Towards a Kaupapa Māori Ako Knowledge Transfer System

Kāinga Tahi, Kāinga Rua
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INTRODUCTION

Researchers are increasingly asked how they might enhance the impact and uptake of their work so that stakeholders, end-users and communities can benefit from research-based insights and expertise (Zelizer 2011; Larner, 2015). National and international literature on this topic suggests that embedding explicit Knowledge Transfer practices and principles within the research design can aid the uptake and application of research findings (Clark & Yukon, 2008; Hughes & Kitson, 2012). Rangahau Māori practices are built on knowledge transfer concepts such as whakapapa, pūrākau, wānanga, hīkoi, ako, tuakana/teina relationships, whakataukī, kōrero tawhito and waiata. These experiential practices and conceptual frameworks are complemented by technological knowledge transfer systems such as the Digital Māori Forum and the TPK-funded Ka Hao initiative. The Kaupapa Māori Knowledge Transfer System proposed in this paper is thus more than a communication strategy: it is also a methodological tool that supports co-created research cultures at the planning and design stages of a project, through to the implementation and dissemination of findings. Such a knowledge transfer system constructs feedback loops, co-creation environments and "checking back" practices that help build and bind communities of interest who can make important contributions to the kinds of environments needed to create healthy – and Māori – built environments. As such, the Vision Mātauranga dimension of the BBHTC National Science Challenge (Kāinga Tahi, Kāinga Rua) offers a unique opportunity to develop a kaupapa-based Knowledge Transfer System that supports Māori and non-Māori aspirations for long-term, affordable, healthy homes, towns and cities. Kāinga Tahi, Kāinga Rua commissioned this paper to support the co-creation of a Kaupapa Māori research agenda. The paper draws on relevant literature in the field, existing Kaupapa Māori research practices as well as kōrero shared at a Māori Housing Think Tank hui held on

24 January 2018.[1] The paper outlines a kaupapa Māori knowledge transfer system specific to the aim of the BBHTC Challenge to "build environments that build communities" that can be implemented in the Kāinga Tahi, Kāinga Rua research programme.

The challenges facing Kāinga Māori (Māori Housing) require a whole of landscape (ki uta ki tai) systems approach that takes into account the wider environment including the cultural, economic, social, political, geographical and technological issues that shape our housing ecology. Such an approach needs to be grounded in the ontological and epistemological realities of te ao Māori. Accordingly, this paper is informed by, and contributes to, the theoretical discourses of kaupapa Māori (Bishop, 1999; Cram, 2001; G.H. Smith, 1993; L.T. Smith, 2000; Hutchings & Lee, 2016) and Environmental Communication Studies (Hansen & Cox, 2015; Cox & Pezzullo, 2016; Wilkins, Tufte & Obregon, 2014). Kaupapa Māori methods affirm the science and knowledge systems of diverse Māori whānau, hapū and iwi. Environmental Communication Studies examines the words, metaphors, visuals, frames and narratives that are deployed to share understandings of environmental and social justice issues. This paper combines these fields to offer an interdisciplinary and interdiscursive[2] Knowledge Transfer System to help foster, support and then communicate Kāinga Tahi, Kāinga Rua research findings in ways that encourage uptake and action. In particular, the paper considers how a kaupapa-informed Knowledge Transfer System (KTS) could be an important method of approach to help strengthen research connections within the Challenge (between both mana whenua and manuhiri), help foster co-created and collaborative research approaches, as well as offer multi-tiered and multi-targeted research messages that encourage, stimulate and *communicate* fresh thinking and new perspectives on the shared problem of achieving better housing, towns and communities. Extending the notion of pūrākau to include the stories we tell about a research process, as well as developing an Ako-based teaching/learning nexus, this paper argues for the value of developing an explicit KTS that helps build communities of interest who might take up, and adapt through actions, Kāinga Tahi, Kāinga Rua research findings. The following discussion develops a multi-tiered Kaupapa Māori Knowledge Transfer System (KMKTS) that can:

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[1] This hui included small group discussion on Knowledge Transfer Systems including Desna Whaanga-Schollum, Lee Cooper, Tāmati Patuwai, James Hudson, Rebecca Kiddle and Jo Smith. This paper incorporates follow-up feedback from these participants.

[2] "Māori Housing" is a term informed by a range of discourses, which draw on economic, health, technological, political and cultural norms. An interdiscursive approach to "Māori Housing" examines the differences and coherences across these discursive formations, to shine light on, and disrupt, prevailing norms.

• strengthen connections between Māori researchers across the BBHTC Challenge

• foster mātauranga Māori engagement with BBHTC research findings in general

• inform and engage the full range of actors and decision makers across the building sector in meaningful and relevant ways

• heighten public awareness of Māori understandings of built environments, home-making and community relationships

• offer disruptive and paradigm-shifting key messages to inspire innovative housing solutions.

CONNECTIONS ACROSS KAUPAPA MĀORI THEORY AND ENVIRONMENTAL COMMUNICATIONS LITERATURE

Tāne Whakapiripiri is the kaupapa Māori strategy informing the BBHTC Challenge, and extends the Braided Rivers model of research to foster "purposive collaboration" (www.buildingbetter.nz) and findings that are "inclusive" and "intersecting with everyday culture and lived realities" (Henry, 2017). Today, there is no more powerful agent of the everyday than mediated forms of communication such as news media, social media, cinema, print, online media and advertising, media that help to shape and express "lived realities". Environmental Communications literature is relevant to the Building Challenge in two specific ways: Māori worldviews assume an indivisible relationship between Te Tai Ao, atua and peoples, making specific housing issues part of this larger web of connections. Environmental Communications literature stresses the importance of "knowing one's audience, telling local stories and building relationships with target audiences" (Brown Jarreau, Altinay & Reynolds, 2017), an attentive place-based approach to communicating that chimes with Māori ways of knowing and doing. A Braided Rivers approach to a Kaupapa Māori Knowledge Transfer system would consider how "the NZ housing problem" has been communicated through mediated public forums, and how this problem is framed by BBHTC researchers. Preliminary findings from a manuhiri BBHTC Challenge research team suggest that New Zealand politicians publically frame the "housing problem" in market terms such as supply and affordability (Nandedkar & White, 2017). The focus on political rhetoric (conveyed through mediated public forums) is an important one but begs a larger question: how can BBHTC Challenge research work disrupt these prevailing stories with research-informed messages from a range of perspectives that foreground the principles and

standpoints of mana whenua and mataawaka? How might a KMKTS use communication techniques and braided (interdiscursive) research practices to help shift debates within the Challenge research community and in more public domains? Existing best practice methods in the field of kaupapa Māori research offer insights into how a KMKTS might function.

ELEMENTS OF A KAUPAPA MĀORI KNOWLEDGE TRANSFER SYSTEM (KMKTS)

Pūrākau, ako and whakamarama are three specific kaupapa Māori concepts that share a commitment to developing dialogical, mutually informing, and ethically open-minded ways of communicating. This paper recommends that these overarching principles form the basis of a KMKTS.

Pūrākau

In her article "Decolonising Māori Narratives: Pūrākau as a Method" Jenny Lee draws on a term usually used to refer to Māori myths and legends to develop a narrative inquiry approach particular to education (Lee, 2009, 1). Arguing that pūrākau "contains philosophical thought, epistemological constructs, cultural codes, and worldviews that are fundamental to our identity as Māori", Lee seeks to disrupt the prevailing norm in education sectors for "evidence-based research" based on "large, randomized controlled trials" (8). Highlighting the importance of experiential and qualitative narrative-inquiry education research methods, Lee states:

> Selecting the topic of Māori teachers' stories as a topic and pūrākau as methodology was a deliberate act in a research climate that is inclined to overlook the wisdom and experience of teachers, in particular, Māori teachers. Pūrākau also offers an opportunity to investigate ako in relation to Māori teachers' pedagogy – cultural qualities that are often made peripheral in a system that is focused on 'outcomes'. (8)

As a decolonizing methodology pūrākau seeks to "create knowledge outside the production and control of powerful elites" (8) to affirm Māori ways of understanding and acting in the world. In the introduction to the pūrākau-informed anthology, *Decolonising Aotearoa: Education, Research and Practice,* Hutchings and Lee-Morgan note that there is no set pūrākau formula as each story is highly contextual, and dependent upon the topic at hand,

the purpose of the communication and the dialogic relationship between storyteller and audience (2016, 6). They write:

> An inherent part of pūrākau is its pedagogical potential. Pūrākau as a cultural imperative guides us to share our 'stories' in ways that engage with the audience, provoke a self-directed process of meaning making, raise questions and provide answers, or quench the thirst to learn more. (2016, 5)

Pūrākau within a KMKTS could help foreground the value of a co-created research story between diverse BBHTC researchers and imagined audiences of that research drawn from deep knowledge systems that are contextually sensitive to both audience and storyteller. Relational, sometimes oblique, embodied and experiential, pūrākau, as a method of research, could be part of building a community of shared interest around the wellbeing issues integral to developing better housing, towns and communities for Māori. Pūrākau emerges from the education sector, and its focus on interactive knowledge co-creation connects to the second key thematic in the proposed KMKTS, that of Ako itself.

Ako

Ako refers to Māori pedagogical practices and is a term that shapes the current education sector in the institutional form of the National Centre for Tertiary Teaching Excellence academy Ako Aotearoa. As Pihama, Smith, Taki and Lee describe it, "ako was integral in the creation, transmission, conceptualization, and articulation of Māori knowledge" (2004, 28). Founded on the notion of a reciprocal relationship between teacher and student (Pere, 1994), and as a form of "education as exposure" (Metge, 1986, 3), ako is a Māori term for "teach" as well as "learn" (Smith, 1987). How might we enact this mutually informing relationship in a KMKTS?

Ako is a form of knowledge transmission attentive to the context and background of both teacher and learner, offering the possibility of building deeper shared understandings across the different contexts they occupy. Within the context of a KMKTS relevant to Kāinga Tahi, Kāinga Rua, this dialogical and interactive model of knowledge transmission could enable the fostering of co-constructed learning pathways, providing the basis for BBTHC researcher relationships within the Challenge and in relation to the more public transmission of

research "findings". Indeed, the principle of ako asks us to remain attentive to how research "findings" land, or, how they "find" their targets of intervention. The question of intervention leads us to the third kaupapa underpinning a KMKTS, that of whakamaramatanga, a term that describes the process of insight, understanding, or revelation.

Whakamaramatanga

As Ella Henry notes in her survey of the Vision Mātauranga dimensions of the BBHTC Challenge, the network of Māori design professionals, Ngā Aho, became "the repository of the knowledge which was transformed into a set of Māori design principles" (n.p., Henry, 2017). [1] 2006 saw the emergence of *Te Aranga Cultural Landscape Strategy*, which was then distilled into *Te Aranga Māori Design Principles* in 2014 and is now currently known as the Te Aranga Principles. [2] A KMKTS developed for the BBHTC Challenge would hope to draw on the design and communication expertise of Ngā Aho, as well as underpinning Te Aranga principles. To operationalize these principles, inspiration could be drawn from one of the key terms noted on the Ngā Aho website, that of "whakamarama", a term referring to understanding or insight and to which Ngā Aho connect the phrase "a new cultural environment which requires a critical stance" (http://www.ngaaho.maori.nz/index.php?m=2). As such, the third component of a KMKTS would be to highlight the capacity for shifts in perspectives – changes in hearts and minds - and the generation of new insights and fresh initiatives. Such a knowledge transfer system should foster self-reflexive critical practices and develop new paradigms to understand, imagine and *action* the provocation of "building environments that build communities".

If these three kaupapa offer conceptual underpinnings for a KMKTS, existing rangahau Māori research projects offer grounded insights into how such kaupapa can be operationalized. Four existing projects briefly described below, offer ways forward for thinking about a BBHTC Challenge-related KMKTS.

Useful Exemplars of existing KMKTS's relevant to BBHTC

While not explicitly drawing on the three distinct kaupapa identified above, nor explicitly framing themselves as knowledge transfer systems, the following rangahau Māori projects

demonstrate the Woven Universe that makes up Māori forms of knowledge and practice (Marsden, 2003). The aim of this section of the paper is to foreground the potential inspirations and innovations that can arise, for all New Zealanders, when Māori practices and philosophies are the grounding norms.

a) Kaupapa Māori Methods: Sharing Our Experiences. Cherryl Smith, 2007.

This research project explored the significance of traditional walkways in the rohe of Ngāti Apa in order to strengthen mana whenua knowledge and connection to the whenua, as well as to wider environmental issues. According to Smith, "Knowledge transfer was one of our key aims so the results of the hui and the uptake of the knowledge at those hui were key" (2007, np).   In addition to hui and wānanga with mana whenua, local authority representatives, archaeologists and tourist operators, the transmission of knowledge also included the training of two local researchers, as well as the collation and sharing of local stories, photographs, maps and archival records from various hapū and whanau members. As Smith notes, the value of existing on-the-ground community-based knowledge cannot be underestimated:

> Treaty Claims are also affecting most hapū and iwi throughout the country. New research is being undertaken which in some areas is providing valuable mana whenua research. Many whanau are doing their own whanau research, tracking whakapapa, putting together photos, gathering old documents, maps and photos, running wānanga, etc. Within many rohe very little of that research has given an overview of the state of the environment and health impacts for tangata whenua. (2007, np)

Walking the land, sharing stories, time and space to underscore the significance of traditional walkways, is an experiential mode of research enquiry that affirms existing and emerging knowledge.

b) Te Reo o Te Repo, the Voice of the Wetlands: Connections, Understandings and Learnings from the Restoration of Our Wetlands, 2017.

The first handbook of its kind to give voice to the cultural significance of wetlands, this project was the result of a research partnership between the Waikato Raupatu River Trust and Manaaki Whenua-Landcare Research. The book weaves together diverse knowledge

forms to help facilitate the renewal and flourishing of whānau, marae and hapū connections to repo. The handbook includes articles written by kairangahau Māori and environmental managers as well as researchers working with hapū and whānau members. Conceived as a living document, the handbook provides a web-based resource where the faces of whānau and landscapes are privileged through the design layout and generous use of photographic materials that visually document the research process.

c) "Imagining Decolonised Cities" Urban Design Competition, 2017.

This UNESCO-funded collaboration between Ngāti Toa and Victoria University of Wellington aims to develop new mātauranga about how to cultivate urban environments that sustain Māori wellbeing. To generate future-focused public input on this research question, the project team staged a competition to encourage people to reimagine two sites in the city of Porirua (the harbour front and whānau land) in light of the key term "decolonize"(http://www.idcities.co.nz/). Briefing notes on the historical, environmental and cultural significance of each site were provided to competitors. The entries gathered (43 in total) will contribute to the research data set of the project team in order to advance thinking on the topic.

d) Huhana Smith's Contribution to MTM: Manaaki Taha Moana Horowhenua Case Study (2010-2015) and the Vision Mātauranga programme of the Deep South National Science Challenge.

Artist and academic head of the Massey University School of Art, Huhana Smith works across the diverse discourses of mātauranga Māori, contemporary art, design and science research. Smith contributes to the MTM coastal ecosystems project (www.mtm.ac.nz) as research leader Māori for the Horowhenua case study. Her role includes devising an interdisciplinary exhibition on water, combining the skill sets of artists, designers, academics and water scientists. The project combines mātauranga Māori with expertise in hydrology, technology, ecological economics and landscape architecture design to offer tools and methods for achieving the project's aims. The MTM research programme also shares its findings through the use of online mapping techniques, 3D depictions and simulation modeling, in partnership with Waka Digital Branding and IT Solutions Company. Smith's role in the Vision

Mātauranga aspect of the Deep South Challenge, works to enhance understandings of the likely impacts of climate change. Smith describes her approach in the following way:

> I am trying to harness the creative potential of Māori contemporary visual art, mātauranga Māori and contemporary landscape architecture/design and climate change science, where all approaches coalesce to explain the complexities of what we are dealing with and how we can envisage, action-based solutions. (https://creative.massey.ac.nz/about/news/2016/september/massey-women-of-influence-dr-huhana-smith/).

All four rangahau Māori projects offer tools, methods and conceptual framings that could inform a KMKTS. These include: hui and wānanga, training of Māori researchers, collaborations between researchers and community members, the collation, discussion and sharing of photographs, maps, visual modeling, the use of competitions to "crowd-source" public imaginings of social change, art exhibitions and handbook-approaches where the research process is made visible and helps model the iterative nature of knowledge transmission. This paper recommends deploying these tactics within and across the BBHTC research communities, as well as in relation to communities, decision makers and the public, more generally.

PRACTICAL STEPS TOWARDS A KMKTS

A recent Māori Housing Think Tank Hui offered a crucial foundation for developing co-designed research that can support the Challenge's aim to "build better". While three key whenu framed discussions (hauora, papakāianga and economics) a fourth issue emerged around how research can be produced and distributed in ways that have impact. Initially framed as a question of Knowledge Transfer, small group discussions on this topic came to the following conclusions:

• to ensure research remains co-created and connected, we need to address the wairua dimensions within each whenu and also between each whenu and use research and other techniques that can inspire actionable ideas. In the face of intensely ephemeral media environments, we also need communication techniques that capture our hearts and minds and spark our imaginations, lifting spirits (mauri oho) to turn thoughts into action.

• experiential learning is key to engaging wairua, tinana and hinengaro. Existing good research and other practices include: wānanga, hīkoi, pūrākau, storytelling, artistic and cultural programming, exhibitions and competitions, social labs, board games and visual storytelling techniques.

• accessible research findings will ensure interest and could be tailored to different audiences and decision-makers to improve uptake. Such a system of knowledge production and distribution can further develop pathways for mātauranga Māori and new knowledge to inform government policy and decision-making.

• Ako emerged as a better term for describing a Knowledge Transfer System as it emphasizes a reciprocal relationship of knowledge sharing, production and advancement. Ensuring that all research themes have a deliberative and co-created research design (including explicit educational components, and reflexive feedback mechanisms) would enhance the dissemination, impact and uptake of research findings.

• If the BBHTC is to explore wairua, Māori research efforts may benefit from input beyond the Māori research community, for example, by tohunga and other healers within our Māori communities.

RECOMMENDATIONS

While the Challenge has identified the three main whenu of hauora, papakāinga and economics, the concepts of wairua and ako could work *across* these whenu to form a whāriki which grounds new and unforeseen connections. Such a research design might foster fresh thinking about Māori Housing in ways that might lead to new actions, strategies and policies. In light of Think Tank discussions, pūrākau remains a crucial research technique and whakamaramatanga (insight, illumination, revelation) remains the utopic horizon of any Kāinga Tahi, Kāinga Rua research programme.

AIMS OF A KMKTS

To develop experiential research practices, which creatively explore Māori Housing dynamics and challenges and provides a space for Māori Challenge researchers to learn from one another and contribute to the mātauranga Māori continuum.

OBJECTIVES

1. To collate and showcase diverse Māori perceptions on the topic of Māori Housing and Kāinga Māori.
2. To stimulate fresh ideas and new connections that could lead to a larger research project and inform strategy and policy.
3. To foster and extend research impact and to influence decision-making processes.
4. To explore experiential, wairua-based approaches to elicit insights and knowledge relevant to informing BBHTC NSC strategy, policy and planning.

POTENTIAL OUTCOMES

1. A co-edited anthology on Kāinga Māori that draws together and visually showcases the key findings of the three whenu and the two ahu of Ako and Wairua.
2. An educational package (including worksheets, infographics and activities) that can communicate key issues and potential solutions for diverse audiences and realities (including age, gender, ahikaa, mataawaka etc.).
3. A five part podcast series that shines light on historical and contemporary housing issues, challenges and opportunities with viewpoints from a range of ages and perspectives (Part 1: Kāinga Māori or Māori Housing? Part 2: Fostering Hauora. Part 3: Pāpakainga versus "Lost Souls". Part 4: Economic Aspects. Part 5: Tino Rangatiratanga).
4. An online forum to showcase evolving activities and to host outputs, curated by a social media manager.
5. A selection of wānanga that showcase wairua-based, experiential approaches to knowledge creation and transfer. The outputs might include written and video capturing of participant insights on the wānanga *process* and *content* as it relates to and informs Māori housing.

CONCLUSIONS

The kaupapa of "building environments that build communities" frames the problem of "New Zealand housing" in an expansive and generative manner. The SRAs identified in the Challenge assume that we need diverse fields of expertise and specialist research foci to address this complex social issue. The threading through of rangahau Māori across these SRAs enacts the Tāne Whakapiripiri vision developed by Māori for this Challenge. A KMKTS could support the transfer and development of rangahau Māori findings and frameworks of analysis across the BBHTC Challenge. Such a KMKTS could also enhance engagements with the diverse publics and building environment decision makers identified by manuhiri BBHTC researchers (BBHTC, 2016). Māori-led research on building better homes, towns and communities has the potential to not only help solve current housing challenges for Māori, such research can also have benefits for non-Māori in its future-focused and whole of landscape approach.

BIBLIOGRAPHY

BBHTC. (2016). *SRA development: Making the architecture of decisions work for better homes, towns and cities – SRA 1*. Report for Building Better Homes, Towns and Cities SRA – The Architecture of Decision-Making, June 2017. Wellington: Author.

Bishop, R. (1999). Kaupapa Māori Research: an Indigenous Approach to Creating Knowledge. In N. Robertson (Ed.). *Māori and Psychology: Research and Practice* (pp. 1-6)*.* Hamilton: University of Waikato.

Brown Jarreau, P., Altinat, Z., and Reynolds, A. (2017). Best Practices in Environmental Communication: a case study of Louisiana's Coastal Crisis. *Environmental Communication* 11 (2): 143-165.

Cram, F. (2001). Rangahau Māori: Tona Tika, Tona Pono – the Validity and Integrity of Māori Research. In M. Tolich (Ed.). *Research ethics in Aotearoa New Zealand* (pp. 35-52). Auckland: Reed Publishing Ltd.

Clark, G., & Yukon, W. (2008). Promising Practices in Knowledge Translation for Research Users. Yukon: Arctic Health Research Network.

Cox, R., and Pezzullo, P.C. (2015). *Environmental Communication and the Public Sphere.* Sage Publications.

Hansen, A., and Cox, R. (2015). *The Routledge Handbook of Environment and Communication.* London: Routledge.

Henry, E. (2017). Rangahau Māori (Māori Research): An Indigenous Perspective. International Social Innovation Research Conference, Swinburne University, Melbourne, December 12 – 14.

Hutchings J. and Lee-Morgan. J., (2016). *Decolonising Aotearoa: Education, Research and Practice.* NZCER, Wellington.

Hughes, A., and Kitson, M. (2012). Pathways to Impact and the Strategic Role of Universities. *Cambridge Journal of Economics*. 36: 712-750.

Larner, W. (2015). Globalising Knowledge Networks: Universities, Diaspora Strategies, and Academic Intermediaries. *Geoforum*. 59: 197-205.

Lee, J. (2009). Decolonising Māori Narratives: Pūrākau as a Method. *MAI Review.* 2: 1-12.

Marsden, M. (2003). *The Woven Universe: selected writings of Rev. Māori Marsden*. Te Ahukaramū Charles Royal (Ed.), Otaki, N.Z: Estate of Rev. Māori Marsden.

Metge, J. (1986). In and Out of Touch: Whakamaa in Cross Cultural Context. Victoria University Press, Wellington.

Nandedkar, G. & I. White. (2017). Decoding Housing Messages. http://www.buildingbetter.nz/publications/Build-163-52-Feature-National-Science-Challenges-Decoding-Housing-Messages.pdf

Pihama, L., Smith, K., Taki, M., Lee, J. (2004). *A Literature Review of Kaupapa Māori and Māori Education Pedagogy*. A report prepared for ITP New Zealand by IRI: The International Research Institute for Māori and Indigenous Education, November.

Pere, R.R. (1994). Ako: Concepts and Learning in the Māori Tradition. Te Kohanga Reo National Trust Board, Wellington.

Smith, C. (2007). Kaupapa Māori Methods: Sharing Our Experiences. Ngā Pae o te Māramatanga, October.

Smith, G. H. (1987). Akonga Māori: Preferred Māori Teaching and Learning Methodologies. Auckland, Unpublished Discussion Paper.

Smith, G. H. (1993). Kaupapa Māori: Educational Resistance and Intervention in Aotearoa (New Zealand). In G. Smith. *Higher Education for Indigenous Peoples.* (Appendix IV, pp. 1-25) Auckland: Research Unit for Māori Education, University of Auckland.

Smith, L.T. (2000). Kaupapa Māori. In M. Battiste (Ed.). *Reclaiming Indigenous Voice and Vision* (pp. 225-247). Canada: UBC Press.

Smith, H., Allan, P., & Bryant, M. (2018). 'Mātauranga Māori, Art and Design for addressing climate change impacts in farming practices'. *The Plan Journal*.

Taura, Y., van Schravendijk-Goodman, C., and Clarkson. B. (Eds.). (2017). *Te Reo o Te Repo – the Voice of the Wetland: Connections, Understandings and Learnings for the Restoration of Our Wetlands.* Hamilton, N.Z.: Manaaki Whenua-Landcare Research and Waikato Raupatu River.

Te Aranga Māori Cultural Landscape Strategy. Briefing Paper, Ngā Aho. http://www.tearanga.maori.nz/cms/resources/TeArangaStrategy28Apr08_lr.pdf.

Tufte, T. (2017). *Communication and Social Change: A Citizen Perspective*. Wiley.

Wilkins, K.G., Tufte, T., and Obregon, R. (2014). *The Handbook of Development Communication and Social Change*. John Wiley & Sons.

Zelizer, B. Ed. (2011). *Making the University Matter*. Routledge: London and New York.

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[1] See http://www.ngaaho.maori.nz.
[2] See http://www.tearanga.maori.nz/cms/resources/TeArangaStrategy28Apr08_lr.pdf.