Contemporary Systems Thinking

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Democracy and Governance for Resourcing the Commons

Theory and Practice on Rural-Urban Balance

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

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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

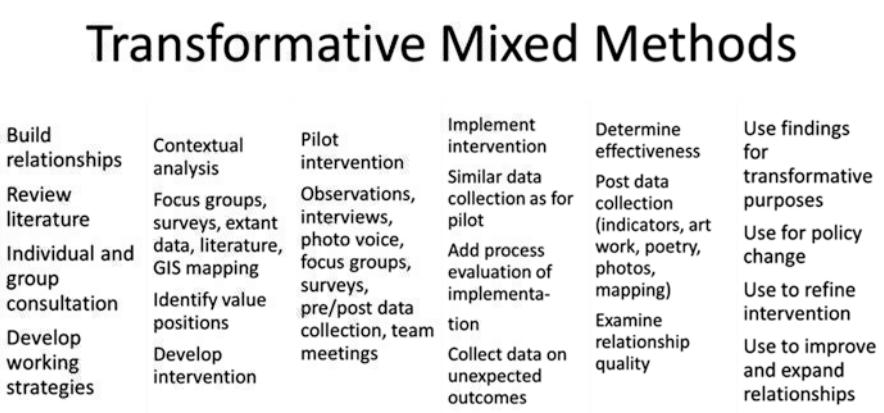

Fig. 1 Transformative mixed methods design

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[1] 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.

[1] 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.

Contents

About the Editors

Janet McIntyre-Mills Flinders University (nee Mills; publish as McIntyre-Mills) is Associate Professor at Flinders University, an Adjunct Professor at the University of Indonesia and Indonesian State Islamic University, and an Honorary Professor at the University of South Africa in the College of Education, Training and Youth Development. The adjunct appointments recognize over 30 years' experience in policy research addressing complex social challenges. Postal address: College of Business, Government and Law, GPO Box 2100, Adelaide South Australia, 5001, Ph.: 61 (0)8-82012075/mobile 61 411 348 862, email: Janet.mcintyre@flinders.edu.au.

Her research addresses social justice issues such as health, housing and social inclusion, and the mitigation and adaptation to climate change. She addresses complex needs by exploring the meanings and "what if" questions with diverse stakeholders. She has written several books including *Systemic Governance and Accountability: Working and Re-working the Conceptual and Spatial Boundaries*, Springer, and *User-Centric Policy Design to Address Complex Needs*. She is Chair of the International Systems Special Integration Group, entitled "Balancing individualism and Collectivism," and in the past was elected three times to Research Committee 10 on Organizational Transformation of the International Sociological Association.

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,"[1] and the edited volume together with Professors Romm and Corcoran Nantes is entitled

[1] 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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Yvonne Corcoran-Nantes (PhD, Sociology) is widely known in the field of gender studies, regularly being interviewed on gender and political issues by the media in Australia and overseas. She has worked with women in such diverse locations as Central Asia, Mongolia, Indonesia, East Timor, and Brazil in many research and development projects to improve the rights and status of women in their respective countries. At the present time, she is undertaking research on women of the resistance in the American war in Vietnam. While Dr. Corcoran-Nantes currently teaches in the areas of international studies and women's studies, her main research interests are gender and international politics, gender and international development, and women and armed conflict. Dr. Corcoran-Nantes is Head of Women's Studies and Associate Professor in the College of Humanities, Arts and Social Sciences at Flinders University.

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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 Foucalult 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)[1]:

> ***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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[1] 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'.