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Lincoln Planning Review (LPR) is the journal of the Lincoln University Planning Association (LUPA) and is the online publication produced twice each year and primarily edited by students and staff in the Department of Environmental Management.

The vision is “to be the pre-eminent source of information on planning issues, research and education in and affecting the “central upper South Island”.

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EDITORIAL

This volume of the Lincoln Planning Review is our tenth, hence the cover showing images of all our previous covers. When we originally started this journal in 2009 (then called the Lincoln University Planning Review), the intention was to bridge the perceived gap between academia and the planning profession. This was further broken up into three main aims: to provide research directly relevant to the New Zealand experience in a format that was accessible to New Zealand practising planners; to meet the requirements of academic rigour in order to attract contributions from researchers; and to do this through a process that provided experiential learning for our students in this particular form of communication. Through running the journal as part of the editorial team, students would develop skills in project management, editing, peer reviewing, proof reading and teamwork that would be valuable to them in their future role as planners. It was also hoped the journal would link different cohorts of students, from PhD to first year undergraduate, building skills through the years of their involvement. The 2011 Award of Merit by the New Zealand Planning Institute (NZPI) for the journal's contribution to experiential learning and the feedback from students and readers over the years has vindicated those early goals. In this anniversary issue we reflect on the role LPR has played in developing a new generation of planners through a very special edition of "Where are they now?" that includes many members of the original editorial team.

The LPR was set up as a journal of the newly formed Lincoln University Planning Association, essentially a student club, but with the support of the Department of Environmental Management (DEM). The wisdom of this was borne out one year when a misunderstanding led to an attempt by the university to require the journal to feature the current corporate branding and to have it only publish material that the university approved of – because it bore the university's name. That attempt failed, but we did drop 'University' from the name.

One way of ensuring a steady stream of material in the early years of publication was to have students in the third year professional practice class (examined by Hamish Rennie) write a brief article on a topical local planning issue. However, the increasing popularity of the planning courses has made it unfeasible to run this style of assessment due to oversight requirements. Nevertheless, we have published numerous articles written by undergraduate and postgraduate students over the years, as well as articles written by academics and professional planners.

The research articles included in this volume reflect this diversity in contributions. Our first article, based on Sai Wang's recently completed MPlan dissertation research, evaluates Chinese migrants' experiences of public engagement exercises in the increasingly multicultural city of Christchurch. The article by Emily Somerfield, also an MPlan student, is based on a paper she wrote as course work for ERST630 (Environmental Policy and Planning), in which she explores the complex issues currently

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facing planners in relation to the apparently benign pet cat. We also feature an article by Helen Fitt, Postdoctoral fellow in the newly established Centre of Excellence in Sustainable Tourism, that examines the costs and benefits of electric vehicle use in tourist travel, a so far under-explored area of research.

Earthquakes, a pandemic, seemingly constant restructuring and of course the Mosque shootings have all taken a toll on our ability to publish the LPR. Surprisingly, improved technology has been one of our biggest challenges. Early issues of the journal were compiled using Microsoft Word, resulting in a single electronic file that was deposited with the Library. In 2013 we shifted to the Open Journal System (OJS) publishing platform; while this has improved the profile and searchability of the journal, when only producing one or two issues per year with a newish team of people each time it has proven extremely burdensome. As a result, staff have taken over this aspect of publishing the journal simply to maintain the knowledge needed to be able to use the system effectively.

We have enjoyed a very good relationship with NZPI and Planning Quarterly (PQ), which has resulted in two LPR articles being republished in PQ. Furthermore, two articles originally submitted to PQ, that were of a more scholarly and lengthy nature than suited PQ, were ultimately published in LPR. Our peer reviewing has evolved over the years so that we now aim to include at least one academic/recognised researcher, one practising professional planner and one postgraduate student reviewer for each research article. We have found this ensures practice accuracy as well as academic rigour. The quality of the research articles in LPR has been recognised through citations by authors writing in high ranking international journals, with one article being cited more than 30 times¹.

The unflagging support of the DEM heads of department and the Faculty of Environment, Society & Design at large has enabled publication of the journal at times when the level of enthusiasm and time constraints on students and staff placed it at jeopardy. The ongoing support of readers, writers and reviewers has been essential, and although we did miss one year and we have been very late with a number of issues (including this one), we have made it to 10 volumes old! We will take a break in 2020 due to the ongoing effects of covid-19, and the need for all of us to build a little more breathing space into our schedules. Our next volume will be published in 2021, and from there we are looking forward to another 10 years.

Hamish Rennie
Editor-in-Chief

Sarah Edwards
Managing Editor

¹ Vallance, S. (2011). Community, resilience and recovery: Building or burning bridges? *Lincoln Planning Review*, 3(1), 4-8.



Diversity and public engagement in planning: A case study of ethnic Chinese migrants in Christchurch

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ABSTRACT

Aotearoa New Zealand's population has grown rapidly from 3.85 million in 2000, to 5 million in 2020. Ethnic diversity has consequently increased. Territorial Authorities (TAs) undertaking statutory consultation and wider public engagement processes need to respond to increased diversity and foster inclusivity. Inclusivity is necessary to facilitate a greater understanding of TA statutory functions, as well as to encourage awareness and participation in annual planning processes, and resource management plans and consents. We examined perceptions, and experiences, of planning within the ethnic Chinese immigrant population of Christchurch. The Chinese ethnic group is a significant part of the city's population and is in itself derived from diverse cultural and language backgrounds. We surveyed 111 members of this community, via social media and in person, to identify environmental and planning issues of concern to them. We sought to ascertain their previous engagement with planning processes and to gauge their willingness for future involvement. We also undertook a small number of semi-structured interviews with Chinese immigrants to explore their experiences with planning in more detail. Results showed only 6% of respondents had been engaged in any planning processes, despite only 20% being unwilling to participate. We analysed these responses by gender, age, visa category, and length of time resident in Christchurch. Notwithstanding the low level of reported engagement, earthquake recovery (70% of respondents) along with water quality, transport, and air quality were the most important issues of concern. However, there was a general lack of awareness of the ability to make public submissions on these and other issues, and of the statutory responsibilities of TAs. We discuss possible explanations and provide several suggestions for TAs to increase awareness and to improve engagement. This includes further research to assist in identifying the nature of barriers as well as the effectiveness of trialling different solutions.

Keywords: Christchurch City, planning and public engagement, immigration, ethnic diversity, Chinese ethnicity

1. INTRODUCTION

Growing immigration and the associated ethnic or cultural diversity are significant factors of globalisation. Both bring opportunities and challenges for the settlement countries, which include the effects on the living and natural environments.

Significant immigration, as has occurred in New Zealand over the past 20 years (Figure 1), brings attendant challenges, both to the immigrants and to resident communities. For example, issues of unfairness, social exclusion, and environmental justice have to be addressed (Reeves, 2005).

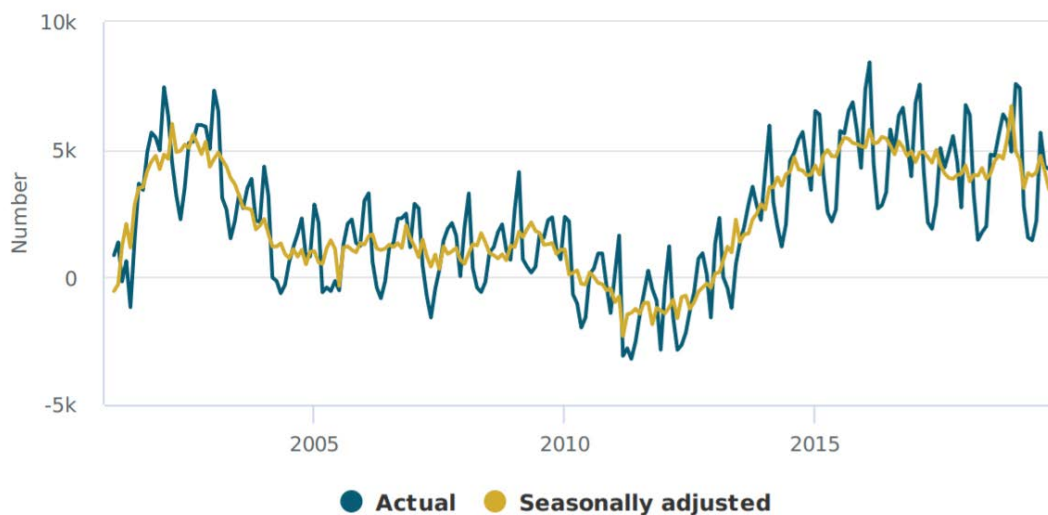


Figure 1: Seasonally adjusted monthly net migration, January 2001-September 2019

(Source: <https://www.stats.govt.nz/information-releases/international-migration-september-2019>, licensed for re-use under the under Creative Commons Attribution 4.0 International license.

New Zealand has relatively open immigration policies and is generally more accepting of multiculturalism compared to other countries around the world (Lyons, Madden, Chamberlain, & Carr, 2011). Multiculturalism is a global concept and is about diversity and acceptance (Fincher, Iveson, Leitner, & Preston, 2014). Christchurch has a large immigrant population (Figure 2). In 2017, Christchurch City Council (CCC) released

a multicultural strategy, which is a commitment to support and embrace the diversity of the people in the city (CCC, 2017a). The strategy responds to the increasing levels of ethnic diversity: “To be Multicultural requires great depth of understanding and acceptance of culture in its many unique manifestations, and the application of such acceptance” (CCC, 2017a, p10).

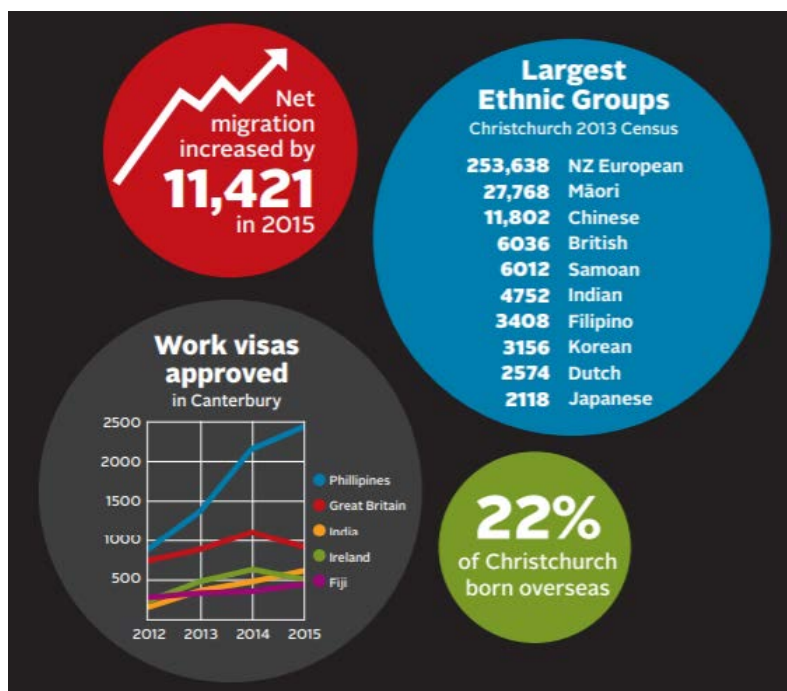


Figure 2: Christchurch multicultural demographics (source: CCC, 2017a, p22). Clockwise from the top left: net migration to the city in 2015 reflecting ongoing population recovery after the 2010 and 2011 earthquakes; ethnic composition from the 2013 census with residents identifying as Chinese being the third largest self-identifying ethnic group; the proportion of the population born overseas from the 2013 census; and the ethnic groups with the most work visas granted for the period 2012-2015. Image © Christchurch City Council.

Current worldwide planning approaches to deal with multiculturalism in, for example, urban areas include "...planning for the commodification of diversity in ethnically identified businesses, and planning for public spaces and encounter" (Fincher, et al., 2014, p3). Signifiers of ethnic diversity in public spaces are evident in Christchurch. For example, there are sister city gardens from China, South Korea and Canada in Halswell Quarry Park (CCC, 1999). The seismic events of 2010-2011 that resulted in the destruction of much of the central city and eastern suburbs, led to twenty-one streetlamps being gifted to

Christchurch by cities around the world as gestures of solidarity. Two of these streetlamps were from China (Figure 3). In the Central City Plan (CCC, 2011), Appendix A of the "Share An Idea" survey described some people's willingness to build a Chinatown in Christchurch for improving entertainment and celebrating ethnic diversity. The ideas for the Chinese-themed area included restaurants and markets (Duyndam, 2012). However, it is not currently mentioned in planning documents, and we have been unable to ascertain why this is the case.



Figure 3: Streetlamps gifted by the city of Wuhan (left) and by Gansu Province (right) by Hagley Park, Christchurch. This was part of artist Mischa Kuball's Solidarity Grid installed from 2013 to 2015: <https://www.scapepublicart.org.nz/solidarity-grid-about>. Photo taken by author (SCU)

The multicultural strategy has priority actions (such as building relationships and promoting engagement of all communities) to identify and remove barriers for ethnic groups to access Council processes, as well as facilities, events, and services (CCC, 2017a). There are many multicultural festivals and events throughout the year listed on CCC's website (such as the Chinese New Year Parade and the Night Noodle Festival). The funding of events is partly justified because financial support demonstrates the Council's positive attitude towards diversity activities. The outcomes Council anticipates include: increasing community spirit through bringing people

together; deepening understanding of different cultures within the city; and, celebrating Christchurch's diverse cultures (CCC, 2017b). It seems that over NZ\$5 million is allocated each year to support festivals and events (CCC, 2014). However, less well understood is the involvement of ethnic groups in statutory planning processes. As such, the extent of the Chinese ethnic community's involvement in CCC planning processes is the focus of our research.

2. CONTEXT

The planning decision-making process involves a series of factors: agenda setting;

problem definition; data collection; information analysis; options selection; legitimating decisions; implementation; and evaluation (Painter, 1992). Public participation, or engagement, is an important component of the modern planning process to ensure the political quality of planning (Lieske, Mullen, & Hamerlinck, 2009; Rowe & Frewer, 2005). Lane (2005) defines the role of public engagement by using planning models, task identification and planning contexts. He argues the degree of public engagement is dependent on problem identification, knowledge types, concepts and the decision-making environment in planning matters. Public engagement is a key to achieve a successful planning goal by promoting local community development through the decision-making process (Kirkhaug, 2013). However, rigorous assessments are largely lacking, and inhibited by confused terminology (Rowe & Frewer, 2005).

Modern planning processes usually engage the public through consultation. However, individual interests can be different and conflicting, so public engagement in planning processes should leave space for negotiation and debate rather than focusing solely on consulting (Lane, 2005). Moreover, collaboration may not achieve a good result if engagement is led by individual benefits and local residents lack motivation to contribute (Bodin, 2017). Additionally, low levels of obtaining information and the difficulty in understanding complex issues (e.g., environmental) are all barriers to effective public participation (Takacs-Santa, 2007).

The success of public participation can be ascertained through the lens of Arnstein's (1969) ladder of participation which categorises different forms of participation on a continuum from token to empowered (Rowe & Frewer, 2005). Drawing on Arnstein, the International Association for Public Participation (IAP2) has developed the IAP2 Spectrum of Public Participation (Shiple & Utz, 2012), that has been used for both evaluating the effectiveness of public participation (Brown & Chin, 2013) and to guide councils in choosing particular public

participation processes (see, for instance, CCC, 2019).

The CCC multicultural strategy includes goals that all communities have equitable access to council services and resources, and that all residents are able to participate in Council decision-making (e.g., statutory planning processes). This means actively fostering the inclusivity of different groups in those processes. However, multiculturalism can make participation in planning more challenging since diversity requires planners to use appropriate approaches to achieve multicultural participation in planning processes (Uyesegi & Shipley, 2009). Specific approaches may include developing effective communication channels and using different languages to engage widely when formulating policies and plans (Reeves, 2005).

For Christchurch, the level of consultation or engagement in most council planning processes depends on whether the Council considers the issue sufficiently significant (CCC, 2019). For other statutory planning processes (e.g., the Christchurch District Plan), prescribed consultation requirements empower the community more and provide affected people with "relevant information in a manner and format that is appropriate to the preferences and needs of those persons" (Local Government Act (LGA) 2002 s.82(1)(a)).

Since 2015, Christchurch has undertaken a number of planning projects under the LGA and the Resource Management Act (RMA) 1991 (for example, a Long-Term Plan, Annual Plans, and Regeneration Plans).

An important civic outcome sought through the City's Long Term Plan is 'Strong Communities' (CCC 2018, p. 59). The desired outcomes from this planning document include:

- Citizens have strong sense of belonging and are actively involved in the life of their city
- Our communities share a spirit of citizenship and participate in civic matters
- The community's goals and aspirations are reflected in council activities

Christchurch is therefore a good place to undertake a case study of immigrant

awareness and involvement in statutory planning. We selected the Chinese ethnic group for our study, as it is the third largest ethnic group in Christchurch and throughout New Zealand (see Box 1 for census data and definitions of immigrants and ethnicity for statistical purposes). In terms of the CCC's Significance and Engagement Policy, this is 'a community' because it is "a group of people with shared or common interest, identity, experience or values. For example, cultural, social...groups" (CCC 2019, Appendix 1). One would expect this community would be actively engaged in planning processes either through its own initiative or proactive CCC consultation processes.

In determining our questions, we distinguished between 'engagement' and 'consultation'. This is because the LGA requires each TA to establish a Significance and Engagement Policy and the CCC Policy has distinguished between 'engagement' and 'consultation'. Moreover, consultation has a strong case law and legislative basis. Engagement, on the other hand, is not defined in the LGA or the RMA. The Greater Christchurch Regeneration Act 2016 (s.24) notes that engagement on a regeneration plan requires, as a minimum, that the proponent publicly notifies where the draft plan can be inspected. It also must outline how, to whom, and by when written comments are to be received. This indicates that 'engagement' can have minimal public participation, falling well short of the consultative requirements set out in section 82 of the LGA (see above). However, CCC has chosen to adopt 'public engagement' as a synonym for 'public participation', specifically renaming the IAP2 Spectrum of Public Participation as the IAP2 Spectrum of Public Engagement (CCC 2019, Appendix 2). It then proceeds to define both (CCC 2019, Appendix 1):

Engagement: *"a term used to describe the process of establishing relationships, and seeking information from the community to inform and assist decision making. Engagement is an important part of participatory democracy within which there is a continuum of community involvement."*

Consultation: *"a subset of engagement; a formal process where people can present their views to the Council on a specific decision or matter that is proposed and made public."*

Box 1 Relevant definitions of immigration and ethnicity

Scholars interchangeably use the terms of "immigration" and "migration", and the line between the definitions are blurring (International Organization for Migration, 2017). For consistency, we use the term "immigrants" to describe the target group. International immigrants refer to individuals who have left their birth country and enter a destination country where they live their daily lives (United Nations, 1998, p.9). Immigrants can be further broken-down into long-term (resident for >12 months in the destination country), and short-term (resident >3 months and <12 months). Immigration excludes travellers who temporarily move for recreation, holiday, business, education, medical treatment or religious pilgrimage.

Statistics New Zealand applies the 12/16-Month Rule to identify long-term immigrants, which requires immigrants to stay in the country for at least 12 months in the preceding 16 months (Stats NZ, 2017). The rule is consistent with the UN definition. The 2018 census showed that approximately 27.4% of the population (~1.29 million people) were born outside of New Zealand (Stats NZ, 2019). In Christchurch, the Asian ethnic group is the third largest ethnic group (15.1%), compared to European (70.2%) and Māori (16.5%). The Chinese ethnicity is the largest of the Asian grouping, with a population of 231,837. This includes people born in mainland China, Taiwan, and South-East Asian regions. Stats NZ defines ethnicity as self-recognised: "ethnicity is the ethnic group or groups a person identifies with or has a sense of belonging to, and is independent of birthplace" (Stats NZ, 2019).

This would actually place engagement as "involve" on the IAP2 spectrum, slightly more empowering than consultation, but often used together. The Policy says that the IAP2 Spectrum will guide the approach to public

engagement. Given the criteria used in the Policy to assess significance, one would expect the community to have been consulted on a number of occasions and that relevant information would have been provided to the ethnically Chinese residents of Christchurch in a manner and format that is 'appropriate to their preferences and needs', as set out in the LGA.

The CCC's strategic goals include facilitating multicultural access to decision-making processes, so it is reasonable to expect this to be reflected in engagement and consultation with ethnic Chinese people in planning processes. However, such processes may only work if the community wishes to engage.

We focused on the Chinese community's awareness of, and participation in, making a submission in determining willingness to be engaged in statutory planning processes, to address the following:

1. What are the levels of awareness and participation of ethnic Chinese residents of plan making?
2. What are the key planning issues of concern to them?
3. What is the general willingness for engagement, and can we identify any barriers?

3. METHODS

To address these questions, we combined data from a survey and from interviews with selected individuals of Chinese ethnicity. The survey enabled us to gain a sense of scale and significance, and the interviews helped provide explanatory depth and context.

3.1 Survey

We developed a questionnaire (Appendix 1) comprising 14 questions which we translated into Chinese. We delivered the questionnaire by two methods: via a direct approach and by an on-line Chinese media platform which are explained in detail below.

For the direct approach, we identified an optimal location by using GIS to characterise the distribution of ethnic Chinese residents across the city from the 2013 census, which is the most recent census data available at the

time of writing. The aim was to identify where to focus survey efforts to get a robust sample size. We selected Riccarton as it had the highest density of ethnic Chinese (Figure 4), and the Church Corner Asian market area as the specific survey location. Locals have referred to it as Christchurch's 'China Town' (Duyndam, 2012). One of us (SW, of Chinese ethnicity and in mid-twenties) stood inside the carpark area and approached every third person. If someone demurred, the next passerby was then approached.

For the on-line survey, we used the WeChat app that includes the functions of messaging and survey (Hu, 2011). In 2019, WeChat reached 1.13 billion monthly active users (Statista, 2019). Although WeChat allows multiple languages, the main target users are people who speak or write in the Chinese language. Additionally, people who use this app are able to join groups categorised by where they live. We sent a link to the survey to groups labelled as located in Christchurch. We made it clear to participants that they could only participate once.

3.2 Interviews

To obtain a deeper perspective, five semi-structured interviews occurred after the survey. We designed the interviews for more specific discussion with ethnic Chinese individuals. We selected interviewees from local government, the public, and a journalist from a Chinese media organisation to elicit diverse understandings and ideas. They included a local government politician; a community leader; a social media journalist; a local resident; and a Chinese planner. After inquiring at councils and environmental consultancies, we were unable to identify a Christchurch-based ethnic Chinese planner, so the planner interviewed was the only interviewee not living in Christchurch. We sent the questions in advance through email and interview times ranged from thirty to sixty minutes. Notes or recordings were taken with consent. The research methods were approved by the Human Ethics Committee of Lincoln University.

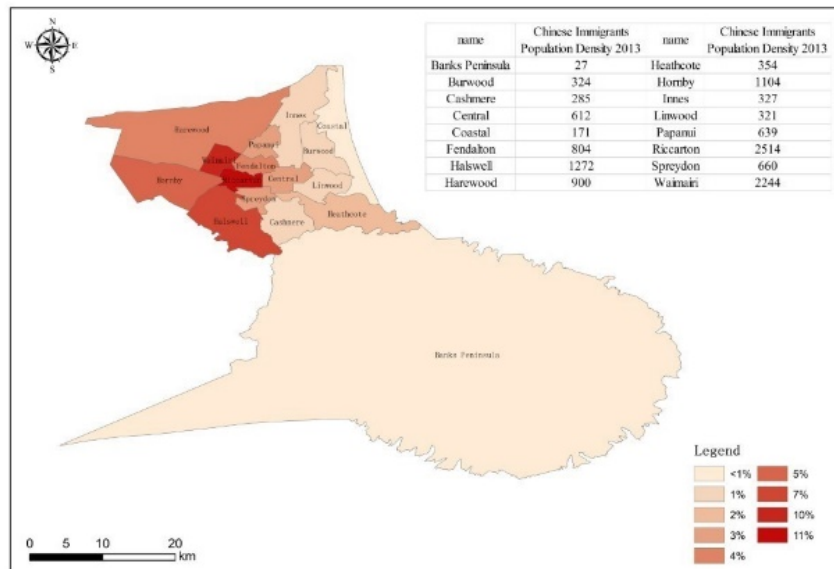


Figure 4: Population density of self-identified ethnic Chinese by Christchurch City Council electoral ward 2013 (Data source: <http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/ethnic-profiles.aspx>, licensed for re-use under the Creative Commons Attribution 4.0 International licence).

4. RESULTS

We collected 111 survey responses, 52 from the direct approach at the market and 59 from the on-line survey. The gender split was 54% female and 46% male. Half of the participants had a permanent immigration status of either citizenship (14%), permanent residence (34%), or partnership visa (2%). Of these, 90% of respondents have lived in the country for more than one year, and 50% have lived in Christchurch from one to five years.

Most respondents (94%) had never made a submission or been consulted in any planning process. The majority (76%) were unaware that the right to make a submission is open to every resident, irrespective of immigration status. This should not be mistaken though for a lack of interest in planning issues, as the majority of respondents were interested in the earthquake recovery, and just under half were concerned with water quality and transport, and a third of respondents identified air quality as an environmental issue of concern (Table 1).

Table 2 shows that 38% of the female respondents and 29% of the male respondents were willing to be engaged in planning. Of the rest, approximately half of each gender indicated that they were not sure whether they wanted to be engaged in planning. There

may be many reasons for this, but the result does show potentially fertile ground for education and outreach leading to engagement. A minority of both genders clearly expressed an unwillingness for engagement at all (~1 in 5 respondents).

Table 1: Concern with local planning issues (n=111). Note, more than one issue could be expressed, so the percentages add up to >100%.

Planning issues of concern	Percentage (%)
Earthquake recovery	70
Water quality	49
Transport	44
Air quality	34
Land use & Subdivision	11
Biodiversity	11
Others	5

Table 2 Gender vs Willingness to engage with planning (n=111).

Gender	Willingness to be engaged	Unwillingness to be engaged	Not sure	Total (%)
Female	38	17	45	100
Male	29	22	49	100

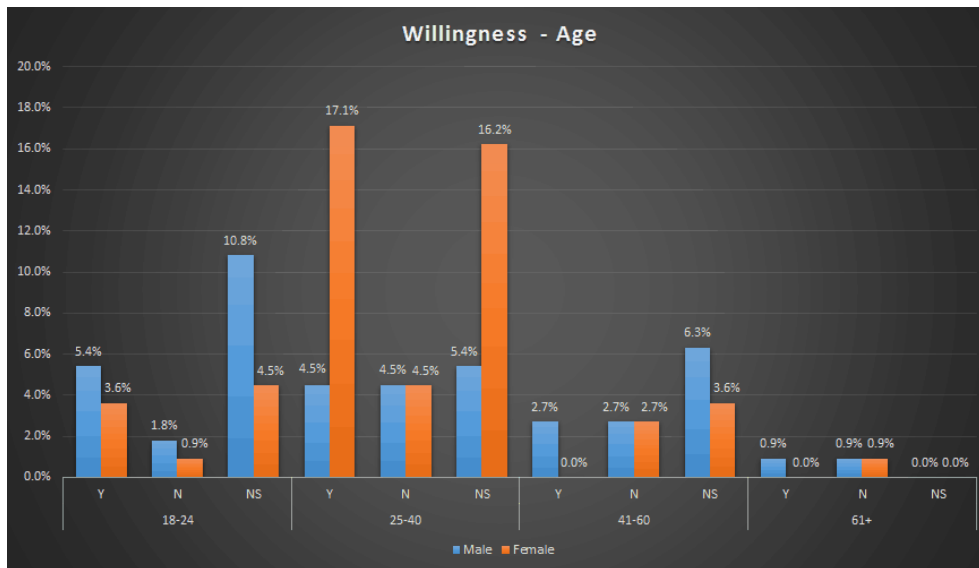


Figure 5: Survey participants' willingness to engage vs. self-identified age group by gender (n= 111).

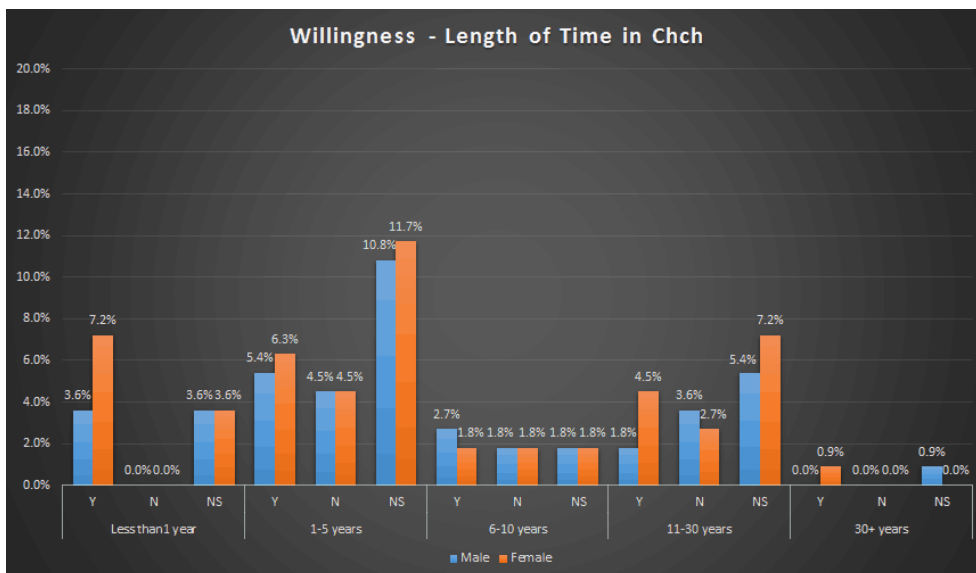


Figure 6: Willingness to be engaged in planning by age group and length of time resident in Christchurch (n=111)

To explore this further, the data were graphed to examine the differences in willingness by age groups, and length of time resident in Christchurch (Figures 5-6). In each of the graphs, the X-axis shows the willingness by Y=yes, N=no and NS-not sure; the Y-axis shows the percentage of survey participants who showed different levels of willingness.

Figure 5 shows that female participants aged between 25 and 40 had the highest willingness to be engaged in a planning process, but they were also the highest percentage that expressed uncertainty. Males

aged under 25 years had similar patterns of willingness and uncertainty; but between 25 and 40 years were just as likely to be unwilling as willing or unsure.

There were only 7 females and 12 males aged over 40 that responded (Figure 5), which is an insufficient sample size from that age group to draw any meaningful conclusion.

Figure 6 shows that it did not matter how long respondents of either gender had lived in Christchurch, in terms of their relatively high levels of uncertainty. The highest level of willingness to be engaged in planning issues

were respondents who had been in the city less than a year. After a year, there was little obvious difference between those who were willing or unwilling to engage when gender data were combined. Similar patterns were evident for the length of time respondents had been in the country (data not shown). An examination of willingness compared with visa category (data also not shown) revealed that female permanent residents (9.9%) and males on student visas (10.8%) were the most unsure.

Only 13% of respondents were satisfied with current engagement processes, although 41% were unsure. We also asked survey respondents whether translation into Chinese would be beneficial for engagement. The majority (73%) agreed that this could be useful, and could include oral translation at consultation meetings, written translations of public notices, and planning documents. There was also solid support for the use of Chinese social media for Council notices (56%).

5. DISCUSSION

Our results show that only 6% of the 111 respondents to our survey have ever made submissions on plans. This demonstrates a low level of engagement in local planning processes, despite a third of respondents expressing willingness to participate. It may be that the results are indicative of the level of involvement of the general public in planning processes in Christchurch. If the gap between the willingness to be involved and the actual level of involvement is the same among other ethnic groups, then it suggests the CCC has considerable scope to improve its engagement and consultation. A first step is to undertake targeted research with different ethnic groups to see if the results reported here are shared by other ethnic groups.

We do not have comparable data on other ethnic groups (including Pākehā) in Christchurch and the Council does not collect such data from participants in planning processes (CCC, 2013). However, in the CCC's 2013 Community Engagement Strategy, a demographic profile for the earthquake recovery "Share an Idea" process showed that 63% of participants were aged 49 or younger (CCC, 2013). This is

considerably more than the results of this study and is indicative of interest within the younger demographics. No gender or ethnicity data from the survey were reported by CCC.

Intriguingly, despite the low level of respondent's participation in planning found in our study, we also found low levels of satisfaction with current engagement processes. This suggests there might be reluctance to participate and/or barriers to participation. We put these findings to the selected interviewees, and several possible explanations were received, which included:

- General lack of awareness of the institutions and the scope of planning responsibilities
- The technical nature and length of the planning documents as a barrier to engagement
- English as a second language makes it more difficult to understand plans
- Few ethnically diverse CCC staff to raise awareness and encourage participation
- Ethnic groups may discuss issues on social media platforms, but Councils are not aware of these platforms or discussions.

Several people, who declined to take the survey, mentioned that they were worried about negative social judgments if they showed an interest in planning. This may reflect perceptions or experience of underlying or overt racism toward the Chinese community by dominant cultures in Christchurch or the CCC. Some researchers have highlighted the occurrence of institutional and casual racism in New Zealand (Ip, 2003, Yeung, 2012) and the Asian community is often the most targeted, which has been pointed out in accessible news media and online commentaries (e.g., Taonui, 2019). Further research would assist in identifying the nature of barriers as well as the effectiveness of trialling different solutions. Several interviewees suggested translation and the use of social media as means of better engagement with the Chinese community; and one person noted that local authorities in Christchurch have started to reach out to the Chinese language print media, but more needed to be done. Another interviewee stressed that participation is, in effect, a

partnership, and that efforts were needed from both local government and ethnic communities. He also suggested that leaders be identified in ethnic groups or communities. These could be 'engagement champions' that should have local planning knowledge and good language skills, so they can share information and help with communication and engagement.

The costs of engaging with particular ethnic communities (e.g., through translating high-level summaries of planning documents or key guidance) might seem prohibitive. However, when seen in the context of an increasing percentage of the community being Chinese and the overall outcomes sought by the Long Term Plan to strengthen its communities, such investment may be as valuable as celebrating multiculturalism through festivals and events. As a first step, CCC could consider collecting demographic data to better understand which sections of the community are responding to different issues and which different mechanisms can effectively engage them in planning processes. These mechanisms could also be targeted to different gender and age groups to maximise outreach and increase participation.

There are real implications for CCC of not actively seeking to improve engagement and participation. Civic life may be socially, culturally and intellectually impoverished by not having a vibrantly engaged polis. The CCC's Multicultural Strategy acknowledges the need to engage with an increasingly ethnically diverse population, but it needs to do more than hold a range of festivals however popular they may be. A sense of exclusion at worst, or tokenism at best as Arnstein (1969) points out, does not work to improve the democratic process. Importantly, it may also not improve environmental outcomes as quickly or inclusively as fostering an authentic sense of participation would likely lead to.

Interestingly, Yeung (2012) has noted that that the natural environment is a major factor in Chinese immigrants staying in New Zealand. Setting aside the recovery from the earthquakes, water, air and biodiversity were three of the most frequently mentioned concerns of respondents to our survey. This

suggests that not only are Chinese attracted to New Zealand because of its environment, they would be responsive to engagement in planning relating to these issues.

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8. APPENDIX 1 – SURVEY QUESTIONS

1. In what age group are you?

- a. 18 – 24
- b. 25 – 40
- c. 41 – 60
- d. 61 and over

2. Gender

- a. Male
- b. Female
- c. Other

3. Which kind of visa type do you currently hold?

- a. Citizen
- b. Permanent residents/residents
- c. Student
- d. Work
- e. Others ____

4. How long have you been living in NZ?

- a. Less than 1 year
- b. 1 – 5 years
- c. 6 -10 years
- d. 11 – 30 years
- e. More than 30 years

5. How long have you been living in Christchurch?

- a. Less than 1 year
- b. 1 – 5 years
- c. 6 -10 years
- d. 11 – 30 years
- e. More than 30 years

6. Which environment issue below is the most important to you (could be multiple)?

- a. Earthquake recovery
- b. Air quality
- c. Water quality
- d. Land use and subdivision
- e. Transport
- f. Biodiversity
- g. Others ____

7. Which of these local authorities have you heard about?

- a. Christchurch City Council (CCC)
- b. Environment Canterbury (ECan)
- c. Ministry of Environment (MfE)
- d. Department of Conservation
- e. All of above

- 8. What is your knowledge about the environmental legislation/plans that relevant to Christchurch City (such as Resource Management 1991, Christchurch City Plan, etc.)?**
- Heard a little
 - Know a little
 - Know much
 - Not at all
- 9. How do you get relevant information from?**
- Newspaper
 - Facebook
 - Twitter
 - Friends/family
 - Others ____
- 10. How many times have you ever engaged in any planning process, such as making a submission?**
- Never
 - 1 – 5 times
 - 5 – 10 times
 - More than 10 times
- 11. Do you know anyone (not only citizens) in NZ can make a submission to councils about proposed plans, plan changes or variations that has been publicly notified?**
- I know
 - I don't know
 - I don't care
- 12. How satisfied do you feel about current planning engagement process?**
- Satisfied
 - Not satisfied
 - Neutral
 - Not sure
- 13. Are you willing to be involved in the planning process?**
- Yes
 - No
 - Not sure
- 14. Which of the following method you believe could increase the efficiency of engagement (could be multiple)?**
- Dual language
 - Social media/app
 - Workshops
 - Others ____



Beyond the urban commute: Why we should be powering up for electric vehicle holidays

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ABSTRACT

To date, most of the research considering adoption of electric vehicles (EVs) has focussed on their use in urban areas, and primarily for routine or habitual travel, such as commuting. This paper argues that any substantial adoption of EVs will see their use extend well beyond these relatively easy to forecast and manage trip profiles. Indeed, this paper argues that the real benefits of EV technology are in the use of EVs outside of urban areas and for less routine trips, such as those associated with domestic holidays. However, at present we know relatively little about how to maximise the benefits and minimise the costs of non-routine extra-urban EV trips. This paper sets out why we should explore EV holidays and outlines some of the early opportunities and challenges associated with such trips.

Keywords: Electric vehicles, tourism, holidays, commute, routine

1. INTRODUCTION

Governments around the world have introduced policies to encourage a shift from internal combustion engine (ICE) vehicles to electric vehicles (EVs), primarily as a way to reduce the climate impacts of transport. Some have announced deadlines for terminating sales of ICE vehicles and many have incentivised the purchase of EVs (Sperling, 2018; Zarazua de Rubens, 2019). In New Zealand, the government has introduced a range of (albeit contentious) proposals intended to speed the uptake of vehicles with lower tailpipe emissions (Ministry of Transport, 2019).

Most research considering the adoption and use of light private EVs (such as personal cars) has been limited to urban contexts and for regular, often habitual travel, like commuting. This appears to be largely because urban areas are considered easy test cases for EVs, with high population density supporting cost-effective provision of charging

infrastructure, and routine trips supporting easy planning of recharging and low risk of encountering range limitations (Pagany, Ramirez Camargo, & Dorner, 2019). However, a gradual move away from ICE vehicles will result in EVs being used in more challenging contexts. It is important, then, to consider these more challenging use cases so as to provide the insights necessary to proactively plan for more than just the most straightforward EV adoption scenarios.

In this paper, I focus on domestic holidays; the kinds of trips that involve family members and friends packing up a car they already own and heading away from home. Domestic holidays can include overnight and weekend trips to a single destination, as well as longer duration trips, and trips that include more than one destination. In New Zealand, domestic holidays often include trips out of urban areas, to engage in outdoor leisure in mountains, coasts, lakes, rivers, and forests (see for example Collins & Kearns, 2010). I acknowledge that many of the factors

discussed below may influence trips taken by international visitors, and trips in rental cars or cars from sharing schemes, but here I start with domestic holidays in privately owned vehicles.

When I talk about EVs, I am referring to battery electric vehicles (BEVs) that need to be plugged in and charged in order to function, but again, I note that some of the same considerations may apply to hybrid vehicles that operate with both ICE and electric propulsion, and even to hydrogen or other alternative fuel vehicles.

This paper starts by considering the suitability of EVs for different kinds of journeys, including commuting and tourism trips. It proceeds to consider some of the present challenges associated with EV use by holiday makers. The paper concludes with a call to extend EV research beyond the easy, routine, urban use cases that have been its focus to date, and to devote more serious research to exploring EV holiday travel.

2. WHY EVs MAY NOT BE BEST SUITED TO COMMUTING

Although urban areas and routine trips may provide easy test cases for EVs, they do not provide the ideal environment for long-term uptake of private electric cars. EVs are primarily promoted as a low-carbon alternative to the use of ICE cars and they do have benefits in this regard (ARUP & Verdant Vision, 2015). What is often not acknowledged, however, is that the use of private cars (including EVs) is associated with a much larger range of negative impacts, especially in urban environments

The use of private vehicles is associated with congestion. Congestion in Auckland alone has been estimated to cost the country's economy over one billion New Zealand dollars a year (not including liveability impacts) (Leung, Destremau, Pambudi, & Bealing, 2017). Some commentators advocate building more roads to reduce congestion, but it has been demonstrated that road building often increases traffic volumes through a process of induced demand (Downs, 1962; Dunkerley, Laird, & Whittaker, 2018; Litman, 2019; Schneider, 2018). Roads also bisect human and

animal communities resulting in community severance and leading to negative impacts in terms of safety and community cohesion (Anciaes, Boniface, Dhanani, Mindell, & Groce, 2016; Appleyard, 1980; Boniface, Scantlebury, Watkins, & Mindell, 2015). Road crashes are responsible for 1.35 million deaths per year, the eighth leading cause of death globally (World Health Organisation, 2018). Car dependence can lead to sedentary lifestyles and consequent poor physical and mental health (Douglas, Watkins, Gorman, & Higgins, 2011), and can result in the exclusion of groups that, for whatever reason, are unable to drive or to access a car (Parkhurst et al., 2014; Shergold, Lyons, & Hubers, 2015).

The use of private vehicles also (regardless of fuel type) influences the development of built environments. More car use leads to increases in paved land surfaces (including for roads and parking provision), which subsequently increases flash flooding risks, reduces biodiversity, and diverts land from other, more socially useful purposes (Frazer, 2005). Car dependence also promotes urban sprawl (Bruegmann, 2005; Newman & Kenworthy, 1996), with negative implications in terms of all of the metrics already mentioned but also in terms of non-transport service provision, such as, for example, the provision of costly freshwater infrastructure covering increasing urban areas and leading to greater system losses (Speir & Stephenson, 2002).

Although these negative impacts have, to date, been largely driven by the use of ICE vehicles, switching from ICE vehicles to electric vehicles will not prevent these impacts from occurring. Indeed, indications that early adopters drive more after purchasing an EV (Haustein & Jensen, 2018; Kester, 2018; Langbroek, Franklin, & Susilo, 2018) suggest that shifts to electrification of the vehicle fleet could drive deteriorations in some of these metrics if later uptake follows similar patterns. Accordingly, it is important to see the potential consequences of an adoption of EVs (and a possibly associated continued reliance on private vehicle travel) in terms of more than just emissions reduction possibilities. Although EVs reduce emissions, other options like

walking, cycling and use of public transport could reduce emissions *and* reduce many of the other negative impacts detailed above. This means that better options than private vehicle travel exist (or could be developed) for much of our urban, routine travel. Such options may not be perfect for every use scenario, but they should be seriously explored prior to investing in urban EV use in most cases (Jones, 2019).

A huge volume of research exists on how to encourage the use of public and active transport and numerous test cases have demonstrated that where policy and investment support these modes, extensive benefits can be observed. Despite this, reorientation away from car dependence is challenging. Consequently, there is some validity in arguments that a shift to EVs in urban areas would at least ameliorate climate concerns. The counter-argument—that prioritisation of EVs can divert attention (and much-needed investment) away from more broadly beneficial active and public transport—also has some validity. While this debate continues, the use of EVs outside urban areas receives much less attention.

3. WHY EVs MIGHT BE MORE SUITED TO TOURISM TRIPS

Although private vehicle travel can have a variety of negative impacts in densely populated areas, these impacts may be less severe in areas of lower population density. Congestion is often lower and so less problematic outside of dense urban centres and their access corridors. Likewise, proportions of land given over to paved surfaces are lower, reducing localised flooding, biodiversity loss, and land availability impacts. Human and animal communities may also be more easily circumnavigated with minimal road infrastructure or provided with safe connection corridors where there are fewer roads and less traffic. Similarly, sedentarism and exclusion are least likely to be promoted by increased car use in areas with geographically dispersed populations that would be unlikely to connect through active transport in the absence of motorised options. Certainly, increasing car use can still have

negative impacts outside urban areas, and alternative strategies—such as reducing the absolute quantum of travel through holidaying closer to home, using staycations, and a reduction in touring holidays—are worthy of consideration. However, if there is a positive use case for EVs, it is most likely to exist outside urban areas.

Further, where there often is (or could be) a suitable alternative to private car travel for routine urban trips, that may less often be the case for holiday travel. For example, although average commuting distances may be appropriate to active travel modes in many urban centres, travel for holiday trips often covers longer distances, which can mean fewer travel alternatives. (It is important to note, however, that walking and cycling holidays are popular in their own right and—depending on the distance and means of travel to start and end points—may offer more environmentally and socially benign holiday options than trips where travel involves use of a motor vehicle).

Where active travel is unlikely to be a distance-appropriate mode for many holiday trips, public transport can provide an alternative. Many positive examples of holiday-making using public transport exist but there are numerous challenges that are not always easy to overcome. For example, commuting is routine and predictable but holiday travel can be much less so, with short-term factors (such as weather forecasts) having more substantial impacts and complicating public transport schedules. Indeed, a desire for the flexibility to change travel plans in response to things like the weather can act as a disincentive to making holiday trips by public transport, especially when public transport services are not frequent or when flexible tickets incur a price premium. Geographically dispersed destinations, particularly those where natural landscape features and remoteness are part of the appeal, can be difficult to serve with cost effective and timely public transport services (Langbroek et al., 2018; Martín Martín, Guaita Martínez, Molina Moreno, & Sartal Rodríguez, 2019) as can destinations with low visitor numbers.

Alongside these very instrumental barriers to holiday travel using public transport, there exists a range of cultural barriers. These might include perceptions of bus travel as low status (Fitt, 2018), a dislike for communal travel with unknown others (Kent, 2015), and a desired feeling of independence and getting ‘off the beaten track’ (even if the holiday destination is actually popular with holiday makers and travel could practically be shared). Some holiday practices are also associated with both practical and cultural luggage requirements. Certain sporting and leisure trips require bulky equipment, and kiwi family camping practices are recognised as often entailing the transportation of diverse camping paraphernalia. People with lots of baggage often prefer private transport (Yang & Ho, 2016) and most commercial modes of transport have strict luggage limits that could pose a challenge for those who are more used to packing the car to bursting (and possibly adding a roof box, trailer, caravan, or boat as well).

The likely lower negative impacts of EV use outside urban areas, along with the challenges to undertaking holiday travel using non-car modes, suggest holiday travel could be a more appropriate use scenario for EVs than routine urban commuting. However, existing studies commonly describe EVs as most suitable as a household’s second car (Halbey, Kowalewski, & Ziefle, 2015; Khayati & Kang, 2019). As such, EVs are described as primarily used for the routine, urban trips for which they are least suitable, while they are passed over in favour of ICE vehicles for longer tourism trips (Haustein & Jensen, 2018; Langbroek et al., 2018; Liao, Molin, & van Wee, 2017). Kester (2018, p. 210) notes that people often “buy a car with the specifications (range and towing power) for those few trips a year to holiday destinations, instead of a smaller and lighter car for their daily routines”.

4. BARRIERS TO EV TOURISM

Although EVs might ultimately be better suited to holiday travel than to urban commuting, there are some (often reported) barriers to their widespread use in that context. First, the range that most EVs can

travel without stopping to recharge their batteries is currently considerably shorter than the range that most ICE vehicles can travel without needing to refuel. Differences in range mean that it is currently much easier to get off the beaten track in an ICE vehicle. The New Zealand government is close to meeting its target of having EV fast-chargers no further than 75km apart on the entire State Highway network (NZ Transport Agency, 2020), but some holiday destinations are well off the highway network and often at the end of lengthy sections of unsealed metal road. Popular, but more remote, destinations like Milford Sound, French Pass, and Lake Waikaremoana remain out of reach of the range of some EVs. Other destinations may be in-range but require multiple charging sessions along the way, adding to total journey time. Charging poses particular issues for the holiday makers (domestic as well as international) who undertake touring, rather than single destination, holidays. Even where vehicle range is sufficient for a trip, range anxiety may deter holiday makers from choosing an EV for longer journeys (Halbey et al., 2015; Langbroek et al., 2018).

The availability of charging facilities in popular holiday destinations, and en-route, is rapidly improving, and many accommodation properties could allow overnight charging on the same basis as home charging. However, destinations such as unpowered campsites, and car parks (at which holiday makers may leave their car for several nights while going off for a longer trip into the backcountry) are unlikely to be able to offer overnight charging in the foreseeable future. Despite ongoing improvements, then, range, charging locations, and the time needed to recharge likely remain disincentives to travelling on holiday by EV. Further, although EV technology is progressing, there are few EVs that have a tow rating, meaning that hitching the boat or caravan is rarely an option.

Second, the capacity of the electricity distribution network to deliver electricity for vehicle charging is not evenly distributed (Page, Fitt, & Moreham, 2020). This can contribute to differences in the number and capacity of public EV charging stations around

the country. It is possible that the availability of charging stations (and the speed at which they will recharge a vehicle battery) will influence holiday makers' travel plans. Charging considerations could influence destination choices, holiday types (such as touring or destination holidays), and activity choices while a vehicle is charging (such as whether visitors pop to the public toilet or opt for a sit-down meal). Each of these decisions (as more and more holiday makers start to make them) could have much wider influences on things like patterns of regional tourism and economic development. Strategic decisions can be made about upgrades to the electricity transmission and distribution networks and to EV charging infrastructure to pre-empt or influence these changes but such actions—like many parts of effective planning—require forethought, potentially contentious priority decisions, financial investment, and time for implementation. Infrastructure investments will also need to take account of variation in holiday makers' EV charging requirements over different seasons, different days of the week, and even different times of day (Helmus & van den Hoed, 2015; Page et al., 2020).

Third, large events pose challenges for the management of EV holiday making. Planning how to charge the vehicles of, for example, the 20,000 annual visitors to the Rhythm and Vines festival near Gisborne, or the 50,000 visitors to Warbirds over Wanaka, adds another level of complexity to planning appropriate EV infrastructure. There is a developing portable EV charger industry that aims to commercialise solutions to these challenges (see, for example, evsafecharge.com), but the size of the challenges emphasises the need for proactive planning.

5. WHERE TO FROM HERE?

There has been surprisingly little research into the use of EVs for extra-urban holiday trips. There is some existing basic research exploring the charging needs and patterns of holiday makers (Helmus & van den Hoed, 2015; Lee & Park, 2018), some investigating aspects of EV rentals (Langbroek et al., 2019; Martín Martín et al., 2019), and some work modelling the proportion of existing trips (including the

routine and the unusual) that could be accomplished by EV (Chlund, Weiss, Heilig, & Vortisch, 2014; Eisenmann & Plötz, 2019). However, most of what we know (or think we know) about EV holidays comes from extrapolations from research that is focussed on the use of EVs in routine urban situations. Many questions remain unanswered, especially in a New Zealand context. For example:

- How are consumers' vehicle choices influenced by actual vehicle range and capability, range anxiety, and holiday preferences? Consequently, what interventions (infrastructure, marketing, trip decision support tools etc.) would be likely to be most effective in encouraging EV holiday making?
- How do the demographics of EV uptake map to holidaying preferences? Should we be focusing on installing EV chargers at accommodation facilities, or working out how to serve destinations popular with hunters, fishers, trampers, skiers, campers, and others keen to stay in more remote areas?
- Does travelling by EV change the experience of holidaying? If so, does that influence the patterns of trips taken, including the ratio of touring to destination holidays, and the travel patterns of people based at a destination but undertaking excursions?
- If EV uptake is uneven across groups of holiday makers, where might we first need upgrades to electricity transmission and distribution networks?

Extrapolations from other research can give us some hints about the kinds of dynamics we might expect to see in EV tourism, but the more we can develop our specific understandings of EV holidays, the more effectively we are likely to be able to plan for them. What we really need now, then, is to extend EV research beyond the easy, routine, urban use cases, so that we can also extend our understandings of how EVs can be integrated into different parts of our lives and societies, including our holidays.

6. CONCLUSION

The wide range of research that has explored the use of EVs for routine trips in urban areas has extended our understanding of potential EV uptake and issues. However, if widespread EV uptake is to be expected (and continues to be encouraged by global governments) it is time to start considering more complex use scenarios, such as the use of EVs by domestic holiday makers.

Research on the use of EVs in extra-urban areas would facilitate understandings of how to plan for such scenarios. In addition, it could help to change the way we think about the future potential of EVs. Current research and discourse may well leave a legacy of consumer concern that EVs are suitable only for relatively short-range trips close to the security of home charging. This paper has argued that these trips are not the most appropriate use of EVs. Although EVs are sometimes presented as a pain-free solution to the climate impacts of private motorised travel, increasing use of EVs is not without negative impacts, particularly for urban areas. These impacts may be much less damaging outside urban areas, and EVs may be most useful for travel for which public transport and walking and cycling cannot easily substitute. As EVs with greater range become increasingly available, charging infrastructure coverage increases, and the time required to charge a vehicle reduces, it is appropriate to think about how we move beyond considering EVs as a solution for the urban commute and into how we power up for their use by holiday makers.

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The state of cats in New Zealand: A precarious position

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ABSTRACT

Cats are one of the most popular companion animals around the world, but they are also one of the most invasive species. In New Zealand alone cats are responsible for the extinction of several native species. However, management of cat populations and the effect they have on the environment is confounded by people's emotional attachment to cats, and the many health and social benefits cats provide. In New Zealand, anti-cat sentiment is putting pressure on local councils to increase regulation of cat ownership in order to control cat populations and reduce their impact on native wildlife. Regulations and policies concerning cats have so far been developed by individual local councils, and as such there is considerable variation in how cats are managed throughout New Zealand. While there are national guidelines for care of companion animals, it is worth investigating whether it is time for stronger national regulations and direction on cats. As such, desktop research on cat management in New Zealand was conducted, including analysis of various central and local government policies, along with academic studies and news articles from around New Zealand. This article concludes that stronger national direction is needed and discusses what exactly should be included in such national direction.

Keywords: Companion species, Predator management, Biodiversity Policy, feral, domesticated

1. INTRODUCTION

First brought to New Zealand by European settlers in 1769 (King, 1984), cats (*Felis catus*) have long been a beloved companion animal in New Zealand households. Not only do they offer companionship, but cats are also prized for their hunting abilities—particularly where pest species, such as rats and mice, abound. This, however, does not negate the International Union for Conservation of Nature's classification of cats as among 100 of the world's worst invasive species (Lowe, Browne, Boudjelas, & De Poorter, 2000). In New Zealand alone, where native species evolved without exposure to land-based mammalian predators, cats are implicated in the extinction of at least six endemic species (Fisher, Algar, Murphy, Johnston, & Eason, 2015). Cat predation on native wildlife—particularly native birds—is well-publicised, with various factions advocating for stronger

cat ownership regulations, improved management of companion and feral cat populations, or even for the total eradication of all cats (companion and feral alike) from New Zealand (Perry, 2013; The Morgan Foundation, n.d.; Chen, 2018). However, as total eradication of cats would be extremely costly and likely elicit negative public reaction, it is perhaps neither a practical nor wise strategy to adopt. At present there is inadequate national direction on cat management in New Zealand, with the responsibility being left to the Department of Conservation (DOC) and local councils. If cat populations are to be effectively managed in New Zealand, there needs to be stronger national direction to achieve conservation goals whilst protecting the socio-cultural importance of cats to New Zealanders. There are numerous ways such national direction could be achieved, including: through statutory means such as a National Policy

Statement or biodiversity strategy, which could give cat management operations legal backing; or through non-statutory means, such as a national strategy or action plan. Momentum for such a national direction is already underway, with a proposed New Zealand National Cat Management Strategy being put forward by the National Cat Management Strategy Group in 2017 (National Cat Management Strategy Group, 2017). This article aims to explore which approach is most suitable given the relationship of cats to New Zealanders, existing cat management systems, and growing concerns around the issue.

2. THE ROLE OF CATS IN NEW ZEALAND

From 1769 onwards, cats became an increasingly popular feature of New Zealand households (King, 1984). According to the New Zealand Companion Animal Council, in 2016 44% of households owned a cat—making cats the most popular companion animal in New Zealand. Since their arrival, cats have often been considered an invasive pest that should be eradicated to protect New Zealand’s native biodiversity (Farnworth, Dye & Keown, 2010). Several studies concur that cats are responsible for a number of bird, mammal, and reptile extinctions in New Zealand (Bruce, 2018; Farnworth, Dye & Keown, 2010; Fitzgerald & Gibb, 2001). Well known examples in New Zealand include the total extinction of the Stephen Island Wren in the late 1800s due to a single cat owned by the lighthouse keeper on Stephen Island (Farnworth, Dye & Keown, 2010). Likewise, Grand and Otago skink populations are believed to be at critically low levels in Central Otago due to cat predation (Department of Conservation, n.d.).

It should be noted that cats are more than simply a conservation concern, and it is worth exploring the emotional relationship between New Zealanders and their cats. Cat management is a sensitive topic due to the emotional investment many New Zealanders have with the species. The strong relationship between New Zealand cat owners and their pets is clearly seen in the public opposition to Gareth Morgan’s controversial ‘Cats to go’ campaign (Perry, 2013; The Morgan Foundation, n.d.). The Morgan Foundation

admits that “we got hate mail, even death threats. We upset a lot of people that are interested in cat welfare” because of their campaign to eradicate cats and make New Zealand truly predator free (The Morgan Foundation, n.d.). This indicates that while stronger national direction is needed to manage cat populations in New Zealand, such national direction must respect and provide for the unique and significant socio-cultural relationship between humans and cats, and ensure that any measures to regulate cat populations are ethically and publicly acceptable.

Furthermore, the benefits cats provide to human welfare should not be under-valued when considering cat management policies. Numerous studies have, for instance, found that cat ownership correlates with many positive health outcomes. Of particular note, cat owners, or people who have previously owned a cat, have been found to have significantly lower risk rates of cardiovascular disease compared to non-cat owners (Friedmann & Thomas, 1995; Qureshi, Memon, Vazquez & Suri, 2009). The mental health benefits of cat ownership or companionship have already been well implemented into many mental health and psychotherapeutic practices (Friedmann & Thomas, 1995; Qureshi, Memon, Vazquez & Suri, 2009; Wood, Giles-Corti & Bulsara, 2005). Cats have been shown to reduce and improve negative moods (including anxiety, fear, depression, and introversion), and are often present in psychiatric centres (Turner, 2017). Cat companionship has also been described as a cure for loneliness. This is because cats often substitute, or replace, aspects of our social networks and become additional sources of emotional support (Rijken & van Beek, 2011; Turner, 2017; Wood, Giles-Corti & Bulsara, 2005). For example, women living alone tend to be significantly lonelier than those living with a cat (Zasloff & Kidd, 1994). It is for these reasons that total eradication of cats in New Zealand would not only be unwise, but also seriously unpopular. The benefits to human welfare should not be overlooked when creating and implementing any national direction on cat management.

3. EXISTING POLICIES, LEGISLATION, AND MANAGEMENT OF CATS IN NEW ZEALAND

Management of cat populations in New Zealand walks a fine line between addressing conservation concerns and protecting the interests of cat owners. To date, cats live in an ambiguous legislative state: they are neither classified as a pest under a national pest management plan or the New Zealand Biodiversity Action plan (2016), nor protected as an exotic species under the New Zealand Biodiversity Strategy 2000. In general, the New Zealand Biodiversity Strategy (2000) has emphasised in situ conservation, favouring the protection of native fauna rather than introduced, or exotic, species. This reflects a requirement under the Convention on Biological Diversity in Article 8(h) to “prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species” (Convention on Biological Diversity, 1992). Though clearly a conservation issue, the New Zealand Biodiversity Action Plan (2016)—which showcases actions being undertaken to meet New Zealand’s commitments under the Convention on Biological Diversity, including the Predator Free 2050 program—fails to address the threats that cats pose to native wildlife. Predator Free 2050 instead aims to eradicate rats, stoats, and possums from New Zealand by 2050 (Predator Free 2050, n.d.). Under provisions of the Biosecurity Act 1993, a cat could be labelled as a ‘pest’ in both national and regional pest management plans (Biosecurity Act 1993, part 5). While some regional councils have included feral cats in their regional pest management plans (for example, section 10.3.5 of the Auckland Regional Pest Management Strategy 2007-2012), there has been no national pest management plan targeting cats—companion or feral—to date. Not classifying cats as pests would make sense if *feliis catus* (the companion cat) was protected under the previous New Zealand Biodiversity Strategy (2000), which can offer protection to exotic species if they are important for economic, biological, or cultural reasons (The New Zealand Biodiversity Strategy, 2000, section

26.4). Cats, however, have not been granted this protection.

This lack of national recognition and direction for cats in New Zealand has meant that cat population management lacks a uniform approach across the country. Part of the problem is the difficulty in distinguishing between various classifications of cats. Under New Zealand’s Code of Welfare—Companion Cats 2018, cats are separated into companion, stray, and feral categories (Ministry for Primary Industries, 2018). Companion cats refer to those that live with humans or are dependent on humans for their welfare, whereas stray cats are defined as lost or abandoned companion cats either living alone or in a group (colony). Stray cats may be indirectly reliant on humans for their needs. Feral cats, on the other hand, have none of their needs supplied by humans and generally live away from centres of human habitation (Ministry for Primary Industries, 2018). This categorisation allows for different management techniques to be adopted to address feral cats, as opposed to stray and companion cats. Feral cats are considered to pose a more significant threat to New Zealand’s native wildlife than companion or stray cats (Forest & Bird, 2018). Under provisions of the Biosecurity Act 1993, DOC currently considers feral cats to be a pest species. Once labelled as a pest species, feral cats may be hunted and killed, as per the provisions of section 30B(1)(b)(iv) of the Animal Welfare Act 1999—which allows for any animals defined as a pest under the Biosecurity Act 1993 to be hunted and killed (Animal Welfare Act 1999; Farnworth, Dye & Keown, 2010). Management of companion and stray cats is generally left to the discretion of individual city and district councils who, under section 146a(v) of the Local Government Act 2002, may make bylaws to regulate the keeping of animals.

While on paper the distinctions between companion, stray, and feral cats are clear, in reality it is difficult to distinguish between them. This is because stray or abandoned cats can easily revert to a feral state within only one generation (Ministry for Primary Industries, 2018). This means that companion cats who are abandoned or get lost blur the boundaries

between companion, stray and feral (Griffiths, Poulter, & Sibley, 2004). False identification of cats not only reduces the effectiveness of pest control operations, but may also spur negative public reaction if companion cats are mistaken for their feral counterparts. Stray cats, therefore, are in an ambiguous territory and require a unified management approach from both DOC and territorial authorities (Farnworth, Dye & Keown, 2010).

Various councils, community groups, NGOs, and even government organisations (such as DOC) approach the issues of identification, de-sexing, and general cat population management in different ways. For instance, Part 2 of the Wellington Consolidated Bylaw 2008 regarding animals was updated in 2016 to enforce compulsory microchipping and registering of all cats within Wellington City limits. Companion cats in Wellington must now be registered either on the New Zealand Companion Animal Register (NZCAR) or another council approved microchip register (Wellington City Council, 2016). Similarly, Palmerston North City Council adopted its Animals and Bees Bylaw in 2018. This bylaw requires all cats born after July 1st 2018 to be microchipped, registered, and de-sexed. It also limits the number of cats residents in urban areas can keep to three cats per household (Palmerston North City, 2018). Microchipping, although an effective means of distinguishing between companion, stray, and feral cats, is not currently mandatory across New Zealand. The Code of Welfare for Companion Cats 2018 does suggest minimum standards for caring for companion cats, and includes recommendations to de-sex all cats, except for those kept by a registered breeder for breeding purposes. The Code also suggests that “cats should be identified with a microchip” (Ministry for Primary Industries, 2018, p.22). Currently, cat owners are not legally required to follow these recommendations. However, evidence of a failure to meet a relevant minimum standard in the code may be used to support a prosecution under the Animal Welfare Act 1999.

4. ESCALATING TENSIONS

The risks that cats pose to the protection and conservation of New Zealand’s native wildlife is not ground-breaking news. However, campaigns such as those by the Morgan Foundation to label all cats, companion and feral alike, as pests have been gaining traction in public spheres. Recently the town of Omaui in the Southland region of New Zealand moved to completely ban all cats in the township in order to protect native birds (Chen, 2018). Those opposed to such campaigns often raise concerns that labelling cats as pests may foster negative public perceptions of cats and, in some cases, promote cruelty towards them (Kerridge, 2019). Conversely, those campaigning against cats often overlook the strong attachment between owners and their companion cats, thus putting cat owners on the defensive. Clearly there is opportunity for a nationwide strategy or policy statement to co-ordinate management of cat populations and reduce their impact on native biodiversity, whilst also prohibiting inhumane actions towards cats. While cats are clearly a threat to conservation efforts, management of their populations must be ethically acceptable and done with caution (Kerridge, 2019; Farnworth, Dye & Keown, 2010; Medina et al. 2016).

In 2017, the National Cat Management Strategy Group (NCMSG), made up of members from Local Government New Zealand, the Morgan Foundation, the New Zealand Companion Animal Council, the New Zealand Veterinary Association (NZVA), Companion Animal Veterinarians, and the Royal New Zealand Society for the Prevention of Cruelty to Animals (SPCA), developed a proposed New Zealand National Cat Management Strategy. Their aim was “to lobby local and central government to enact useful legislation that facilitates sustainable humane cat management” (National Cat Management Strategy Group, 2017, p.5). The proposed national strategy addresses the conservation issues around cats, whilst also seeking humane and sustainable population controls that respect the relationship between New Zealanders and their beloved cats. However, critics have been quick to suggest that statistics used in the strategy are unreliable and have

been used to paint a negative image of cats (Kerridge, 2018).

5. POSSIBILITIES

While the current Code of Welfare—Companion Cats 2018—perhaps does not go far enough in legislating responsible ownership of cats in terms of microchipping, de-sexing and so on, the strategy proposed by NCMSG does appear to strike a middle-ground approach to cat management. NCMSG’s call for “useful legislation” is warranted, and New Zealand could benefit from mandatory legislative requirements regarding cat management. Such mandatory requirements could be enacted through a National Policy Statement, and may include regulations such as: the compulsory microchipping of all cats nationwide; stronger de-sexing and neutering regulations; the creation of a regulated cat breeding programme; and investigation into the effectiveness of humane population control of stray cats, such as trap-neuter-release (TNR) programmes. It is important that the adopted regulations placate public desire for humane methods of cat population control, as highlighted by Mankad, Kennedy and Carter (2019) who found that “public perceptions of what is and isn’t in the best interests of cat welfare do not always align with veterinary definitions of care and welfare” (Mankad, Kennedy & Carter, 2019, p.316).

TNR programmes may be a viable option for future management of cats in New Zealand. As opposed to trap to kill programmes, which tend to spark public outcry, TNR programmes take stray and feral cats, de-sex them, and return them to their area. Using this method, the population of stray and feral cats will slowly decline over time, without causing public backlash over perceptions of inhumane treatment. Some studies have found that TNR is more effective because it does not open up cat territories to new stray or feral cat populations, as happens if the original cat inhabitants are euthanised. Therefore, although it takes a long time to achieve, TNR has more effective results (Levy, Gale & Gale, 2003). In 2014, Wellington SPCA and Wellington City Council set up a pilot project to investigate the effectiveness of TNR on a stray

cat population in the suburb of Strathmore. This resulted in a slow decline in the stray cat colony, showing that compassionate population control methods can be effective if given the chance (Mussen, 2015). In other countries TNR has become standard practise for major animal welfare organisations, such as the American Society for the Prevention of Cruelty to Animals, and the Humane Society of the United States (L.A. Unleashed, 2009).

Stronger requirements for nationwide de-sexing and neutering of cats should also be included in a national direction. Such requirements should not aim to fully eradicate cats from New Zealand, but rather to bring the national cat population under control. At present there are no statutory requirements for companion cats throughout New Zealand to be de-sexed or neutered (Farnworth, Dye, & Keown, 2010). Certain cat shelters, such as the Cats Protection League and the SPCA, require cats to be de-sexed before they are rehomed, but this is not currently a legal requirement (Cats Protection League Canterbury, n.d.; SPCA, n.d.). If requirements for microchipping, TNR, and neutering were made mandatory in a legislative document such as a national management strategy, uniform management of cats across New Zealand might just be possible.

6. CONCLUSIONS

Though clearly a conservation issue, the issue of cat management should not, and realistically cannot, be addressed without respect to the socio-cultural role of cats in New Zealand society. National guidance for minimum standards of care have been given through the Code of Welfare—Companion Cats 2018 as directed under the Animal Welfare Act 1999, but these minimum standards of care are not legally enforceable. To date, central government has provided little in the way of mandatory regulations regarding cats. If New Zealand is to achieve conservation goals then it is necessary to have stronger regulations around cat management and ownership nationwide. However, such regulations should not be at the expense of the emotional attachment many New Zealanders feel towards cats. There is room then, for a

National management strategy, national policy statement, or action plan regarding cat management to be developed. This could include nationwide legislative requirements for microchipping, de-sexing where appropriate, and possibly TNR programmes. Such a strategy should seek to balance the competing conservation and socio-cultural interests around cat management in New Zealand in a way that benefits all parties.

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Book Review

The new biological economy: How New Zealanders are creating value from land

Eric Pawson, Richard le Heron, Hugh Campbell, Matthew Henry, Erena Le Heron, Katharine Legun, Nick Lewis, Harvey C. Perkins, Michael Roche and Chris Rosin.
Auckland University Press, Auckland, 2018. 290 pp. ISBN 978-186940-888-6

As an output of the New Biological Economies team's Marsden Fund project, this book sets out to describe and then implement an alternative way of examining New Zealand's primary production sectors and the processing, marketing, and selling of these primary products around the world. The introduction sets out the goals and objectives of both the project and this resulting book. Recognising that the introduction lacks some clarity as to how much of the project is being delivered in this 290-page volume (a summary of the findings), the authors also include guidance on how to read the book.

The subtitle for the book is 'how New Zealanders are creating value from the land', with individual chapters focusing on the values created through dairying, lamb production, merino wool, kiwifruit, apple production, wine, and rural tourism. The focus on specific industries is useful for briefly outlining the history of that industry, its spread around New Zealand, current issues and technological developments, and issues that challenge the viability of that industry. The dairying chapter, however, largely focuses on Fonterra and hence discusses being trapped within commodity markets where there is less value added to the product and more exposure to the fluctuations of international markets. The author could have instead focused on the smaller dairy companies that are sprouting around the countryside to provide more value-added dairy products, including those of sheep and goat.

The other industry-focused chapters look at the creation of value and by whom. For instance, one chapter details the development of the latest types of apples and their introduction to new markets, while another looks at the standardising and marketing of merino wool. Unfortunately, after that chapter was written, the book's preface explains that the main New Zealand-owned merino wool manufacturer, Icebreaker, was sold to an overseas company. My concern is that this sale reflects what has happened to New Zealand's biological economy for generations; farming families want to carry on their stewardship of the land while producing a better product, but New Zealand based processors of biological production sell their processing and manufacturing operations and intellectual property to overseas-based multi-nationals. This division between New Zealand producers and overseas-owned manufacturers risks devaluing New Zealand's biological economy to commodity-based products with associated low prices, while the overseas manufacturers capture the added value. This raises questions of whether there is a new biological economy and whether New Zealanders are not only creating value from the land but also capturing that value.

The approach of these industry-focused chapters provides useful background and an interesting use of descriptive geography to examine a specific industry or a specific place. While resource management issues are not specifically addressed in these chapters, each

industry's current and potential impacts on the environment are clear. For planners, this should assist in understanding what environmental impacts there are and what impacts there might be if a particular industry fails, continues, or expands into an area, district, or region.

Latter chapters also discuss the presence and interaction of industries within the Maori or Taniwha economy, on Banks Peninsula, Central Otago, and in Hawke's Bay. The authors explore the issues that can arise when one production sector crowds out other traditional industries in an area and the effects this has on resources. Again, this should assist planners when considering how different types and methods of primary production will affect, alter, and cause problems within a landscape. A key task for planners could be to anticipate primary production changes and their positive/negative impacts within the local landscape and use that information to develop plan changes that encourage or hinder such industries.

The final chapter describes Te Ipu Kai and the Food Innovation Network which provide opportunities for potential and existing companies to develop and test products without needing to invest in the equipment and premises. The authors' analysis of the benefits and pitfalls for the processors and the New Zealand biological economy were interesting as they drew attention to the government contribution through the infrastructure to assist firms develop new products in the biological economy, and the risks firms have of developing their intellectual property in a forum that publicises what firms are developing. It also highlighted that not only start-up firms are obtaining government assistance but also large New Zealand companies. The authors suggest that New Zealanders will benefit from such facilities in the form of shares in the processors. This idea warrants further action to ensure that taxpayers have a share of the profit they helped create when the business is sold to larger, often overseas, competitors.

In terms of how easy this book was to read, some diagrams appeared to be PowerPoint slides without the benefit of having a large wall

to display them, making some hard to read. The chapters were a lucky dip of simple enjoyable language, language filled with appropriate and interesting jargon, what appeared to be jargon for the sake of using it, or turgid prose that had me yearning for a red pen and feedback on the benefits of shorter sentences.

Overall, the book is a useful background document for planners who need to address primary production issues in their districts and regions. Where I would like to see the research extend next is into the intentions and commitment amongst New Zealand-based processors, manufacturers, and the government to capture the value generated from bio-economies within New Zealand. This too will affect the development and use of biological resources in different parts of New Zealand.

*Reviewed by
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Book Review

Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds

Arturo Escobar

Duke University Press, Durham, 2018. 312 pp. ISBN: 9780822371052

We live in a time when our goal of achieving a just and equitable world is being challenged by multiple, interlinked crises. According to a plethora of critical scholars, the roots of such crises remain firmly entrenched in historical processes, including colonisation, patriarchy, and industrial capitalism. Addressing the effects of these historical processes requires mobilising a collaborative effort across scales and disciplines. A mobilization which is ontologically driven and goes beyond mere renovations of our institutional tools. In this book, Escobar explores how *design* fits into such mobilization, and asks:

Can design be reoriented from its dependence on the marketplace toward creative experimentation with forms, concepts, territories, and materials, especially when appropriated by subaltern communities struggling to redefine their life projects in a mutually enhancing manner with the Earth? (preface)

It is a complicated, all-encompassing question. It challenges the roots of mainstream design principles which remain grounded in colonisation, patriarchy, industrial science and capitalist growth. Escobar sheds light on the spectrum of alternatives that reject such design, and envisions different worlds. He explores this complicated question within the context of 'contemporary Latin American epistemic and political experiences and struggles'.

His arguments are tethered to concerns about the three following current situations.

The first situation concerns the current pervasiveness of global socio-ecological crises, including climate change, economic inequality, ecological destruction, and cultural subjugation. To him these are a result of "deeply entrenched ways of being, knowing, and doing" (p.19). Escobar asks how is design implicated in the production of these crises? And can design be transformed to address such issues?

The second situation Escobar explores is the power discrepancies between western dualist ontology (Cartesian instrumentation) and others who advocate for the deep relationality and interconnectedness of all that exists. Questions of access are questions of ontology (worldview; what we think the world is). Can design be ontologically produced? And can such production address the historic inequity of power?

Given the existing crises, the third situation Escobar explores is the rise of various nodes of transition thinking. Transition thinking is having a particular impact on design theory and practice. This has resulted in challenges to design's utility, role in projects of justice and representation, across objects, spaces and processes. Such contentions have given rise to movements such as 'design for transitions' and 'design for autonomy', that are "centred on the struggles of communities and social movements to defend their territories and worlds against the ravages of neoliberal globalization" (p.20). What do these new emerging fields look like, both in theory and in practice?

While the above questions demarcate specific political and ideological debates, their overarching question is the question of modernity. The viability of modernity as a proxy for wellbeing, or sustainability, or even justice has often raised questions. For example, can modernity consider, and truly make space for, 'other-than-modern world making possibilities', or is it 'fatally compromised' given its allegiance to certain institutions of exploitation? The Pluriverse Escobar mentions in the title of his book is a counterweight to this idea of one modern world. Not a universe, but a pluriverse: space for many worlds inside the one we all share. As he interrogates the life of design within such a vision, he returns to the earlier question, slightly reworked:

Can design be extricated from its embeddedness in modernist unsustainable and defuturing practices and redirected toward other ontological commitments, practices, narratives, and performances? Moreover could design become part of the tool kit for transitions toward the pluriverse? (p.15)

Escobar explores and wrestles with this question in three acts of the book. He first situates design within the field of cultural studies and argues that a critical design studies field 'is under construction'. It is a descriptive introduction to the world of design studies, covering vast intellectual territory and engaging with some of the current key debates within the discipline. The second act advocates for an ontological approach to design, building on ontological re-imaginings from other fields. Escobar uses literature from varied disciplines and fields to manifest this idea, which is built around Winograd and Flores' proposition from the 1980s. This multiplicity of worldviews sets the stage for designs of the pluriverse: as a radical tool for reimagining and reconstructing the world through a relational matrix of autonomy and justice. The final act attempts to explore such designs for the pluriverse. Escobar does this by identifying the various transition narratives emerging from both the Global North and the Global South. Ultimately, Escobar proposes the idea of Autonomous Design as a particular avatar of ontological design. To flesh out his idea of Autonomous

Design he presents a case study from Latin America (Colombia). The book ends with an invocation for further research in this area, in the space between the 'politics of the real and the politics of the possible'. Such research is critical given the enduring exploitative structural legacies of patriarchy, colonization, and industrial global markets within communities across the world.

I enjoyed reading the book and resonate with the emancipatory ethic it advocates for, given my own long-time engagements with many people within the 'transition thinking' movement. However, there are some points of contention which I noticed and discuss in this section. The scale of this book is incredibly ambitious, as Escobar himself states, "It is easier to imagine the end of the world than the end of modernity" (p.8). In order to represent the brutal exclusionary machinations of modernity Escobar moves through a wealth of different literature, including feminist political ecology, science and technology studies, anthropology of design, critical development studies and political ontology. The fields mentioned explore ideas of equity, justice and dependence within human and nature relationships. And Escobar employs them to castigate a framework that has been widely criticized for the past three decades by post-colonial and critical studies literature. Thus, his evisceration of Cartesian bordering (and ordering) that is the foundation of modernity is nothing novel, and actually fails to address the significant critiques levelled at such attempts. Furthermore, the relational prism, presented as an alternative to such dualism, though well theorised very rarely materialises outside of academia.

Even though Escobar asks, "What does nondualist existence mean in everyday life?" the answer he provides fails to travel the distance between metaphor and practice. While meshing together visions of radical activism from (mostly indigenous communities) in Latin America and notions of 'conviviality' as imagined by thinkers like Ivan Illich and Thomas Berry, Escobar uses his description of this vast thought-scape as his prescription. Escobar's vision of ontological design meanders through the deconstructive

landscape of Heidegger and Varela, but still fails to remain true to its own notion of non-duality. In constructing monolithic notions of indigeneity, markets, and even community, the pluriverse within them is reduced and caricatured in their representation.

Following this train of thought reveals a critical point: in taking the axe to the structural forests populating modernity, Escobar misses the myriad trees of agency. The many worlds he mentions are brimming with many different ideas and actions, but by making design the central subject of the book, the agency of the many communities he mentions are inadvertently excluded. Various communities are experiencing different engagements with modernity. Such engagements lead to a spectrum of world-making politics which may or may not democratically represent the complex intra-communal assemblages. The 'community' much like 'modernity' is not a sum of its parts, and this idea is absent in Escobar's analysis. The leviathan whom Escobar is attempting to hold accountable is modernist design praxis and philosophy. However, Escobar's overwhelming dependence on theoretical tools ends up stretching theory to its limits and comes up short. If instead, Escobar had shared this burden by focussing on everyday points of resistance undertaken at specific places by specific humans and non-humans, and their corresponding potential for solidarity, he would have addressed the question of misrepresentation and communal erasure that he identified.

Having said that, I do believe he does an impressive job compiling a huge trove of intellectual work that grapples with the very soul of design. For me this is the key contribution of this book. It acts almost as a reference volume and primer, identifying the thousands of tributaries flowing into the Pluriversal Ocean. Enzo Manzini's *Design, When everybody Designs: an Introduction to Design for Social Innovation*, Ivan Illich's *Tools for Conviviality* and Humberto Mautaurana and Francisco Varela's various books seem to be informing much of the conceptual inspiration, along with the Zapatista resistance struggle and Bob Marley's music.

Ultimately, autonomous design, which rests heavily on Latin American struggles for autonomy, emerges more as a vision of the relational engagements of 'indigeneity and modernity', than as simply an 'onto-epistemic' moment of resistance. This is the vital conjecture at the heart of this argument, defining a set of rules and devices with which to engage with the ongoing manifestations of modernity. At times, Escobar seems to advocate for a bounding of modern processes and artefacts within certain spaces, almost as a form of containment to allow the other worlds to flourish. At other times, the call to action is one of more intellectual syncretism, imagining equitable collaboration and symbiotic flourishing. I believe this unresolved question: What to do with modernity? Reflects the situation on the ground. Therefore, *Autonomous Design*, while an admirable goal fails to adequately address the question of modernity. Furthermore, I find it strange that the modern western university, which is often the stage and conduit through which ideas about how to relate to the world are decided and dispersed, is left unchallenged until the very end. Hopefully, an extension of this work can explore the probable material and affective interventions needed in the academy to usher in the pluriverse.

Despite such drawbacks, the greatest strength of the book is its marvellous journey through hundreds of projects, ideas and practitioners that are rethinking the very foundations of design and implementation. Ultimately, this has inherent value to the pluriverse of different ideas and initiatives that are encountering the powerful developmental machine. Challenging the status quo, both theoretically and otherwise, can feel like such a solitary and exhausting battle. *Designs for the Pluriverse* addresses this by highlighting the community that exists and is growing.

Reviewed by
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Australia and New Zealand Association of Planning Schools Conference, 4-5 July 2019

Suzanne VALLANCE

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In my newly-appointed role of Director of Planning, I attended the Australia and New Zealand Association of Planning Schools conference in Brisbane in July last year. The conference theme was *The role of research and the researcher in city making*. After presenting a paper on 'Planning, curation and improvisation in the scriptless city', I was able to enjoy some really good sessions devoted to critical thought/theory in urban planning education and practice, the skills required by new graduates, and the relationship between the academy and planning professionals. In the context of potentially substantial reform of the Resource Management Act, another session - exploring the roles for urban researchers (academic and/or others) in urban planning practice in (Australia and/or) New Zealand - was particularly interesting. Apparently after 30 years of essentially limiting our statutory planning gaze towards our effects on the bio-physical environment, we are now being encouraged to consider the converse. This has the potential to expand our NZ notions of 'planning' considerably, particularly in recognising the implications of urban form and function for how we live, work and play. So, while my sense was that NZ is ahead of Australia when it comes to embedding indigenous planning approaches and methods in the curriculum (with PIA consulting with NZPI for best practice) and we may have some

advantages in integrating planning with climate change adaptation/mitigation given the bio-physical environmental emphasis of the RMA, the Aussies absolutely have the edge when it comes to recognising 'cities' as distinctive environments. It seemed to me that their recognition of non-statutory planning and their deployment of such tools was also rather more advanced.

Whilst there, I met with other Heads of Planning programmes for breakfast and a chat. The fortunes of the various planning schools in Australia and, indeed, the profession more broadly seemed to vary from state to state. In some places, planning was seen as a 'regulatory burden' whilst in other states and cities, the role of planning in mitigating and managing market failures and protecting public goods was more widely acknowledged. It would be interesting to explore the relationship between those cities that appear more pro-planning and their scores on global liveable city indexes (alas, my scepticism around such indexes prevents me exploring this relationship).

Joanna Ross (Massey) and Dr Ashrafur Aram (Otago) also attended ANZAPs. Jo has helped facilitate an inaugural meeting of New Zealand Planning school representatives in Palmerston North in June.



Figure 1: Head of Planning Schools Breakfast at the Australia and New Zealand Association of Planning Schools Conference in Brisbane 2019. [Photo courtesy Ash Alam]



Euroleague for Life Sciences Scientific Student Conference 15-16 November 2019

Melissa McMULLAN

Master of Planning Student, Lincoln University, Christchurch, New Zealand

The Euroleague for Life Sciences (ELLS) Scientific Student Conference was held at the Swedish University of Agricultural Sciences (SLU) in Uppsala from the 15th-16th of November 2019. The theme for the Conference was “Managing Broad Environmental Interests for a Sustainable World.” Lincoln University is a partner university to the ELLS network, and three Lincoln University students were invited to take part. Following the selection process, my project, “Protecting productive land and allowing for urban growth: Can we have our carrots and eat them to?”, was selected to give a poster presentation under the subtheme “Solutions for an urban ecosystem”. The other subthemes covered: the future use of natural resources; green entrepreneurship; and, innovations in the food chain. Students from across the ELLS universities presented their research in either oral or poster presentation format. The numerous sessions on at different times meant that there were a range of different topics to listen to at any one time. As a planner I found the work of landscape architects to be particularly interesting, especially where they are considering the impacts of development on amenity. One particular presentation argued that large online stores, such as Amazon, should be required to invest in improving ‘nature’ around their large mega-warehouses to try to limit the impact on amenity. While I did not connect with any other planners, there was still a great deal of value in discussing with other students how they are proposing to manage some of the issues we are facing – particularly with losses

to open spaces occurring due to expanding urban centres and commercial activities.

My presentation at the conference required a 4-5 minute poster pitch, followed by another 5 minutes of questions from the audience. Coming from a system with the Resource Management Act 1991 (RMA), it proved to be quite a challenge to convey how the RMA hierarchy works in 30 seconds – particularly the relationship from National Policy Statements down to District Plans, but the presentation was received well. Future attendees should be aware that they may be asked very out of left field questions, and no amount of planning can prepare you for some of it.

Overall, the conference was really valuable and an interesting experience. It was interesting to see how the European universities carry out their Masters research, as well as the scope, scale, and funding behind these projects, which create some fascinating work. I could really see the value for Lincoln in being a part of this network of universities. It made me lament that I was at the end of my Masters rather than the start, as I would have loved to have done a semester abroad at one of the ELLS Universities. I would like to thank Lincoln University for their generous travel grant that allowed me to travel to Sweden and finish my Master of Planning on a very cold, but rather wonderful high!



Department of Environmental Management Staff Profiles

Compiled by Jocelyn HENDERSON

Master of Environmental Policy and Management Student, Lincoln University, Christchurch, New Zealand



STEVE URLICH

Steve Urlich teaches Environmental Management at Lincoln University. It's his second stint at Lincoln, having completed a Bachelor of Resource Studies (now a Bachelor of Environmental Management) and a PhD in Forest Ecology at Lincoln in the 1990s.

Since he was awarded his doctorate, Steve has had a varied career, working in regulatory, community-facing, and scientific and technical roles for different organisations including the Department of Conservation, Land Information New Zealand, Marlborough District Council, and the Foundation for Research, Science and Technology.

Steve credits his training at Lincoln for his interdisciplinary and holistic approach, which has enabled him to come up with innovative solutions like introducing elements of environmental history into management decisions. Providing historical context for decision-makers by, for example, looking back at the history of native forest in the Wellington region, or at historic ecosystem changes in the Marlborough Sounds, helps them understand how environmental issues have arisen. This approach also helps communities to recognise

and address the issue of shifting baselines in environmental management – where people's perceptions of the environment and what is "natural" or "degraded" is out of kilter with actual changes.

Currently, Steve has a few irons in the fire which he thinks may interest prospective Master's or PhD students. He is co-leading a Sustainable Seas project as part of the National Science Challenge, examining legislation, policy and practice in the marine environment to improve the state of the ocean.

When asked what he thinks about the planning profession today, Steve answered that planners are faced with a messy, dynamic and complex (but exciting) regulatory and social environment which poses a heap of demanding personal and professional challenges. These challenges include the proposed changes to the resource management system; reform of the biodiversity, fisheries, and freshwater management policy frameworks; urban development and highly productive soils; and a raft of national environmental standards. Cutting across all of these are the effects of climate change. Steve thinks that planners have an important role to play in helping communities pragmatically meet these challenges, saying that planners now have to be as resilient as the built and natural ecosystems that they manage. He says: "We have to be on top of our game as educators and researchers so, with a cooperative and humble approach, recognising that we are all in this together, we can help equip our planners to make the courageous, well-informed, and necessary policies and regulations."

Where are they now?

Compiled by Jaclyn PHILLOTT

Bachelor of Environmental Policy and Planning (Hons) Student, Lincoln University, Christchurch, New Zealand

In order to commemorate the 10th anniversary of the Lincoln Planning Review, in this issue we profile a selection of the editorial team members who were involved in the original volume of the journal in 2009. In addition to the seven profiles below, the following Lincoln students were also integral members of the team in the early days of the journal's production: Suzanne Blyth, Bailey Peryman, Mazy Wallen, and Abby Hamilton.



ADRIENNE LOMAX

Adrienne completed a Master of Environmental Policy at Lincoln University in 2010. After completing her Masters she worked for the Waihora Ellesmere Trust for almost seven years. In 2017 she took up a role with Environment Canterbury as Senior Strategy Advisor in the Strategic Policy team. In this varied role writing and peer reviewing are a core part of her day-to-day job. The skills she gained from working with the Lincoln Planning Review have been very useful throughout Adrienne's career. While working on the Lincoln Planning Review she thoroughly enjoyed getting to know other students and staff and learning useful skills – mainly cat-herding and refining her eye for detail!



ABBIE BULL

Abbie completed a Master of Environmental Policy at Lincoln University in 2011. She has been with the Ministry for the Environment for just over two years now, managing the marine policy team and RMA statutory functions. She finds it rewarding to be part of a Ministry that strives to have a positive impact on the environment. During her time at Lincoln she was interested in the Lincoln Planning Review because it drew tangible connections between real world people and issues. While working on the journal she gained useful experience in peer reviewing and editing which are essential skills in her current role. It also gave her a broader awareness of the different ways people and professionals are involved in the planning system.

NICK WILLIAMS

Nick completed a Bachelor of Environmental Management and Planning degree in 2009, majoring in Water Science and Technology. About four years ago he changed career and joined the electrical industry. Joining the Lincoln Planning Review allowed Nick to mix with a range of people and learn from them. He learnt a lot about teamwork and managing the various expectations and priorities of other group members. Nick enjoyed the design side of things and learning how to put together a professional publication, proof reading, as well as the opportunity to reach out to those actively working in the planning profession.



KELLY GOVERNOR (née Fisher)

Kelly completed a Bachelor of Environmental Management and Planning degree in 2009, followed by a Master of Resource Studies in 2013. She joined Te Rūnanga o Ngāi Tahu as an Environmental Advisor in 2015. In this role Kelly provides advice and management support to the head office and Papatipu Rūnanga on tribal properties returned to Ngāi Tahu as cultural redress under the Ngāi Tahu Claims Settlement Act 1998. Kelly is very grateful for the opportunity to work in this role. No two days are the same and she enjoys the challenges and variety of the job, including elements of land management, consultation, and planning. Kelly reflects fondly on her time with the Lincoln Planning Review. Participating in the development and editing of the journal allowed her to develop many skills that continue to help her in her current role. This includes improving her professional writing

skills, working to deadlines, peer review, editing and providing constructive feedback, networking with likeminded people, and staying abreast of current planning issues and initiatives.



SARAH EDWARDS

Sarah completed a Post Graduate Diploma in Resource Studies in 2008, a PhD in Environmental Management in 2014, and is now a Lecturer in the Department of Environmental Management. Sarah first got involved with the Lincoln Planning Review to connect with other students during her postgraduate studies. In the first few years the journal was more of a low-tech student-led initiative, but has slowly evolved into the online journal we know today. Although it takes more time to put together now than in the past, the standard of articles greatly contributes to the wider planning community and Sarah enjoys being part of the team.



HAMISH RENNIE

Hamish came to Lincoln University in 2007 as a Senior Lecturer in Planning in the Natural Resources Engineering Group (which subsequently became the Department of Environmental Management). He hoped to create a planning journal to bridge the gap between academia and the planning profession and provide students with experience in all aspects of journal production and publication. This became the LPR. Since then he has progressed to Associate Professor and now also Chair of the Faculty of Environment, Society and Design's Post Graduate Studies Committee. He continues to be actively involved in advising community groups on planning issues and lecturing on environmental planning and planning law, but after a stint researching rural resilience, has recently returned to his primary research interests as part of the Sustainable Seas National Science Challenge exploring ways to implement ecosystem based management for marine areas.



“A decade on” for the Waterways Centre for Freshwater Management

Jenny WEBSTER-BROWN

Adjunct Professor, Faculty of Environment, Society and Design, Lincoln University, Christchurch, New Zealand

The last decade has seen the birth and rise (and rise) of the Waterways Centre for Freshwater Management. The centre is a collaboration between Lincoln University and the University of Canterbury, to improve training and education in freshwater management, and to co-ordinate and focus university research on issues of critical importance for the freshwater systems of Aotearoa. I was appointed as the inaugural director in early 2010 and it has been my privilege to oversee the development of nine new “WATR” courses and three postgraduate qualifications in Water Resource Management.

In the context of escalating national concerns about the state and future of our freshwater systems, the centre has been able to bring the distinct strengths of both universities to bear on these problems, using the complementary teaching capabilities and facilities to support over 100 graduates with Postgraduate Diploma, Masters and PhD qualifications in Water Resource Management to date. The centre has also supported students enrolled in other qualifications, who have been able to incorporate freshwater management knowledge into their own degrees and/or research programmes. The annual Waterways Postgraduate Student Conference has provided a showcase for all such research. This has been held at Lincoln University for all but one of the conferences in the last decade, and has been increasingly well attended by an external audience, making up over 100 of the 160 conference registrants in 2019.

I retired as director in July 2019, and as I reflect on the previous decade I feel a sense of

great satisfaction with what we were able to achieve. It was, at times, challenging working across two universities and in the contentious freshwater space, but both universities have remained committed to the vision of the joint centre. The new director took up their position in January 2020, potentially heralding a new direction and a new era for the centre.



Awards, Prizes and Scholarships

Compiled by Giles BLACK¹ & Sarah EDWARDS²

¹Master of Planning Student, Lincoln University, Christchurch, New Zealand

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Each year Lincoln University students and staff gain merit-based recognition. A number of students also receive Summer Scholarships, usually externally funded, to work on research projects under staff supervision during the summer vacation period. We record these awards in the earliest edition of LPR after they have been announced.

STUDENT AWARDS

The John Hayward Memorial Prize 2018 – Craig Friedel; 2019 – Shera Pahn

The John Hayward Memorial Prize was created after the death of John Hayward in 1993. John Hayward was the founder of the Centre for Resource Management at Lincoln, as well as the Master of Science (Resource Management) degree, a precursor of the Master of Environmental Policy and Management degree. This award is given to the most outstanding Master of Environmental Policy and Management student who has completed the requirements for the degree, and is based mainly on their academic performance in core subjects. In 2018, the recipient was Craig Friedel, who is currently a Senior Planner and Associate of Harrison Grierson. In 2019 the recipient was Shera Pahn, who is currently working in the Philippines for Environmental Science for Social Change as Area Manager for its Forest, Farm and Leadership in the Margins unit.

The Thomson Reuters Prize in Resource Management 2018 – Hannah Staines

The Thomson Reuters Prize in Resource Management is awarded to the highest performing first year Master of Planning student, and is based on academic performance in core subjects. Thomson Reuters are a leading provider of information and solutions to the legal, tax, accounting and business markets in New Zealand. Through their online and hard copies of the Resource Management Act and other relevant pieces of legislation they allow students to gain information and keep up to date with changes in resource management and planning law. The recipient of the 2018 award was Hannah Staines, who is currently a Planning Adviser at Nelson City Council.

The Lincoln University Planning School Award 2019 – Max Lichtenstein

The Lincoln University Planning School Award is funded by the Canterbury/Westland Branch of the New Zealand Planning Institute. It is awarded each year to the student member of the NZPI with the highest grade point average across their Level 3 papers who has completed their third year of their Bachelor degree at Lincoln and is continuing their tertiary study in an NZPI accredited planning degree at Lincoln University. Within six months of receiving the award, the recipient shall demonstrate a contribution to the NZPI, the Canterbury Westland Branch, the Canterbury/Westland Emerging Planners or the planning profession generally. Max

Lichtenstein was the awardee in 2019 and is studying towards a Bachelors of Environmental Policy and Planning (with Honours) degree at Lincoln.

Young Farmers Stock Judging 2018 – Melissa McMullan

The National Stock Judging Award is given by the New Zealand Young Farmers through its Stock Judging Competition, and is based on the ability of stock assessment in judging deer velvet, Friesian calves, sheep and wool. It is awarded each year to the winner of the sheep section of the National Stock Judging Competition in Invercargill to develop interest and skills in stock judgement of young people and this generation of farmers. The recipient of the 2018 award was Melissa McMullan, who is currently a Resource Management Planner at Mackenzie District Council.

Best Masters Thesis in Geography Award 2019 – Ivor Heijnen

The Best Masters Thesis in Geography Award is given by the New Zealand Geographical Society (NZGS) through its President's Awards, and recognises the best contribution to geographic knowledge in a Master's thesis. In 2019, the recipient was Ivor Heijnen for his thesis entitled 'From Place-Responsive to Place-Constructive Outdoor Education: A Case Study of the Port Hills, Christchurch, New Zealand'. The award citation noted that Ivor's exceptional thesis makes significant contributions nationally and internationally within the field of geographies of education. His research advances the application of place concepts in outdoor education and he has developed and implemented novel methodologies. Ivor was supervised by Emma Stewart and Stephen Espiner as part of a Master of Social Science in the Department of Tourism, Sport and Society.

STAFF AWARDS

Research Collaboration in Geography Award 2019 - Dr Mike McKay & Professor Harvey Perkins

The Research Collaboration in Geography Award is given by the New Zealand Geographical Society (NZGS) through its President's Awards, and is given to New Zealand-based geographic researchers who have contributed through team research projects over a number of years. In 2019, the recipients were Dr Mike McKay and Professor Harvey Perkins. The award citation noted that their collaboration began 12 years ago when Mike was a Masterate student at Lincoln University and has continued to flourish. Inclusivity has been a defining feature of their highly productive working relationship, which has yielded many research opportunities and outputs. As co-Principal Investigators for the National Science Challenge 'Building Better Homes, Towns and Cities' they foster a collaborative, multi-disciplinary and multi-institutional research programme that is well-connected to stakeholders, communities and end-users.

SUMMER SCHOLARSHIPS 2018-2019

Ollie Rutland-Sims: Oral Histories of the Selwyn/Waikirikiri River
Supervisors: Dr Emma Stewart, Katie Nimmo, Dr Stephen Espiner
Funded by the Faculty of Environment, Society and Design

Max Lichtenstein: Recreational Pig Hunting significance, motivations and activity
Supervisor: Dr Geoff Kerr
Funded by the Faculty of Environment, Society and Design

Sunil Tamang: Economic valuation of ecosystem services from urban waterways.
Supervisors: Dr Geoff Kerr, Dr Ed Challies
Funded by the Waterways Centre for Freshwater Management

Sara Hodgson: Evaluating visitor engagement in National Parks: Developing tools for monitoring DOC's Interpretation Ranger initiative

Supervisors: Dr Stephen Espiner, Dr Emma Stewart

Funded by the Department of Conservation/
Faculty of Environment, Society and Design



Planning-relevant peer reviewed publications by Lincoln Staff 2018-2019

Compiled by Hamish G. RENNIE

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One of the goals of LPR is to bridge between academia and practise and as research is at the heart of academia, it makes sense to try to ensure that practitioners are as aware of our research as are our research colleagues. This compilation attempts to build part of that bridge but the list should also aid students and other researchers to readily access research undertaken by their colleagues.

It is always surprising to find how much has been published by our staff who teach planning or research on planning related subjects (e.g., landscape architecture). They are also not easy to find. The following publications have been identified by trawling manually through individual staff publications stored in the internal PBRF Elements software database. Only peer reviewed material has been included. There are probably at least double, perhaps triple that number in conference presentations, Op-Ed and Newsletter contributions that have been omitted. There are also bound to be articles that have yet to be lodged in the database. It was especially pleasing to see three of our MPlan students have turned their 40 credit dissertations into respectable publications (Hoang, How and Outram) alongside those of student completing research degrees (e.g., Kadibadiba) . While one expects landscape architecture to be strong at Lincoln, it was pleasing to note how many articles were dealing with energy or transport issues. While the nominal period covered is articles published in 2018-2019, as this list was compiled in mid January 2020 there were already a number of 2020 journals able to be

listed and they have been included to facilitate early access for our readers.

Abbott M. (2018) Placing design, and designing's place, in landscape architecture research *Landscape Review* 18(1):89-107

Abbott M. (2018) The sustaining beauty of productive landscapes *Journal of Landscape Architecture* 13(2):8-19

Abbott M, Blackburne K, Boyle C, Lee W, Pickett T. (2018) A new wild: Reimagining the potential of indigenous biodiversity in Aotearoa, New Zealand *Design Ecologies* 7(1):72-93

Abbott M, Bowring J. (2019) The DesignLab approach to teaching landscape Chapter 24 In *The Routledge Handbook of Teaching Landscape*. Jorgensen, K., Karadeniz, N., Mertens, E., Stiles, R.. (eds.) London: Routledge

Abbott M, Boyle C. (2019) Ecological homelands: Towards a counter-ontology of landscape design *Landscape Research* DOI: 10.1080/01426397.2019.1611750

Abbott M, Boyle C, Blackburne K, Lee W. New Zealand's "arc of influence": the "clean, blue, green" country *Journal of Cultural Geography* 35(3):388-412

Abbott M, Boyle C, Lee W, Xuejing L. (2019) Interweaving protected areas and productive landscapes in Aotearoa New Zealand: Using design to explore multifunctionality in the Mackenzie Basin *Journal of Landscape Architecture* 14(2):6-19 04

- Abbott M, Roncken P, Lee W, Pickett T.(2018) Conjectural 'landscape cities' and the gap of imagination *Landscape Review* 18(1):108-117
- Aleksandrova KI, McWilliam WJ, Wesener A. (2019) Status and future directions for residential street infrastructure retrofit research *Urban Science* 3(2):49
- Bowring J. Navigating the global, the regional and the local: researching globalisation and landscape In *The Routledge Companion to Landscape Studies*. Howard, P., Thompson, I., Waterton, E., Atha, M. (eds.). Routledge. Pp. 229-310.
- Bowring J. Survivor trees: Spectrality and stickiness *Fabrications* 29(1):21-36.
- Bowring J, Vance N, Abbott MR. Architecture and design: Between Seascape and Landscape: experiencing the liminal zone of the coast In *Living with the Sea Knowledge, Awareness and Action*. Brown, M., Peters, K.. (eds.).Routledge. Pp. 15-35
- Brower AL, Heijs L, Kimani R, Ross J, Doscher C. Compliance with biodiversity compensation on New Zealand's public conservation lands *New Zealand Journal of Ecology* 42(1):11-17
- Burningham K, Venn S, Hayward B, Nissen S, Aoyagi M, Hasan MM, Jackson T, Jha V, Mattar H, Schudel I, Yoshida A (2020) Ethics in context: Essential flexibility in an international photo-elicitation project with children and young people *International Journal of Social Research Methodology* 23(1): 7-22.
- Cameron T, Moore K, Montgomery RL, Stewart EJ.(2018) Creative ventures and the personalities that activate them in a post-disaster setting *Creativity and Innovation Management* 27(3):335-347.
- Cameron T, Montgomery R, Moore K, Stewart E.(2018) Swimming with ideas: What happens to creativity in the wake of a disaster and the waves of pro-social recovery behaviour that follow? *Creativity Studies* 11(1):10-23
- Cretney R, Nissen S. (2019, November) Climate politics ten years from Copenhagen: Activism, emergencies and possibilities *Women Talking Politics* 15-19
- Denne, T.; Kerr, Geoffrey; Glover, D.; Winder, M.; Wright, L. (2018) A pilot study to determine the relative value of non-market transport impacts of investment NZTA Research Report No. 648 Wellington: NZTA. P.121.
- Dupuis A, Vallance S, Thorns D.(2018) On Shaky Ground: Homes as socio-legal spaces in a post-earthquake environment In *Law and the Precarious Home Socio Legal Perspectives on the Home in Insecure Times*. Carr, Helen, Edgeworth, Brendan, Hunter, Caroline (eds.). London: Bloomsbury Publishing. Pp. 245-268.
- Fox-Kämper R, Wesener A, Munderlein D, Sondermann M, McWilliam WJ, Kirk N. (2018) Urban community gardens: An evaluation of governance approaches and related enablers and barriers at different development stages *Landscape and Urban Planning* 170:59-68
- Frater J, Vallance S, Young J, Moreham R. (in press, online 2019) Disaster and unplanned disruption: Personal travel planning and workplace relocation in Christchurch, New Zealand Case Studies on Transport Policy in press: Pp. 1-8..
- Guerello A, Page S, Holburn G, Balzarova M.(2020) Energy for off-grid homes: Reducing costs through joint hybrid system and energy efficiency optimization *Energy and Buildings* 207: 109478 :Pp.1-11.
- He Y, Bowring J. (2018) Five site visits over four centuries: Imagining pasts and futures for Yuanming Yuan Garden (圆明园), Beijing, *China Studies in the History of Gardens and Designed Landscapes* 38(4):330-341
- Hoang H, Kerr G, Roberts L (2019). Determinants of bioethanol fuel purchasing behaviour in Vietnam *Interdisciplinary Environmental Review* 20(1):47-72

- How SM, Kerr GN. (2019) Earthquake impacts on immigrant participation in the Greater Christchurch construction labor market Population Research and Policy Review 38(2):241-269
- Kadibadiba AT, Roberts L, Duncan R.(2018) Living in a city without water: A social practice theory analysis of resource disruption in Gaborone, Botswana Global Environmental Change 53:273-285
- Kench PS, Ryan EJ, Owen S, Bell R, Lawrence J, Glavovic B, Blackett P, Becker J, Schneider P, Allis M, Dickson M, Rennie HG. (2018) Co-creating resilience solutions to coastal hazards through an interdisciplinary research project in New Zealand Journal of Coastal Research.85(S1): 1496-1500.
- Kerr GN. (2019) Efficiency of a recreational deer hunting bag limit European Journal of Wildlife Research 65:15
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- Krabberger, Steffan, Swaffield S, McWilliam W.(2018) Christchurch's peri-urban wildfire management strategy: How does it measure up with international best practice? Australasian Journal of Disaster and Trauma Studies 22:63-73
- Matunga HP. (2018) A discourse on the nature of indigenous architecture In The Handbook of Contemporary Indigenous Architecture. Grant, E., Greenop, K., Refiti, A. L., Glenn, D. J.. (eds.) Singapore, Springer. Pp. 303-330.
- Marsh L, Doscher C, Cameron C, Robertson LA, Petrović-van der Deen FS. (2020) How would the tobacco retail landscape change if tobacco was only sold through liquor stores, petrol stations or pharmacies? Australian and New Zealand Journal of Public Health. <https://doi.org/10.1111/1753-6405.12957>
- Mamboleo AA, Doscher C, Paterson A. (2019) Analysing the geospatial patterns of hidden impacts from human-elephant interactions in the Bunda District, Tanzania Journal of Environmental Informatics Letters 2(1):40-47
- McWilliam W, Gregorini P. (2018) Brief Communication: Re-designing New Zealand's productivist livestock production systems: Current strategies and next steps New Zealand Journal of Animal Science and Production 78: 132-136
- Montgomery R. (2018) The Port Hills fire and the rhetoric of lessons learned Australasian Journal of Disaster and Trauma Studies 22:85-95
- Nissen S. An intergenerational view In A Careful Revolution: Towards a Low-Emissions Future.: Hall, David. (Editor) Wellington, Bridget Williams Books, Pp.55-79.
- Nissen S. (2018) Student Debt and Political Participation . Switzerland, Palgrave Macmillan. 105 pages
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- Nissen S, Hayward B, McManus R. (2020) Student debt and wellbeing: A research agenda Kōtuitui: New Zealand Journal of Social Sciences 14(2): 246-256.
- Owen S, Lawrence J, Ryan E, Kench P, Bell R, Rennie H, Blackett P, Schneider P (2019, June). Anticipating staged managed retreat at the coastal margins Planning Quarterly Issue 209: 8-11
- Rennie H. (2018, December) The seduction of fast track Recovery legislation - the Mangamaunu surf break saga Planning Quarterly Issue 211: 21-26
- Rennie H, Outram A. (2018, May) Section 33 Transfers - Implications for Co-management and Kaitiakitanga In Environmental Handbook. 22-37. Thomson Reuters (Chapter)
- Rennie H, Simmons D, Fountain J, Langer ER, Grant A, Cradock-Henry N, Wilson, T.(2018) Post-quake planning – tourism and surfing in Kaikōura In Shaky shores – Coastal impacts & responses to the 2016 Kaikōura earthquakes. Hendtlass, C.,

- Borrero, J., Neale, D., Shand, T.. (eds.) Special Publication 3. New Zealand Coastal Society, Wellington. Pp. 37-38.
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- Sword-Daniels V, Eriksen C, Hudson-Doyle EE, Alaniz R, Adler C, Schenk T, Vallance SA. (2018) Embodied uncertainty: living with complexity and natural hazards *Journal of Risk Research* 21(3):290-307
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- Ulrich S, Thrush S, Hewitt J, Jorgensen E. (2018, April) What it means to "maintain" biodiversity in our coastal marine environment *Resource Management Journal* 25-30.
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