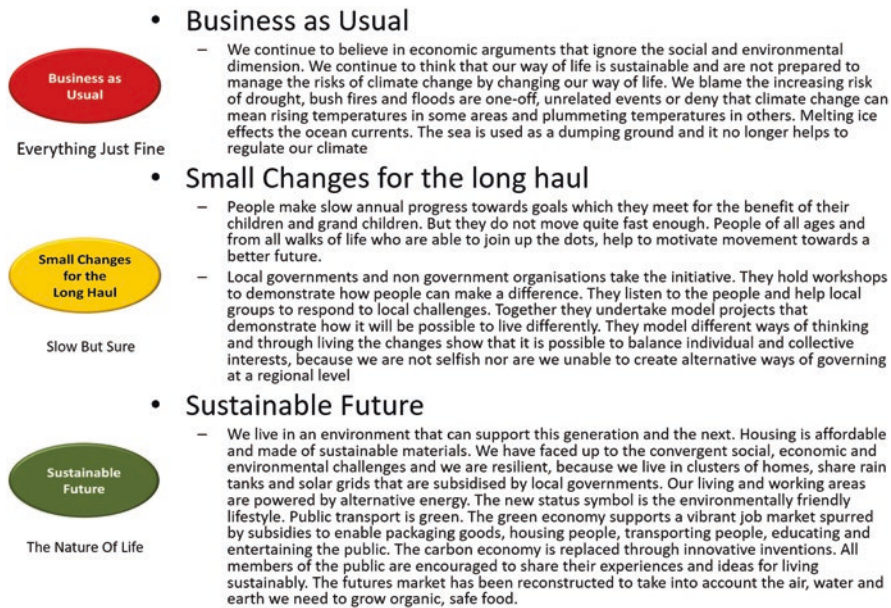


Fig. 15.3 Scenarios of options to guide ‘if-then’ thinking to balance individual and collective needs in terms of the consequences of their decisions for self, others and the environment on which they depend

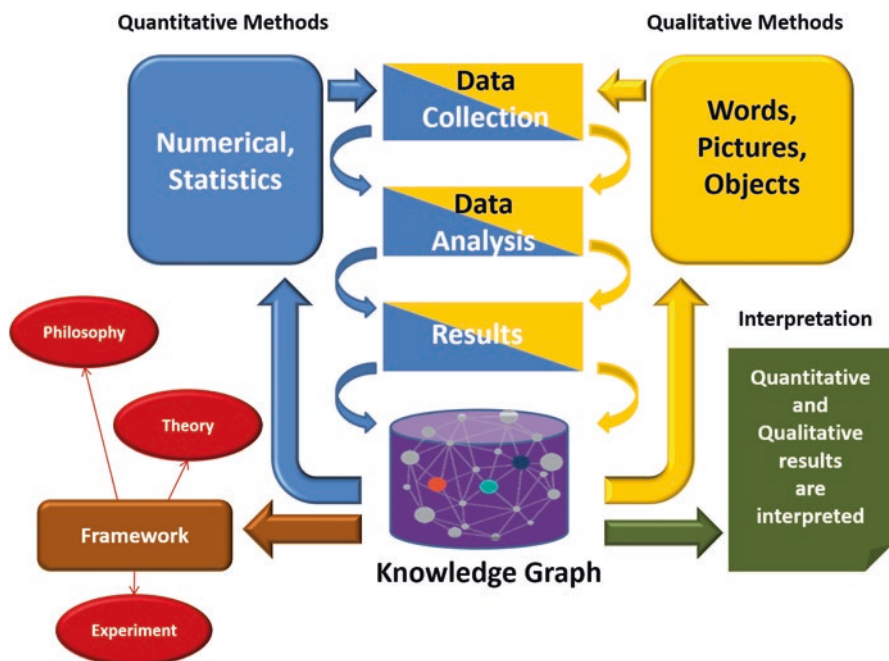
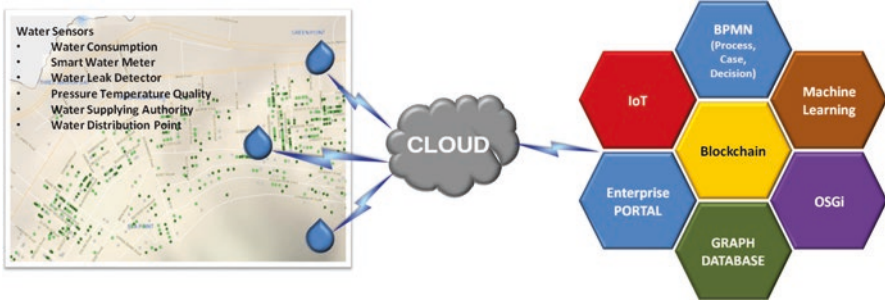


Fig. 15.4 Combining qualitative perceptions and quantitative data to manage from below and from above, in order to narrow the gap between service users and service providers



**Fig. 15.5** Linking water management sensors to a water management system. Source: <https://city-maps.capetown.gov.za/waterviewer/>; <http://www.capetownetc.com/news/green-light-for-cape-town-water-map-despite-objections>

The following diagram shows the use of the generic smart platform integrated with IoT (Internet of Things) platform based on blockchain technology for managing the water crisis in South Africa (Fig. 15.5).

The above diagram, depicting different type of sensors, such as water consumption sensors, smart water metre sensors, water leak detector sensor, etc., are connected to IoT.

The following explanation of the technical details deliberately draws on Wikipedia explanations (see underlined text links) to enable readers to follow up on the explanations. A standard Business Process Model and Notation (BPMN<sup>4</sup>) can be used to provide businesses with the capability of understanding their internal business procedures in a graphical notation and will give organizations the ability to communicate these procedures in a standard manner. Furthermore, the graphical notation could facilitate the understanding of the performance collaborations and business transactions between the organizations. This could ensure that businesses will understand themselves and participants in their business and will enable organizations to adjust to new internal and B2B business circumstances quickly.

All data collected will be stored in a graph database which uses graph structures<sup>5</sup> for semantic queries with nodes, edges and properties to represent and store data. A key concept of the system is the graph (or edge or relationship), which directly relates data items in the store. The relationships allow data in the store to be linked together directly and in many cases retrieved with one operation.

The enterprise portal<sup>6</sup> is used for human interaction to the system. An enterprise portal, also known as an enterprise information portal (EIP), is a framework for integrating information, people and processes across organizational boundaries in a manner similar to the more general web portals. Enterprise portals provide a secure unified access point, often in the form of a web-based user interface, and are

<sup>4</sup><http://www.bpmn.org/>

<sup>5</sup>[https://en.wikipedia.org/wiki/Graph\\_\(abstract\\_data\\_type\)](https://en.wikipedia.org/wiki/Graph_(abstract_data_type))

<sup>6</sup>[https://en.wikipedia.org/wiki/Graph\\_database](https://en.wikipedia.org/wiki/Graph_database)

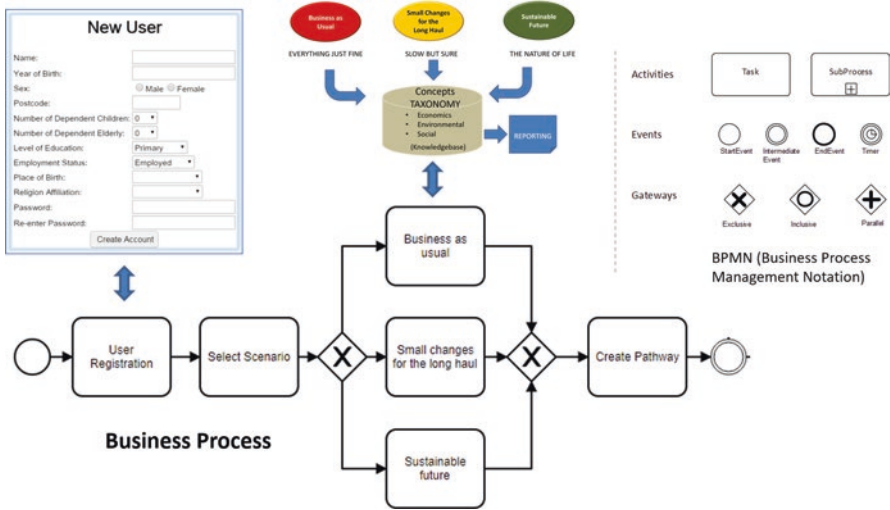


Fig. 15.6 Process management

designed to aggregate and personalize information through application-specific portlets (e.g. Smart Green Energy Portal).<sup>7</sup> All collected data can be turned into information, then to knowledge and ultimately to wisdom as described in DIKW Pyramid,<sup>8</sup> by utilizing the machine learning, which is used to analyse and extract knowledge from the graph database (Big Data Day).<sup>9</sup> To ease the integration of different frameworks and technologies used in P2W application, we can utilize the OSGi Alliance, formerly known as Open Services Gateway Initiative technology. The OSGi technology<sup>10</sup> is a set of specifications that define a dynamic component system for Java. These specifications enable a development model where an application is composed of several components which are packaged in bundles. Components communicate locally and across the network through services. Components are the reusable building blocks, i.e. the bricks; the components provide the implementation code.

Using business process management notation (BPMN), the process is depicted in the following diagram (Fig. 15.6):

The following diagram depicts the mapping between the pathways iterative application with the process model implementation using BPM notation (BPMN) (Fig. 15.7).

<sup>7</sup> [http://wirasoftfoundation.org/en\\_GB/web/smartenergy/home](http://wirasoftfoundation.org/en_GB/web/smartenergy/home)

<sup>8</sup> [https://en.wikipedia.org/wiki/DIKW\\_pyramid](https://en.wikipedia.org/wiki/DIKW_pyramid)

<sup>9</sup> <https://www.youtube.com/watch?v=2FtjASOHL8A>

<sup>10</sup> <https://www.osgi.org/developer/architecture/>

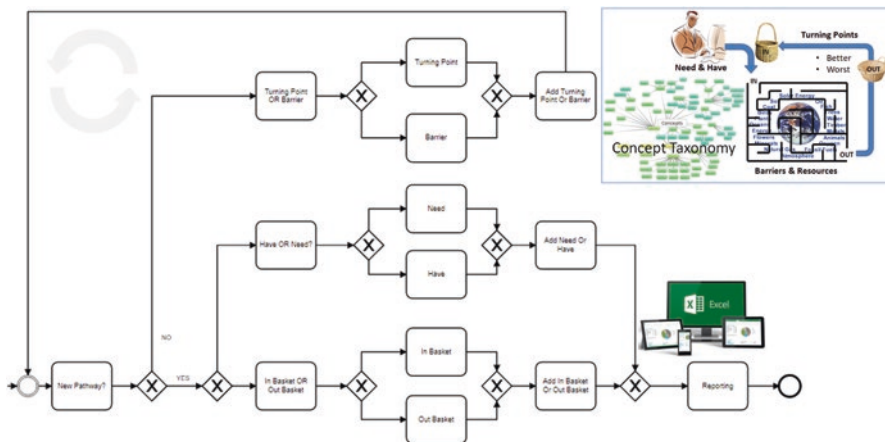


Fig. 15.7 The mapping between the P2W iterative application and the process model implementation using BPM notation (BPMN)

The weblink<sup>11</sup> gives details of the proposed design. It is an abridged set of slides to the Venture Institute, Flinders University, and details the way in which the software could be extended to address the challenge, namely, energy, mobility and communication, applied to address food and water security. The mapping system could aid a comprehensive intersectional understanding and address the concern that people currently feel ‘let down’ by current policies and they need to ensure that the risks are addressed in a transparent way which ensures that consumption of scarce resources is addressed in ways that are representative and accountable. This applies to food, energy and water management. Existential risks (Bostrom) are likely to increase unless the Intergovernmental Panel on Climate Change (IPCC)<sup>12</sup> formula is addressed in ways that engage ecological citizens.

<sup>11</sup> <http://wirasoftfoundation.org/web/smartenergy>

<sup>12</sup>The Intergovernmental Panel on Climate Change (IPCC) formula, namely,  $E$  (Emissions) = Population  $\times$  Consumption per person  $\times$  Energy Efficiency  $\times$  Energy Emissions, suggests that the privileged urban lives of some could lead to ‘existential risk’ for people and the planet (Bostrom 2011) which is why it is necessary to enhance our understanding of consumption. Nussbaum discusses the essential capabilities that are needed by sentient beings to live a life worth living. She takes the initiative to design and construct the essential conditions. She is not suggesting that people should be limited, she is making a case for *extending rights beyond the human* in ‘Frontiers of Justice’ in which she discusses the current limitations of *social contract theory* to **protect** those who *fall outside the boundaries of the nation state* or outside the parameters of state protection as they are non-citizens. These include asylum seekers, those who have lost citizenship (because they are labelled criminal) and the disabled, She then extends protection to *all sentient beings* and the need to *protect the environment* on which we all depend. In this way she also introduces protection of habitat for all living systems, although she does not specifically spell out our hybrid inter dependency. Andrea Nightingale has developed an intersectional study on access to land in Nepal that is shaped by caste and gender. Thus intersectional analyses need to take categories as just one dimension of more comprehensive analyses to support social and environmental justice.

This approach to ecological governance identifies social, economic and environmental risks through enabling people to participate in using a regenerative living and resilience scorecard. By addressing so-called wellbeing stocks (Stiglitz et al. 2010: 15)<sup>13</sup>, a multidimensional measure spanning social, economic and environmental makes steps towards protecting the commons. Some aspects of life are beyond price<sup>14</sup> and need to be regarded as part of the fabric of life.

Boulding stressed that transformation requires the highest level of response as the level of complexity required for transforming society increases as we move from inorganic to organic, to animal and to human life.

The neo-liberal agenda has pushed developing countries, such as South Africa facing both water and energy insecurity to the brink (see, for example, Bond and Mottiar 2013). The Nevertheless the agency shown by Civil Society movements, responses (albeit belatedly by the state, despite the political stand offs) set an agenda that needs to be met by innovative economic transformations that are not in line with the same old paradigm that has been emulated by the BRICS network (Bond and Garcia 2015; Bradlow 2017). In these references, it is stressed that BRICS has done little to address sustainability and has instead repeated the same old messages.

This requires simple systems that support representation for enhanced equity, accountability to enhance fairness and transparency and regeneration for the restoration of the commons and the assumptions and values that support it.

### ***Reframing Knowledge Through Researching Relationships to Protect the Web of Life***

As stressed in ‘Democracy and Governance for Resourcing the Commons: theory and practice on rural-urban balance (McIntyre-Mills 2017: 88–89), the purpose of our policy research to date has been to explore and deepen an understanding of the complex, interrelated factors underpinning decision-making and resource sharing, in order to respond to the UN Sustainable Development Goals. The most impactful

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<sup>13</sup> ‘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’.

<sup>14</sup> All life is interdependent and vulnerable, but as human beings, we need to act as stewards as we are responsible for achieving Boulding’s notion of transformative culture (Boulding 1956). The authors draw on Butler and Athanasiou (2013) to stress the need for performative agency to protect the commons and the need to concentrate on dynamic ways of working with others. McIntyre-Mills, (2017) expands the concept of ‘wellbeing stocks’ developed by Stiglitz et al. (2010) to take on board the points made by Nussbaum (2011) about the need to appreciate the ‘determinants of a life worth living’. The capabilities approach needs to draw on both Amartya Sen’s functionality and Nussbaum’s a priori idealism. In reworking the capabilities approach, McIntyre-Mills (2014 in Systemic Ethics, 2017 in Planetary Passport) make a case for both *rights and stewardship* to protect living systems and sentient beings, simply because it is the right thing to do.

element of a transformative system needs to develop water and energy in combination with food and shelter. Water security exists in parallel with energy harvested and those in combination of food and shelter that enables regeneration of resources to benefit the service users.

Ecosystemic approaches to regenerative service delivery need to *work with nature* by using *natural energy sources* and designing *rural-urban linkages that support food and water security* which are core to supporting *the wellbeing and resilience of living systems*.

In his preface, Adam Smith (1776a, b: 4) discusses the imbalance in development:

Some nations has given extraordinary encouragement to the industry of the country; that of others to the industry of towns. Scarce any nation has dealt equally and impartially with every sort of industry.

Adam Smith (1776a, b: 24):

It is not from the benevolence of the butcher the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity, but to their self-love, and never talk to them of our own necessities, but of their advantages. Nobody but a beggar chooses to depend chiefly upon the benevolence of his fellow-citizens.

Enlightened self-interest in today's context would require rethinking the example and rethinking what cascade economics to protect living systems could look like. I find it hard to accept that the time and motion principles (embedded in the wealth of nations) that provide the basis for factory organization and the commodification of labour and extraction of rent were discussed by Smith without actually questioning the way in which the economic system operates. Smith seemed to think that *if capitalism is applied in an ideal and organized way*, then the profits would flow on to all.

Economic growth does not entail a fair distribution of resources to protect all living systems. The wicked nature of climate change, displacement of people, loss, unemployment and poverty is explored as it affects multiple species.

The cascading effects of climate change can be better understood and hopefully redressed through intersectional pathways to mitigate the causes and adapt to the effects of climate change. These pathways include:

- Identifying issues and working with the community
- Identifying what the problem is represented to be by different stakeholders (Bacchi 2009)
- Identifying what and who is currently included and excluded and why in policy planning processes
- Identifying what, who and why ought to be included in a better design to address wicked challenges that have many interrelated problems that are perceived differently from different stakeholders
- Identifying ways to prevent loss of land
- Identifying species that are under threat as a result of habitat loss

- Matching resources to their needs
- Identifying pathways that address complex needs through working with a host of factors simultaneously and in a non-linear manner as detailed in McIntyre-Mills and De Vries (2010), McIntyre-Mills et al (2014) and McIntyre-Mills et al. (2017)
- Lobbying to address policy changes

The notion of virtuous living needs to be explored in terms of:

- **A priori norms** that are guided by accepted rules of behaviour that protect sentient beings and the fabric of life on which they depend
- **A posteriori indicators** that measure the extent to which service users act as stewards for current and future generations

Both norms and indicators are needed, in order to guide practices and to hold people and their elected government representatives to account and to engage people to resource the commons. In this paper a case is made for a way forward to address the cascading effects of climate change in the Western Cape region of South Africa by redressing the rural-urban imbalance in development opportunities. The actions taken by the Municipality of Cape Town succeeded in managing the scarce resource and balancing individual and collective needs.

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# Chapter 16

## Conclusion: Potential for Transformative Research to Address Risks



Janet McIntyre-Mills and Norma R. A. Romm

**Abstract** Intersectional interventions are needed to match and address the needs of the marginalised in social life. Our focus is on the voiceless as they become displaced and vulnerable as a result of losing habitat or homes. We begin with some deliberations by Janet in which she summarises her conceptual background to this argument and then explains the importance of practising research to address social and ecological justice. This is followed by her creation of a hypothetical vignette which serves to illustrate options for systemic intervention. We conclude the paper and draw together key points made in the book. Norma engages with Janet's vignette and explanation of ways to expand pragmatism by thinking through the consequences of our choices. A key message for the conclusion and the two volume series is the importance of combining approaches *in response to areas of concern*. Norma suggests ways of 'stretching' different paradigmatic/philosophical bases for doing research responsibly to address complex issues, including ways of practising multiple and mixed methods research that focus on a transformative agenda.

**Keywords** Multiple and mixed methods research · Researcher responsibility · Intervention intent · Justice-oriented (co-)inquiry · Cognition and action

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## Introduction

Janet McIntyre-Mills

Since the most consequential ecological issues are so obviously global, forms of intervention to minimise environmental risks will necessarily have a planetary basis...A possible way of conceiving of the objectives of planetary care is offered by the so-called 'Gaia hypothesis' put forward by James Lovelock. According to this idea the planet exhibits the behaviour of a of a single living organism, even a living creature (Giddens, 1990:170)

The consequences for people living in cities who have lost their connection to the land are a central theme of the two companion volumes.

The purpose of this book and this concluding chapter is to explore an area of concern *with* people who have lived experience and who wish to make a concerted effort to make changes by reframing the current system by exploring the ways problems are represented (Bacchi 2009).

'Planetary health' was explicitly addressed by Giddens (1990) almost two decades ago, and yet the tendency to work in conceptual and spatial silos persists. Surely it is common sense that we need to work across sectors and boundaries to make a difference through transformative research (Mertens, 2009)?

This requires Mode 2 type approaches, to use the phrase popularised by Gibbons et al. (1994). This involves research that crosses conceptual and spatial boundaries applied to address areas of concern such as planetary health for the wellbeing of living systems. In the concluding comments made by Giddens (1990:190), he hints at the dangers and risks of modernity and the impact of Western cultural influences. Thus the need to develop a critical awareness of Indigenous wisdom (see UNDRIP 2007) is important and taking into account the need for post national co-operation is vital. The nationalist stance of many nation states is as problematic as is segregationism that does not support caring for the global commons.

Giddens (1990:170) also mentions 'consciousness' citing the Gaia hypothesis of Lovelock. How to achieve a new approach to consciousness is the focus of this work on transformational praxis to make a difference by being the change.

Methodological approaches need to address the area of concern in ways that make a difference to the everyday survival needs of people through regenerative living that addresses the cascading risks of climate change explained in *Planetary Passport* (McIntyre-Mills 2017) which refers to the need to make positive interventions socially, economically and environmentally to use sources of waste more creatively and more respectfully.

All people and sentient beings as well as the organic and inorganic systems that support them need to be respected, and waste needs to be minimised and used as a source for another purpose.

For example, as discussed in Chaps. 3 and 14, Capetonians in South Africa have managed to halve their water usage (ABC News 21st February, 2018) through using water for household washing and then as grey water to be used for processing solid waste in the sanitation system. But the opportunities to recycle water and to process waste for fuel in closed system buildings are feasible and need to be progressed (Pauli 2010) in city designs to ensure that fragile ecosystems are not destroyed.

## Doing Research Responsibly

Janet McIntyre-Mills

Doing intersectional research responsibly requires an appreciation of the transformative approach (cf. Mertens 2009, 2014, 2016) that draws on qualitative and quantitative methods and many ways of knowing.

For example, knowing where the local springs are based in Cape Town helps locals informed by Indigenous paradigms to ensure that the cultural discourse that underpins the work is not dominated by Western values or framed from the perspective of so-called enlightenment thinking that loses the soul and the sense of sacredness that can be found in our relationship to nature. We need to be able to embrace a stretching of postpostivist, constructivist and expanded pragmatic approaches (see also Romm 2018, Table 9.1, pp. 449–450). Each of these is summarised in turn.

Postpostivist approaches imply that we can accept the not so common sense notion that science through understanding of organic and inorganic life and measuring and explaining its patterns has a role to play, as does the emotionally obvious that the way we make sense of or perceive an area of concern matters. For example: How we construct the experience of being wounded physically matters and can make a difference to how we manage the pain and how our immune system copes with the injury.

Pert (1999) stresses that emotions shape our physical wellbeing and of course our physical wellbeing affects our emotions. So in a very real sense, thinking and emotions matter and can affect physical matter. By appreciating many ways of knowing, we begin to move away from silos.

In terms of our response to the person who has wounded us, ideally we may shrug off the role of victim and instead act as an agent of change who insists that the young perpetrator of the wound, an intoxicated teenager, aged 16 high on alcohol and drugs driving a stolen vehicle is sent to do community service in a hospital for motor vehicle accidents. If it is found that the teenager comes from a community where this is not uncommon, then a more wide-ranging approach to ‘the environment’ of the problem is required.

If we are capable of treating people as ends in themselves and not ‘merely means to an end’, then we may be able to begin to work with the young person to establish what options are available for turning his life around. In terms of narrow pragmatism, we can ask him to consider the consequences of causing injury to others on his own life and opportunities.

Nevertheless, the narrow pragmatism of thinking through options needs to be expanded to enable people to think through consequences in the short, medium and long term on their own lives and others on whom they depend.

Expanding pragmatism has been discussed in detail elsewhere (McIntyre-Mills 2012, 2014a, b); it is based on considering the consequences of decisions taken through limited sets of lenses versus taking decisions based on many sets of lenses. Churchman (1979) introduced the notion of the *Design of Inquiring Systems* approach, based on unfolding the values of diverse stakeholders who perceive the environment of a problem differently.

Some of the many ways of knowing are:

*Spiritual* awareness, based on appreciating our connectedness to ‘all that exists’ and that we return to the earth and waters at the end of our life cycle to become one with the nature

*Idealism* based on a priori norms that guide choices

The *Dialectic* based on exploring options with people so that areas of overlap can be found or co-created and areas of difference can be respected

*Empiricism* based on treating qualitative and quantitative data as evidence

*Pragmatism* based on thinking about the a posteriori consequences of choices

I have added the notion of ‘expanding pragmatism’ (McIntyre-Mills 2012) to include intuitive and perceptive knowing and the wisdom of many living systems experienced by plants and animals. Trees have the ability to regenerate because their roots are supported by other living organisms. The roots do not only compete; they share nutrients, stressed by Pixie Littleworth, a biologist who has spent more than 60 years studying cape flora and has played a role in regenerating the forests on table mountain (December, 2017). Alan Rayner also a biologist would agree; he talks about the fluid interchange of energy (positive or negative) and the ballot to make a difference. He has studied the way fungi develop and share nutrients from their surroundings. The commination across plants responds to the environment through opening or closing their cells to toxins and nutrients, and communicating in advance has also been documented.

The fact that elephants have been documented as knowing when another sentient being will arrive (long before they are visible) though perhaps feeling the vibrations in their feet or hearing sounds that are inaudible to the human ear has been documented (Lawrence and Spence 2009). Similarly, the ability to sense danger of earthquake or impending tsunami has been documented (Shanor and Kanwal 2009) as discussed in *Systemic Ethics: Non-Anthropocentric Stewardship* (McIntyre-Mills 2014c). However, just like human beings, many sentient beings have a sense of fairness (De Waal 2006) as documented by his research at Stanford, and so the continuum of consciousness needs to be acknowledged as a precursor to appreciating many ways of knowing and our place with living systems.

The ability to use signs and symbols has been regarded as a human capability, but it is being found increasingly that sentient beings such as elephants can also create art works and sign to others. Similarly, dolphins use sound to communicate with one another and have strong sense of community.<sup>1</sup> The obvious shared capabilities of higher primates have been widely documented,<sup>2</sup> and now the notion that Neanderthals also used art to communicate and express themselves indicates the continuum of consciousness and many ways of knowing across many species. Walsh<sup>3</sup> says we need intersectionality to address the effects of climate change because to understand the concept, we need to see how the different stakeholders define it in relation to positional power and identity.

<sup>1</sup>Susan Casey’s 2015 ‘*Voices in the Ocean*’ Random House. New York.

<sup>2</sup>Rincon, P. Neanderthals were capable of making art <http://www.bbc.com/news/science-environment-43115488> \$\$ is Rincon, P and author writing on a date—give the date and also put in the ref list <http://www.bbc.com/news/science-environment-43115488> accessed 27 February 2018.

<sup>3</sup><https://intercontinentalcry.org/need-intersectionality-understand-climate-change/>.

Intersectionality is drawn from Crenshaw's (1991) work on the intersecting axes of power and how these can compound oppression. Walsh (2016) draws on this work through citing Dhamoon (2011) to develop an analysis of climate change stakeholders who work inside or outside the state-market system. Intersectionality can be applied in many contexts, and policy analysis needs to mainstream intersectionality to explore the impact of the cascading effects of climate change on the poor, for example, in informal sector areas in drought-affected Cape Town, the residents face rising food, energy and water costs. The drug trade and crime thrive. The following hypothetical scenario of the life chances in a place that I will call 'Struggle Ville' ends better than most real-life scenarios where drug-fueled crimes result in high morbidity and mortality rates and little is done to turn around the cascading effects of poverty and rising costs.

### **Hypothetical Vignette Based on Lived Experiences, Field Work, Supervision of Research and Secondary Data**

Joseph became a gang member at a young age as his mother works as a domestic cleaner many kilometres away. After school, he met gang members who befriended him. The sense that they were 'stealing' was seen as evening the score, as the suburbs with high fences seem to have so much more than his mother possessed. When he was arrested, the caseworker (who had studied widely and experienced poverty herself) was impressed by his explanation that they never took too much and that the theft of the vehicle and the injury caused were the first two actions for which he felt really guilty as he had indeed inflicted pain on the victim.

He then thought about the chain of events that had led him to making progressively problematic decisions. The caseworker expressed sympathy for his situation but stressed that the victims of the thefts would also have a point of view and he needed to bear in mind that some of the things stolen could have resulted in the victims being injured in ways that Joseph had not thought about. The consequences for them were worse than he had anticipated. For example, he did not know that the stolen computer had resulted in a young woman losing her thesis, because she had not backed up her work on any other system. She had a nervous breakdown and had to find part-time work at a fast-food outlet to survive and pay her bills.

A programme was set in place for Joseph to do a year's community service after school. This introduced him to a wider network of opportunities in the hospital where he worked. He was inspired to study and decided to become a nurse. His mother (an Indigenous healer as well as domestic worker) perceived that Joseph had responded to the call of his ancestors at last (see McIntyre-Mills 2000, 2017, Chap. 1 of 'We Are the Land and Waters') and had found his place in life. She shared her knowledge passed down through her family with Joseph, and Joseph's knowledge of healing was extended to appreciate the importance of protecting the natural environment from which so many herbs can be found in the Cape and which provide habitat for all.

Unfortunately, the more likely scenario for Joseph is incarceration leading to further cascading effects. By exploring the ‘wicked nature’ of climate change, displacement, loss, unemployment and poverty as it affects multiple species living in cities and the regions on which they depend, the cascading effects of climate change can be better understood and hopefully redressed through pathways to mitigate the causes and adapt to the causes of climate change. These pathways include:

- Identifying issues and working with the community (through a dialogical approach)
- Identifying what the problem is represented to be by different stakeholders (Bacchi 2009)
- Identifying what and who is currently included and excluded (and why) in policy planning processes
- Identifying what, who and why ought to be included in a better design to address wicked challenges that have many interrelated problems that are perceived differently by different stakeholders
- Identifying/exploring ways to prevent loss of land
- Identifying/locating species that are under threat as a result of habitat loss
- Matching resources to their needs (as located with attention to a non-anthropocentric ethic)
- Identifying pathways that address complex needs through working with a host of factors simultaneously and in a non-linear manner as detailed in McIntyre-Mills and De Vries (2010, 2014) and McIntyre-Mills and Wirawan (2017)
- Lobbying to address policy changes

## **Conclusion: Reframing Knowledge Through Researching Relationships to Protect the Web of Life**

Janet McIntyre-Mills   Norma R. A. Romm

One could argue (as does Janet in various chapters in this book) that transformative approaches can be used to address food, energy and water security in ways that support life chances and ecological justice outcomes. Water security exists in parallel with energy harvested, and these, in combination with food and shelter, enable regeneration of resources to benefit the service users.

Ecosystemic approaches to regenerative service delivery need to work with nature by using natural energy sources, designing rural-urban linkages that support food and water security, which are core to supporting wellbeing and resilience of living systems.

As mentioned in Chap. 14, Adam Smith’s (1776) notion of ‘enlightened self-interest’ in today’s context would require rethinking the example and rethinking what cascade economics could look like. Low-carbon options may exclude meat, and many cultures will abhor alcoholic brewing. We find it hard to accept that the time and motion principles (embedded in the wealth of nations) which were the basis for factory organisation and the commodification of labour and extraction of

rent were discussed by Smith without actually attempting to reframe the way in which the economic system operates. He seemed to think that if capitalism is applied in an ideal and organised way, then the profits would flow on to all.

By exploring the wicked<sup>4</sup> cascading problems of climate change, displacement, loss, unemployment and poverty (as outlined in Chap. 14), we can appreciate the effects on multiple species living in cities and the regions on which they depend; the cascading effects of climate change can be better understood and hopefully redressed through pathways to mitigate the (complex) causes and adapt to the causes of climate change.

In order to address complex policy issues comprising many diverse, interrelated variables that are perceived differently by different stakeholders, it is vital to appreciate many ways of knowing and to begin to understand the consequences that could flow from taking different decisions. By engaging in dialogue to explore and test out ideas, we are able to stretch the boundaries of knowledge to incorporate ways of knowing that may not previously have been considered. These include social, cultural, spiritual, instinctive as well as more mainstream qualitative and quantitative social and natural science approaches, as well as forms of communication and knowledge that human beings have not previously appreciated from other parts of the continuum of inorganic and organic living systems of which we are a strand.

In effect, the following philosophical/paradigmatic positions, which themselves can be seen as shifting/evolving in practice, can be ‘stretched’ to take into account the need to responsibly account for the potential impact of inquiries on the social and ecological worlds of which research (forms of knowing) is a part (see Romm 2015, 2018 for a more detailed explanation).

The issue at stake as expressed in Romm (2018) is how research can be actively practised in such a way that *at the moment of doing research, the consequential character of social inquiry is acknowledged and accounted for*. (This is what McIntyre-Mills calls ‘expanded pragmatism’, which also includes transformative intent—2014a, b, c.) It is this acknowledgement which can inspire an intent to advance via an active research approach (which emerges along the way as options for action become explored) more ‘just’ social outcomes and hopefully ecological outcomes too, as explained above.

Use of multiple and mixed research approaches (MMMR)<sup>5</sup> is then accompanied by recognising how ways of generating, and ways of treating, ‘findings’ need to be carefully (and dialogically) considered so as to take into account the likely intervention effects of the research on a world in process of *becoming*. Romm (2018) calls this active use of MMMR.

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<sup>4</sup>Wicked problems are complex (Flood and Carson 1993) and, drawing on Rittel and Webber (1984), can be defined as comprising many interrelated variables that are perceived differently by different stakeholders and that need to be addressed critically and systemically within context (McIntyre-Mills 2014, 2017).

<sup>5</sup>The distinction between multiple and mixed approaches is laid out by Hesse-Biber and Griffin (2015). They explain that multiple approaches imply using similar kinds of data measurement (such as quantitative or qualitative), while mixed approaches imply using different kinds (e.g. quantitative mixed with qualitative).



As far as the stretching of what are termed ‘post-positivist’ orientations to cater for more responsibility goes, it is important to note that post-positivist positions (following the Popperian tradition) suggest that multiple and mixed methods research (MMMR) supports different ways of trying to get closer to the truth about the patterning of social reality by using as sources different types of data and by employing different modes of analysis of these data. In line with the Popperian idea that we can never verify any statements about reality (see Popper 1959, 1969), it would be admitted that neither quantitative-styled nor qualitative-styled methods can lay claim to directly accessing ‘reality’. We can now suggest—see also McIntyre-Mills’ account of doing research responsibly above and Romm (2018)—that given this admission (which may involve some stretching of post-positivist position), we would do well to recognise how our ways of filtering ‘the data’ may have social consequences, for which we need to bear some responsibility. Policy needs to specifically address life chances shaped by discrimination against specific classes, races, cultures (expressed in language and religion), age or gender groups and disabilities. An intersectional study enables ensuring that interventions are not blind to the specific public issues and challenges that play out in specific lives. For example, we can frame the causal chain of events described in Janet’s vignette on Joseph, by seeing the ‘cause’ as the variable of ‘joining a gang’, which created problems for Joseph, or we can frame the problem (and the cause) by referring to the structures of the society and the lack of opportunities for Joseph as well as the problem that Joseph did not have a ‘place in life’. Hence ways of framing problems ‘scientifically’ are not innocent in the way in which we treat Joseph and consider options for addressing his (and other youth’s) ‘problems’. The intervention options that we consider are a result of how we frame the problem. Once we admit this, it means post-positivist conceptions of ‘science’ and ways of doing science become stretched to take into account this admission.

Regarding constructivist research orientations (research underpinned by constructivist understandings of the research process and its products), MMMR involves using different research methods while recognising that both quantitatively directed and qualitatively directed inquiries issue in *constructions of realities*. MMMR here requires being cognisant that researcher/research participant relations *generate* (rather than ‘find’) the data that become constructed. Now we can suggest that insofar as we take into consideration that the constructions generated during all research processes—whether quantitatively and/or qualitatively directed—are arguably a product of an interaction of researchers and research participants (where the distinction between these parties can indeed become blurred), those initiating research can *responsibly try to gear the research process towards enhancing the quality of constructions*. Quality of constructions can be assessed in dialogical interaction with those concerned. Janet’s account above of how a quantitative account of the extent of physical wounding and of the health of the immune system needs to be understood also as linked to how researchers and participants construct ‘pain’ as an experience and also link it to social constructions of ‘teenagers’ and ‘life chances’ in communities is also a case in point. Again, the constructions, with participants and communities of ‘the accident’ described in the vignette, will have consequences for how we construct remedial action.

In what is called transformative research orientations (cf. Mertens 2007, 2009, 2014, 2016), MMMR is defined as mixing methods and modes of analysis/interpretation while promoting participant and stakeholder involvement through progressive research cycles, with an explicit aim to incorporate an empowerment, transformative-oriented (intervention) intent in service of those most marginalised in society. MMMR, when practised (which is often advised in order to address wicked, complex social problems), should be tied to an axiological framework that seeks to enhance social (and ecological) justice—as explained in Janet’s hypothetical vignette. One can indeed ‘expand’ this position to recognise that any research initiatives (including MMMR ones) should be practised as undertakings in which researchers, with coresearchers, *recognise their responsibility to highlight versions of reality that are hopeful and that point to possibilities for positive social transformation. That is, the reality-forming potential of all research can be highlighted and nurtured in the research endeavour.* So in this case, one would try to highlight versions of reality that focus on lack of opportunities and lack of a ‘place in life’ rather than (simply) on Joseph as having ‘behavioural problems’. (See in this regard the work of Hesse-Biber 2015, regarding research framings; and see Romm 2018, especially Chap. 9.) This also has implications for social policy, as noted by Janet when she refers to programmes for community service after school—rather than incarceration as options for dealing with Joseph. This is on the basis of highlighting Joseph as linked to community life and not treating him as individually having a problem. The ‘variables’ affecting his life chances need to include discussion in communities, with stakeholders, to consider new narratives and new options for action.

A pragmatic approach to the use of MMMR suggests that such research combines quantitatively directed and qualitatively directed research practices, on the premise that their supposedly different philosophical underpinnings (e.g. postpositivism and constructivism) do not exclude mixing of research methods in practice. Paradigm wars between supposedly contending paradigms should not prevent researchers from designing an inquiry approach so that it ‘works’ to answer a specific research question. However, as noted by Janet, we need to stretch/expand this position towards what she calls an expanded pragmatism (2014a, b and in her discussion above of doing research responsibly). This is in order to highlight that because all research can impact on the unfolding of realities, we need to *responsibly conduct research with a ‘conscience’* (Gergen 2015; Romm 2018), so that it can be forward-looking to activate morally infused potential in social and ecological existence.

Indigenous-oriented philosophical positions (cf. Cram and Mertens 2015; Chilisa 2012; Chilisa et al. 2017; Kovach 2009; Romm 2017) suggest that MMMR is suited to explore the differentiated social pathways leading to unequal life chances for privileged and for marginalised social groups, while incorporating in inquiries the value of (qualitative) appreciation of experiences and views. MMMR can be used in the service of generating culturally responsive inquiry while encouraging reflection and conversation around social as well as ecological justice. Different styles of knowing, including that which takes into account spiritual experiences (see also Wane et al. 2014), can be harnessed via MMMR. Janet hints at this above in her vignette of how Joseph needed to be treated by considering the spiritual experience

of the call of the ancestors as well as by considering connections to the land and the waters as part of what needs to be addressed. Again, one can stretch/expand these arguments by highlighting that because we (all that exists, living and nonliving) are part of a dynamic web of relations, researchers—that is, anyone involved in the research endeavour including participants and stakeholders—should *take co-responsibility for reflecting upon how the research space is part of this dynamic web of life*. MMMR needs to concentrate on locating culturally responsive versions of reality that are likely to lead to actions which *enhance the relational quality of social and ecological existence, as understood through a range of ways of knowing*. ‘Culturally responsive’ does not imply that cultural repertoires are treated as ‘given’; diverse perceptions of the potential of cultural expressions for living in balance with ‘all that exists’ are open to continued conversation. What is important in this conversation is that different forms of knowing are acknowledged including spiritual experiences, as noted by Janet above via her conceptual discussion and her vignette, which is meant to ‘touch’ us as audiences emotionally too and is meant to encourage us to reflect on areas of concern in ways that enable us to think about the issue and to examine our emotions. Thoughts as well as feelings can act as guides for decision-making provided that we are mindful of our emotions and our values.

As West Churchman stressed (1981), ‘the enemies within’ are religion, morality, politics and aesthetics. These make us human, and they lead to both passionate and compassionate responses. The ability to think about our thinking and to examine our values in conversation with others is a precursor to being able to make better public policy and compassionate decision-making in all walks of life.

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# Correction to: Policy Design for Vocational Pathways to Protect Biodiversity and Regenerate the Land



Janet McIntyre-Mills

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The chapter was published with few text errors. The same has now been corrected throughout the chapter.

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