

Chris McDowall and Tim Denee, *We Are Here: An Atlas of Aotearoa*, Auckland: Massey University Press, 2019. ISBN: 978-0-9941415-3-8 (cloth)

A hardback atlas? Printed on fine paper to the highest production standards and with exquisite design. What possible market might this address? Surely the bookshelf reference for geographical guidance has become, well, strictly boutique? Not so. As Tze Ming Mok most eloquently explains (p.116), this is “data poetry”; this is “datavis” (data visualisation) made critical and emancipatory by “data plumbers”, to use her terms. The authors are artisans, crafting beautiful objects to solve questions not yet fully realised. Like old family atlases, the journeys are yet to be imagined far less travelled.

The retro-styled cover hankers after a 1920s tourist brochure to some romantic place set earnestly in “Nature”. Yet its contents, outrageously post-modern, take the reader on journeys unlikely and unfamiliar to a destination quite unanticipated. While its subtle and deceptive title, *We Are Here*, might draw in the casual reader on their first encounter, perhaps the real title should be “*Where are we headed?*” A book for datavis poets, plumbers, practitioners and researchers communicating the complexity of contemporary society in one country across multiple disciplines and timeframes. A book that demonstrates complexity and creates questions about how underlying trends may impact on the future.

Chris McDowall, a self-employed cartographer and data visualisation expert (or data plumber, to use Tze Ming Mok’s terminology), has worked extensively within Aotearoa New Zealand’s environmental science system and the National Library and is driven by a desire to make data easier to interpret. Creative New Zealand (the national arts development agency) supported, in part, the costs of writing the book which enabled McDowall to bring in Tim Denee, a designer who has worked across multiple disciplines, as co-author. The book’s sets of maps and graphics are intended to help people make sense of their country, to grasp its scale, diversity, and intricacies, and to experience connections with the land, the place, this

time in its history, and to each other. In so doing it embodies the duality of Mātauranga Māori¹ and science which is increasingly seen as the essence of contemporary Aotearoa New Zealand. By making data visible, each graphic reveals insights about Aotearoa New Zealand by answering a range of questions: “Who visits us? How equal are we? How were these lands formed? Where do we live and work? How do we hurt ourselves? Where do our cats go to at night”?²

The authors wrestle, successfully and quite lovingly, with wicked problems across multiple, complex and, ultimately, interlinked domains. For example, “Where We Live and Work” (p.92-109) opens up aspects of urban sprawl, transportation and human footprint; “Threatened Environments” (p.66-69) hints at agricultural production and economic growth; while the calendar of “Income Gaps” (p.132) and “Child Poverty” (p.134-137) highlights most elegantly issues of inequity and identity which lead back to where people are able to live. It is through the 84 collections of charts, graphs, diagrams, maps and illustrations that society’s almost incomprehensible difficulties are revealed. Yet, the authors resist making dramatic calls to attend to the climate crisis, social wellbeing or cultural dilemmas. Rather, the reader is drawn in to make their own interpretations of the authors’ gentle but skilful manipulation of Big Data. The resulting read suggests that, even in a small and relatively stable country such as Aotearoa New Zealand, tackling any singular issue on its own merits will not necessarily provide outcomes of value to the whole of society in other domains. The reader, softened by the attractive graphics, gradually experiences discomfort as, using Clifford Geertz’s term, the thicker description unfolds. and it is in the nine short essays that introduce each chapter where these issues are teased out more explicitly. These amplify the contemporary import of the topics through the critical lenses of leading Aotearoa New Zealand researchers and writers on Indigenous knowledge, environmental and social issues, as well as, of course, data futures. For example, in the introduction, Dan Hikuroa makes the

¹ This has been defined as “... ‘the knowledge, comprehension, or understanding of everything visible and invisible existing in the universe’, and is often used synonymously with wisdom”

(<https://www.landcareresearch.co.nz/about/sustainability/voices/matauranga-maori/what-is-matauranga-maori>).

² <https://www.masseypress.ac.nz/books/we-are-here/>

point that Aotearoa New Zealand is a nation built around two main bodies of knowledge, Mātauranga Māori and science, and that, as a result, time and place are inter-connected in a unique sense (p.14-15). Later, James Russell, a strategic advisor on the country's goal to be free of invasive predators by 2050, makes an appeal for a socially and environmentally just country that punches above its weight to demonstrate how people could live sustainably (p.62-63). Both these aspects highlight this melding of Mātauranga Māori and science in Aotearoa New Zealand. The contemporary importance of this is stunningly illustrated by the Whanganui River catchment (p.216) which has had the status of a legal person since 2017 and which the legislation describes as an ancestor of the Whanganui people. Interestingly McDowall describes this, his favourite, as resembling the human circulatory system.³

Each of the graphic maps casts light on what, in most cases, is entirely unexpected. A deep dive through multiple datasets, mostly held by New Zealand governmental institutions (Statistics New Zealand, Land Information New Zealand, research organisations, and so on), some by individuals (notably the "Secret Lives of Cats" [p.80]) and some through private sector trading websites (p.132). The data has been mined, refined and polished to provide 84 gems about contemporary Aotearoa New Zealand. Together they provide insight, sometimes light, sometimes dark. Always provocative. Examples include beautiful renditions of pub quiz standards, exports (p.190), imports (p.192) and earthquakes (p.28-33). Plus some delightfully off-beat esoterica such as the distribution of lightning strikes (p.40) (there were 320,000 in 2013...), the history of Christchurch's wastewater system since the 1880s (p.180) laid out respectfully on a dark brown background, and the evolution of pop music in Aotearoa New Zealand (p.204) since the 1920s described with a reverence akin to cosmologists explaining the Big Bang. There is room too for formal critique, such as the fact that LGBTQI people remain invisible in the national census and most other government statistics (p.11). Combined, they provoke an image of a country potentially at odds with many of its colonial myths and its contemporary touristic image as echoed in the cover.

³ <https://www.masseypress.ac.nz/news/2019/july/10-questions-with-chris-mcdowall-and-tim-dence/>

In its eight short chapters – Te Whenua (the “land” in both its physical and cultural sense); Water and Air; Living Things; Places; People; Government; Movement and Energy; and Heart and Memory – the authors have selected with precision and forethought. Their deceptively soft-spoken and highly elegant style sweeps through the cultural, social, environmental and economic landscapes. The result is much more than a cute collection of infographics. It opens up conversations about the past, present and, most importantly, future. It asks what kind of identity might emerge, what might be thought plausible, and what might be preferable. In some ways it achieves what a well-rounded set of scenarios might bring after an extensive participatory process and so brings up possibilities of new forms of long-term strategic thinking. In so doing it teases out value sets and challenges dominant worldviews. For example, “Faith and Religion”; with those identifying as Christian dropping from 60% of all New Zealanders in 2001 to 49% in 2013 while Islam grew by 95%, and the Dharmic faiths increasing similar or greater numbers (Buddhism 40%, Hinduism 124% and Sikhism 269%), what might that mean in the long term?

One surprising omission, at least for a book about New Zealand, is a sports section and with it the iconic All Blacks. Perhaps, as has been suggested, their formidable performance record has created unreasonable expectations about success and led to fair-weather fans for other spectator sports. Presenting this on a map of venues and participation in different sports events might have been a step too far for a domestic market. A further omission is the lack of attention to political structures, both formal and informal, and how power and authority are exercised in relation to, for example, Indigenous and environmental issues. Yet perhaps that is the book’s greatest strength with issues left to be explored by the reader. Indeed the two highly informative appendices (p.222-233) on the tools, software and data sources which describe the ways in which datasets have been gleaned, interpreted and re-presented using multiple codes, languages and formats provide access to the kinds of resources with which readers could produce their own maps. It is also important to emphasise

the critical importance of open data and technologies made possible by the New Zealand government's "open by default" approach to data.

However, the book's importance stretches well beyond the geographical boundaries of a small Pacific nation experiencing a renaissance in its Indigenous culture. It is situated within a long pedigree of infographics and cartographies that present alternative and, at times, radical interpretations of complex data. One of the earliest of such graphics is Minard's 1869 statistical map of the terrible fate of Napoleon's army in Russia in 1812⁴ described by Edward Tufte in his classic works *The Visual Display of Quantitative Information* (2001) and *Beautiful Evidence* (2006) as "one of the best statistical graphics ever" (Tufte 2001:122). Other global examples include the championing of public health statistics by the late Danish statistician Hans Rosling through the Gapminder project;⁵ the work of Danny Dorling; the Worldmapper project,⁶ which provides "cartograms of territories resized according to the subject of interest"; as well as the work of groups such as 3Cs, the counter-cartographies collective.⁷ While these use data visualisation (datavis) as devices to provide the potential for radical debate, it was projects such as the Detroit Geographical Expedition and Institute (Colenutt 1971; Horvath 1971; Thatcher 2017) and the Toronto Geographical Expedition (Stephenson 1974) that provided manifestations of these devices where action took place in the real world. These have attracted some research interest with a sustained documentation over the years in *Antipode*, among other places (e.g. Alton et al. 2014; Crang 2003; Driver 2003; Matless 2003; Merrifield 1995; Rose 2003; Ryan 2003). Collectively these provide possible sites of engagement with critical cartographic theory, which proposes that maps, like other texts, are not neutral but reflect relations of power and their social relevance (Alton et al. 2014; Crampton and Krygier 2006; Wood 2010). As such, mapping can express

⁴ <https://www.edwardtufte.com/tufte/minard>

⁵ <https://www.gapminder.org>

⁶ <https://worldmapper.org>

⁷ <https://www.countercartographies.org> and

https://www.countercartographies.org/wp-content/files/Dalton_counter-mapping_data_science.pdf

competing interests and make visible otherwise marginal experiences and hidden histories. Within this literature, “counter-mapping” is described as a practice involving formal and informal organisations charting their territory in order to make land claims or protect resources, for example. Critical cartography can be a process of collective, democratic knowledge production. By accentuating relations between institutions, landscapes, and ecosystems, it can lead to the reconceptualisation of relationships with invisible structures and the natural world. It can provide novel ways to highlight aspects missing from conventional maps and to illustrate materialities and affective/emotional connections to the physical and the social worlds.

Within this, the point of departure for *We Are Here* is a combination of multiple disciplines within one physical and social boundary using both standard and non-orthodox context-specific metrics. In so doing it disrupts formal analysis and presentation and resists any sense of institutional capture. As such it opens up possibilities for alternative narratives and provides excellent source material for researchers and advocates of change to develop new frontiers on which to engage. Although this was not a declared intent of the authors it certainly provides a contemporary case study and an excellent exemplar for future ventures. It would certainly be fascinating to imagine a process whereby the book’s materials were used to stimulate a participatory process on Aotearoa New Zealand’s long-term futures.

Here then is a book that attempts to present wicked problems in, to quote Lillian Grace (p.221), “a love letter to Aotearoa”. If society is to engage with the complexity of its current being, rather than just absorb the threats of post-truth and the need to dumb-down meaning to single memes, soundbites and YouTube clips, then perhaps *We Are Here* provides an example of a way forward. Of course, there could be quibbles about emphases and omissions – that’s hardly the point. The essence is that we are indeed “here” and that we may well wish to be somewhere else completely, but that too may not be a plausible outcome. Judgements, possibly biases, have obviously been made in the editing and on the page. Yet it is all achieved with such wit and charm and without a voice being raised. As the authors note,

their many debates on choosing typefaces, iconography, illustration, hierarchy, and juxtaposition should be invisible. “The maps speak for themselves” (p.11) and they seek quite clearly to have an earnest conversation with the reader.

Though the book doesn’t end here. The associated website⁸ promises “interactives” and updates, though the maintenance of such a large project undertaken outside a research institute might prove a stretch. While aimed at a Aotearoa New Zealand market of armchair pundits, secondary and tertiary education, the book deserves a global audience with futurists and not just with datavis poets and plumbers, but with radical geographers and those seeking to communicate for change. It may be about one small country but there are few places that would not benefit from being “here” too.

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⁸ <https://www.wearehere.nz>

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