

POLICY IN THE ANTHROPOCENE

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Abstract: This article discusses recent works on the notions of postpolitics and sustainability in conjunction with illustrative examples from empirical data collected during long-term fieldwork in and around the tourist town of Broome in the West Kimberley region in Australia. I argue that for policy research and practice to remain a significant contributor to contemporary research on sustainability in the Anthropocene, it needs to develop more collaborative approaches that cater to the involvement of numerous and diverse actors in decision-making processes. The article outlines some of the methodological challenges this poses, and how to address them.

Keywords: Anthropocene, anthropology, Australia, knowledge production, policy.

Modernist theories of unlimited wealth and progress are no longer sustainable. On the contrary, they have led to environmental degradation and the growing marginalization of people around the globe. In response, the Anthropocene calls for an urgent re-thinking of the dualism between “nature” and “culture”, where social science and humanities research is employed to situate the human (*anthropos*) in a relational nexus that is constituted by diverse human and non-human elements (Gibson-Graham et al. 2013)¹.

My aim in this article is to outline some of the theoretical and practical implications this reimagining of human/non-human relations in the age of the Anthropocene has for policy makers and researchers². I follow the hypothesis that by attending to the entanglement of human and non-human elements through an emphasis on collaborative knowledge production, policy research can help fashion more sustainable development pathways in a shared and increasingly uncertain planetary future.

The first section introduces recent works on the notions of postpolitics and sustainability as the theoretical frame in which this article is embedded. This is followed by some illustrative examples for collaborative approaches to environmental decision-making that stem from original fieldwork conducted for a total of more than two years between 2011 and



2017 in the West Kimberley region in Australia. The focus will be on a conflict over the development of a \$ 45 Billion AUS Dollar natural gas facility 50 km north of the iconic tourist town of Broome on the Indian Ocean coast and the different ways in which the social and environmental impact of this project was assessed.

With reference to the different “regimes of value” (Appadurai 1986) at play in these assessments, I provide reasons for the continued dominance of an anthropocentric worldview in environmental decision-making, but also highlight means for local communities to successfully challenge this dominance. Most notably, in the above case, it was possible to counter-act scientific assessments of the social and environmental impact of the project that were produced for government and industry through the collaborative engagement of diverse community members as citizen scientists (Wergin 2018). I thus argue that for policy research to remain a significant contributor to contemporary discussions about sustainability in the Anthropocene, it needs to nurture more such collaborative knowledge production, with a methodological approach that caters to the involvement of numerous and diverse actors in decision-making processes.

COLLABORATIVE KNOWLEDGE, POSTPOLITICS AND SUSTAINABILITY

Apart from the scientific rationale, to acknowledge the Age of the Anthropocene is also a political project that counteracts proclamations of apparent “rights of Nature” and their conventional attribution through stylized, almost always quantitative, criteria³. Proponents of the Anthropocene argue instead that mere quantitative assessments of, for example, climate change and its impact results in a de-politicization of more complex social issues. The notion of the “postpolitical” has been applied to denote this phenomenon, particularly in regards to urban environmental issues (Swyngedouw 2010).

Human impact on climate change has been known and discussed since the early twentieth century. It has formed part of global political discourse at least since the 1970s with the 1972 landmark UN “Only one Earth” Conference in Stockholm. This culminated in the 1997 Kyoto Protocol, the 2009 Summit in Copenhagen, and is revisited annually at the United Nations climate conferences (COPs).

Theorists of the postpolitical such as Slavoj Žižek, Chantal Mouffe and, in particular, Erik Swyngedouw emphasise that the elevation of the environment to a public concern through global conferences on sustainability and climate matters is both a marker of and constituent force in the production of de-politicization. While climate matters have been brought into the domain of politics, they are articulated around an imagining of what a “good” climate or a “good” environment is. In line with Modernist theories about economic development and progress such, “post war framing of the environment fatefully reduced it to an object of natural science” (Palsson et al. 2013: 4).

In contrast to this, the perspective advocated by scientists of the Anthropocene acknowledges that there is no such thing as a singular “Nature” that could be good or bad. Consequently, there can be no common sustainability or climate policy constructed or performed (Sörlin 2013; see also Latour 2004). Instead, knowledge production about nature needs to be fostered not only by so called “natural science” but through direct involvement of scholars from a wide range of disciplines, and in particular from the domains of policy, social theory and the humanities (Palsson et al. 2013: 4; see also Hulme 2011).

The aim of these larger collaborative efforts is to produce and use knowledge to promote a more engaged and reflexive role for science that incorporates views and insights from a variety of actors in what has been termed a “knowledge democracy” (in’t Veld 2010).

Knowledge democracy highlights the relationship between science and the rest of society, which is currently undergoing profound change in the context of phenomena such as the scientization of politics and the politicization of science (Cornell et al. 2013: 61; see also Weingart 1999; Leach et al. 2005).

Along these lines, more effort needs to be devoted to engagement, interactive problem framing, knowledge integration and real-world experimentation (Chabay 2010). However, as Holm et al. (2013: 26) points out, “interdisciplinarity is too often not integrated from the start. Definition of the problem often sets the terms of engagement, expected outcomes, who is involved, etc.”. Notions of scientific collaboration but also of scientific *coproduction* become vital here. Understanding sustainability in the Anthropocene needs a more organic

methodology that develops along with the research inquiry and is thus designed in contrast to the conventional focus on singular methods used to assess a particular problem⁴.

Helpful for the development of a more inclusive methodology has been the emergence of networked communication technologies, which created new collaborative ways of doing science through the direct involvement of local experts and citizen scientists⁵. Some of the examples presented below draw on material from such citizen science projects that, rather than producing more knowledge, produced appropriate knowledge for the assessment of the social and environmental impact of a large-scale industrialization proposal in the remote Kimberley region in Northwest Australia.

Here, the involvement of citizen scientists added a significant quality to the work, “the constructive sharing of experience and expertise” (Cornell et al. 2013: 69). In the collaborative approach advocated by the citizen scientists these domains came together and offered a more nuanced assessment of the environment at play. Their plurality of perspectives allowed collaborators to highlight significant uncertainties in the research results produced by consultant firms that were employed by proponents of the project. The collaborative knowledge about the particular values of the land that citizen scientists were able to generate contradicted these findings and ultimately prevented the industrialization from literally *taking place*.

ENVIRONMENTAL TRANSFORMATIONS, CITIZEN SCIENCE AND CONFLICTING REGIMES OF VALUE

Before land becomes useful in Modernist terms its values have to be assessed. Evidence drawn from natural science is but one of the inscription devices used to produce land as an abstract space that renders these values assessable in terms of size, utility, and risk (Li 2014).

Along these lines, Western knowledge and related regimes of value began to heavily impact on the Australian outback town of Broome and its adjacent region in the late nineteenth century, with the professional exploitation of the local *Pinctada maxima* pearl shell, which was used to produce buttons for shirts worn in the Western world. Broome became the only place in Australia that was exempt from the White Australia Policy in order to guarantee a sufficient supply of work-

ers of Asian and Aboriginal descent necessary to collect mother of pearl from the ocean floor⁶. At some point, the town was the largest export base for mother of pearl in the world, a legacy that lasts until today and adds a lucrative historic dimension to Broome as a tourist destination⁷.

Following the introduction of plastic, which replaced mother of pearl as the significantly cheaper alternative, pearl farms such as Cignet Bay, the oldest pearl farm in Australia, changed direction from collection to the cultivation of pearls. Today, Cignet Bay also runs a restaurant, and offers accommodation and guided tours for tourists. This allows for young work-and-travel visitors from Europe and elsewhere to renew their visas for another twelve months if they work for three of those on the farm, no matter whether they harvest mangoes or oysters, or conflate related tasks with house-keeping responsibilities.

Thus, since the introduction of cultured pearling and the rise of the tourism industry, the value of Broome's *Pinctada maxima* has been transformed. Similarly, the cultural mix generated through the exemption from the White Australia Policy has become a drawcard in tourist advertisements that highlight the "Creoleness" of the town and its multicultural character. The latter can be experienced in Broome's very own Chinatown, or during the annual *Shinju Matsuri*, the Festival of the Pearl, that was traditionally celebrated in memoriam of Japanese pearl divers and today showcases Sammy, the Chinese dragon, as its iconic symbol (fig. 1).

Meanwhile, well before the advent of such Modernist regimes of value, mother of pearl was an important symbol and trading object for the Aboriginal communities in the region. Fig. 2 shows the interior of the Sacred Heart Church in Beagle Bay, a former mission station, located about 75 kilometres north of Broome on the Dampier Peninsula. Work on the church began in 1915 when German Pallottine missionaries were confined to Beagle Bay due to wartime restrictions on their movements.

The church celebrated its one-hundredth anniversary in August 2018 and has become a popular tourist attraction because of its unique decorations made from mother of pearl by missionized Aboriginal women. Some of those decorations display symbols of Indigenous communities from the area while others form lamb, fish and shepherd's crook of the Christian faith.



Fig. 1. *Sammy the Dragon with spectators during his official "Awakening" for Shinju Matsuri 2012 in front of the iconic Roebuck Bay Hotel in Broome. Photo by the Author, 2012.*



Fig. 2. *The Altar in Sacred Heart Church, Beagle Bay. Photo by the Author, 2011.*

These examples demonstrate how the attribution of value to a particular place and its people continues to change over time. A Modernist rationale of progress and development that is grounded in the exploration of local resources has been instrumental for allowing such attributions to transform the place and its people, not least since the Aboriginal population was disregarded when it came to define the value of the *Pinctada maxima* in Modernist terms. Their sole function was to provide cheap labour.

A rather different collaborative case is made by the organisers of the *Lurujarri Heritage Trail*, an 82 km coastal walk founded in 1987 by the late *Goolarabooloo* senior law boss Paddy Roe (OAM), that begins in Broome and follows an Aboriginal Song Cycle along the Indian Ocean coast (Wergin 2016). Roe's vision was for black and white people to walk together on "a trail to understanding" (Roe, Hoogland 1999).

The insights into this world of the *Goolarabooloo* and the *Lurujarri Heritage Trail* experience are derived from my own participation in the trail in 2012 and 2015. They are also informed by further consecutive visits with members of the community to some of its spiritually significant places. Additional material stems from participant observations at tourism related events in Broome and, of course, interviews conducted in the course of my fieldwork with a diverse range of people, from government and industry representatives to local community members, sometimes over many hours and in multiple sessions. In these interviews I used a problem-centred approach, focussing on individual opinions that were then put in triangulation with further qualitative results derived from, among others, aforementioned participant observations. Another methodological component was provided through discourse analysis on how the environmental, social and cultural conflict that unfolded was addressed in local, national, as well as social media.

Between 2006 and 2013, many people who have walked the nine-day trail reunited to protect one of its central sites, Walmadany / James Price Point, from industrial development. Indigenous and non-Indigenous people staged what can arguably be termed the largest environmental protest action in Australian history, in order to oppose the construction of a \$ 45 Billion AUS Dollar liquefied natural gas (LNG) facility in this environmentally and culturally sensitive area⁸.

When its main stakeholder, Woodside Petroleum Ltd., officially withdrew their proposal in April 2013, the WA gov-

ernment had already approved all environmental and heritage applications and its then Premier, Colin Barnett, remained determined to develop the site. Though the government has changed since then, possible future uses are still looming as a port facility and export hub for large-scale explorations throughout the Kimberley of coal, oil, uranium and unconventional gas, with use of the controversial process of fracking.

For now, the *Goolarabooloo* succeeded in protecting Walmadany / James Price Point from industrial development by sharing parts of their knowledge about the area with a diverse range of people. Since 1987, they have travelled the land together with participants in the annual *Lurujarri Heritage Trail* and thus made its social and environmental values accessible to the latter as part of a lived experience. The custodians shared their knowledge about the land while traversing the land, which is instrumental to understand the particular values of their country. These values are different from those advocated by the resources industry and its proponents because they are not implemented from above but derived from below, through the acknowledgement of the particular qualities that are already in place and that have made the environment sustainable, as Aboriginal people say, “since day one”.

The diverse group of opponents that formed and successfully delayed construction of the LNG facility was made up of local residents to Broome as much as national and international experts, academics, lawyers, and media representatives. It was supported by environmental groups such as *Environs Kimberley*, *Save the Kimberley*, *The Wilderness Society*, as well as public figures from around Australia, including former Greens Senator Bob Brown, former Telstra director turned environmental activist Geoffrey Collins, and musician John Butler⁹. Other significant contributors to the opposition movement were the threat to local fauna and flora.

The threat to endemic plant and animal life assisted the opposition groups in a significant way. In January 2013, Woodside Petroleum received Aboriginal Heritage Act Section 18 clearance to construct the LNG facility, thus burying the natural and cultural values of Walmadany / James Price Point under an estimated 15 meters of concrete¹⁰. On the same day that heritage clearance was announced, strong rains washed away the sand from many burial sites and artefacts, exposing them to the human eye. I was invited to visit these sites with one of the custodians and to document some of

them in a report that was later submitted to the WA Supreme Court (Wergin 2017).

Related to my own contribution are diverse citizen science projects about endangered bilbies, turtles, and migrating humpback whales. The consultants employed by government and industry did not find bilbies or turtles nesting near the proposed industrial precinct. While the number of humpback whales and their calves that migrate each year along the coast of Walmadany / James Price Point had also been significantly underestimated by the consultants (Wergin 2018), the citizen science projects were able to contradict their results. Their collaborative approach allowed citizen scientists to find humpback whales and calves along the coast north of Broome, and significantly closer to Walmadany / James Price Point than was presented in the results provided by the consultant firms.

Numerous resting and playing behaviours observed by citizen scientists proved the place important for vital activities such as whale breeding, resting and playing. Their results suggested that between 12,108 and 15,876 whales passed within eight kilometres of Walmadany / James Price Point over the 2012 migration season (Goolarabooloo et al. 2013). For the same time period, consultants had estimated only approximately 1,000 whales (Woodside 2012).

Goolarabooloo, as custodians of the land, had added their traditional knowledge to the success of these citizen science projects. Through sharing knowledge about the environment, the opposition movement was thus able to produce more *appropriate* results for the assessment of the social, cultural and environmental impact of the industrialisation proposal. In addition, collaborative knowledge catered to overlapping regimes of value of Indigenous people, environmentalists, tourists, and Western scientists. A peer-reviewed article about dinosaur track ways that can be found all along the coast was published by palaeontologist Steve Salisbury (2011) and presents a further case in point.

In Indigenous culture, these footprints in the sandstone are attributed to Marella, the Emu-man, an Ancestral Being who created the land. Within the collaborative knowledge that was generated from the opposition movement, both narratives, the Indigenous and the paleontological, played out. It was the Indigenous knowledge provided by the *Goolarabooloo* that drew attention to the footprints in the first place.

The opposition movement thus successfully generated a knowledge system about the diverse values of the region that

presented a valid alternative to the plans for industrialization advocated by the WA government, Woodside Petroleum and its joint venture partners. Their collaborative means of doing so are exemplary for a more sustainable approach to policy research and practice in the Anthropocene.

IMPLICATIONS FOR POLICY RESEARCH AND PRACTICE

The work undertaken by the opposition movement generated concrete data that contradicted the results of the scientific experts engaged by industry and government. In addition, it produced and spread increasing awareness that the tools of economics applied to assess the values of a particular region do not simply measure but perform these values. This provides further evidence for the fact that scientific assessments continue to profoundly constitute and shape places around the world (see also Callon 1998).

If policy makers are to learn from the success of the citizen science conducted in opposition to the industrialization of Walmadany / James Price Point, they need to engage with the ways in which its collaborators were able to perform the place differently. Their collaborative means of attributing value to the place prevailed over the interests of WA government and industry. In a recent article, Jacobs (2013: 24-26) makes five propositions for a methodological engagement with this. Two of those are particularly relevant here: *a*) recognise that the present dynamic of income and wealth distribution in industrialised economies tends towards greater inequality, and that this is socially unsustainable as well as unjust; and *b*) recognise the way in which a concentration of economic power can lead to the undemocratic exercise of political power.

These two propositions are fundamental to the ways in which cultural and environmental values of Broome and its adjacent region have historically been assessed, from the use of *Pinctada maxima* to the multicultural character of the town, and most recently in the attempt to industrialize Walmadany / James Price Point. The conflict presents a prime example for how the environment was once again produced as the result of diverse and often competing “enviroming” activities (Sörlin, Warde 2009).

The WA government vigorously pushed its interests ahead, while its initiatives to generate sustainable development

in the region amounted to little more than “simulacral politics” (Blühdorn, Welsh 2008)¹¹. For this, consultants and scientific experts were called in by the proponents to assess a minimum environmental impact while at the same time sanctioning its destruction. Two sets of problems for policy in the Anthropocene become apparent: *a*) those derived from the operation of global market forces; and *b*) those that generate from a form of government that is meant to legislate objectively, but that fails to do so.

As Jacobs explains, “what is required [...] is much deeper thought about the kind of government we need” (Jacobs 2013: 26). For this to be achieved, Taylor-Gooby suggests, “reciprocity and solidarity approaches [as they] take the problems of stigma and the lack of awareness of inequalities seriously” (Taylor-Gooby 2013: 39).

Here, the opposition movement is exemplary in showing how, through reciprocity and solidarity, appropriate knowledge was produced to assess the impact of the industrialization proposal. The collaboration of citizen scientists with environmental organisations, Indigenous and non-Indigenous members of the Broome community and beyond, offered an assessment of the environmental impact of the LNG facility that was better informed than the conventional scientific studies commissioned by government and industry. Most notably, in the case of the citizen science projects conducted to preserve Walmadany / James Price Point, Indigenous knowledge and Western science successfully worked together.

In the examples above, the interventionism not of consultants but largely unpaid citizen scientists highlight, “real opportunities [...] for progressive political leadership to contribute to a shift in public attitudes in a more inclusive and less stigmatic direction” (Taylor-Gooby 2013: 41). To put it differently, to assist policy-makers in the Anthropocene to generate sustainability measures beyond an anthropocentric engagement with the world, researchers and practitioners need to rethink their possibilities for generating information through collaborative means.

The diverse members of the opposition movement and their differential knowledge contributions were essential for developing adequate strategies to counteract the conventional environmental assessment undertaken for industry and government. Local people are not only eager but also knowledgeable in a way that qualifies them to participate in such enquiries. They turn agendas and findings into more than mere addi-

tions to the general debate, as they help to flesh out the particularities of a region, in contrast to the globalist blurring of a place into an environment that is assessed either as good or bad, sick or healthy, valuable or ready to be industrialized.

CONCLUSION

The above provides a case for policy research and practice in the Anthropocene to, “keep it complex, employ multiple methods, and accept ambiguity, pluralism and conditionality” (Pahl-Wostl 2013: 40; see also Stirling 2010). For this, I have drawn on ethnographic examples and debates about sustainability and postpolitics in the Anthropocene in order to work towards a new agenda for policy makers. The examples of *Pinctada maxima* and “Multicultural Broome” highlighted the anthropocentric dimensions of generating change, culminating in possible industrialization of culturally and environmentally sensitive land.

I then introduced the *Lurujarri Heritage Trail* as an alternative collaborative engagement with the place, and a means for a shared knowledge production that played an instrumental role in light of potential environmental and cultural destruction. Along these lines, I argued that the Anthropocene is also a political project in which policy research and practice need to account for regimes of value that are constructed differently from the mainstream, and beyond Modernist ideals of economic development and progress.

Late liberal governments and industry use various methods, including allegedly objective science, to advance their views and interests. However, the examples above demonstrate how such advancements can be counteracted in a constructive space with no apparent leadership. Policy research and practice needs to facilitate such spaces of constructive and collaborative criticism. At a time in which institutions, politics and industrial corporations still function along the lines of an earlier epoch, these new spaces will help navigate the transition into a fully Anthropocenic society. As Palsson et al. (2013: 10) formulate:

To characterize the Anthropocene by means of quantitative data is one thing; to describe and understand how it perceives human interaction, culture, institutions, and societies – indeed, the meaning

of being human – is truly another and a major challenge for the scholarly, literary, artistic, practitioner, and policy communities.

The false belief in human mastery over the environment is tempered in these collaborative spaces through mutual respect for other actors. What is conventionally perceived as environmental “problems” thus become extensions of the social (Sörlin 2013: 16). Along these lines, policy research and practice can depart from apocalyptic tales about environmental destruction, or fabulous stories of salvation for the poor and disadvantaged, and once again answer questions of sustainability through collaborative engagement on site – in the terrain of the properly political.

NOTES

¹ Atmospheric chemist and Nobel Laureate Paul Crutzen and biologist Eugene Stoermer (2000) coined the term Anthropocene to describe a new epoch that emerged as a consequence of the irreversible influence of humanity on the earth system. For most scientists, this new geological era began with the Industrial Revolution in the 1800s, when through the invention of the steam engine, human activity, “gradually grew into a significant geological, morphological force” (Crutzen, Stoermer 2000: 17). Bruno Latour (2010) formulates in this regard that, “through our very progress and through our proliferating numbers, we have taken the Earth on our shoulder” (Latour 2010: 480). While Deborah Bird Rose (2008: 81) states more drastically, “the Anthropocene is the sixth great extinction event on Earth, and the first to be caused by a single species, namely our own”.

² I am very grateful to my former colleagues at the Social Policy Research Centre (SPRC) of The University of New South Wales (UNSW) who introduced me to many contemporary issues in policy research and thus sparked my interest in bringing these together with discourses on sustainability and the Anthropocene. I would furthermore like to express my gratitude to the two anonymous reviewers for helpful comments on an earlier version of this article.

³ Pálsson et al. (2013) draw on the “physical climate system” published in “Earth System Science: An Overview, NASA, 1988” to illustrate this point. The diagram presents terminologies and definitions as detached from human activity, while the human impact on the climate system is marginalized in one comparably small box with the general title, “human activities”.

⁴ Pálsson et al. (2013) use the example of how the growing awareness of environmental change has also brought about new methodologies through which to assess economic growth other than the conventional GDP.

⁵ The impact of such networks on sustainability as discussed here receives closer attention in my previous publications and the monograph I am currently finalising (Wergin 2016, 2017, 2018). Those also engage in more detail with fieldwork context and methodology, both of which can only be briefly presented in this article.

⁶ In 1901, the Edmund Barton administration passed the Immigration Restrictions Act, which is considered the beginning of White Australian policy-making. These policies were to prevent people of non-European descent from migrating into Australia. They particularly excluded people from Asia and the Pacific Islands. The policies were progressively dismantled between 1949 and 1973 until, in 1975, the Whitlam government adopted the Racial Discrimination Act which made any racially motivated selection illegal.

⁷ Nicholas Paspaley Senior is one of the prominent figures who had drawn inspiration from the commercial success of cultivating pearls from the Akoya oysters *Pinctada fucata* in Japan. He sought to innovate the same technology for the much larger *Pinctada maxima* oysters of Australia that are found around Broome.

⁸ There are many similar battles fought in Australia over the environment that range from forestry in Tasmania, mining in Queensland and WA, fracking in Queensland and NSW, to the building of desalination plants at Murray-Darling river.

⁹ While in other contexts tourism would conflict with Indigenous rights, and Indigenous rights with environmentalism, the opposition to the industrialisation of Walmadany / James Price Point thus also presents a prime example in which the interests of tourism, Indigenous rights and conservation merged.

¹⁰ In his foreword to the Aboriginal Heritage Act 1972 (WA) Guidelines, Kim Hames, Deputy Premier and Minister for Indigenous Affairs, explains that, "The Aboriginal Heritage Act 1972 was enacted to ensure that all Aboriginal cultural heritage within Western Australia could be properly protected and preserved. In recent years, Western Australia has experienced strong economic growth, particularly in the resources sector, placing increasing pressure on Aboriginal cultural heritage sites". Meanwhile, if a site has Aboriginal Heritage Act Section 18 clearance it is exempt from the protection of this act and can be disturbed. For further information: [http://www.daa.wa.gov.au/Documents/Heritage Culture/S18OverviewConsent.pdf](http://www.daa.wa.gov.au/Documents/Heritage%20Culture/S18OverviewConsent.pdf).

¹¹ The WA government declared large areas south of Broome and north of the Dampier Peninsula as Marine Parks and/or Class A National Parks. Those include 80 Mile Beach Marine Park, Camden Sound Marine Park, North Kimberley Marine Park and Prince Regent Nature Reserve. There is, however, no apparent reason other than economic interests not to attribute the same environmental and cultural values to the whole of the Kimberley coast.

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