

Number Eight Fencing Wire: New Zealand, Cultural Innovation and the Global Silicon Network

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Abstract

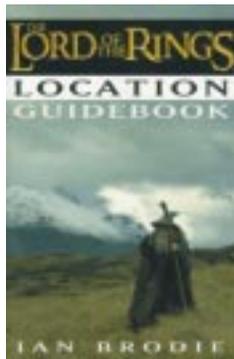
Silicon places, such as California’s Silicon Valley, Bangalore, Dublin, Taipei and Nordic Europe, form a network of culturally, socially and economically intertwined technoscapes. Some regions, such as Silicon Valley, have been participating in a high-tech sector for decades. Others, such as the emerging silicon concentrations in Christchurch, New Zealand, are relative newcomers. New Zealand struggles with inventing strategies for participating in the global high-technology sector to generate wealth, and yet not compromise other aspects of its civic culture and identity. Its nascent silicon identity is based on several assets, including a cultural tradition of “inventive-ness,” a solid base of tertiary education, big science spin-offs from Antarctic research and active networks supported by informal and formal partnerships. At the same time, political economy, interethnic and intercultural tensions, a small population and geographic isolation are constraints that will shape the future of New Zealand’s global participation.

This poster is based on ethnographic observations and interviews with various individuals in the New Zealand government, education and industry sectors in July 2002. These observations and interviews are placed within a comparative framework of ethnographic research done by C. Darrah and myself in Silicon Valley, Dublin, Bangalore, and the Taipei/Hsinchu corridor over the last decade. In addition to outlining the major forces acting on silicon place formation, this poster outlines the conflict between local life and global interaction resulting from the tensions between creating an identity suited to global technological participation and existing ethnic, cultural, and regional differences.

Why New Zealand?

New Zealand fills a particular niche within the global silicon network as an emerging silicon place. As such it forms the basis for a comparison with more established silicon places such as California’s Silicon Valley, Bangalore, Dublin, Guadalajara, and the Taipei/ Hsinchu corridor. It illustrates the tensions between state-planned sites—such as Auckland’s Silicon Bay—and places that emerge organically—such as Christchurch’s Silicon Plains. Finally, it provides insights into other emerging silicon places, such as Vilnius, Lithuania.

New Zealand has been ironically nominated as “Best Supporting Land Mass” due to the Lord of the Rings. “Creatives” are an emerging asset, evidenced by Peter Jackson’s army of high-tech animators and designers. LOTR is an asset recognized by TradeNZ and InvestmentNZ and others to be leveraged for tourism, film creation and techie cachet. While Wellington is the center, Christchurch, Dunedin, Nelson and Auckland contribute to the innovative gestalt.



Twizel was a production site for Lord of the Rings, which in turn has spawned the “Frodo economy”

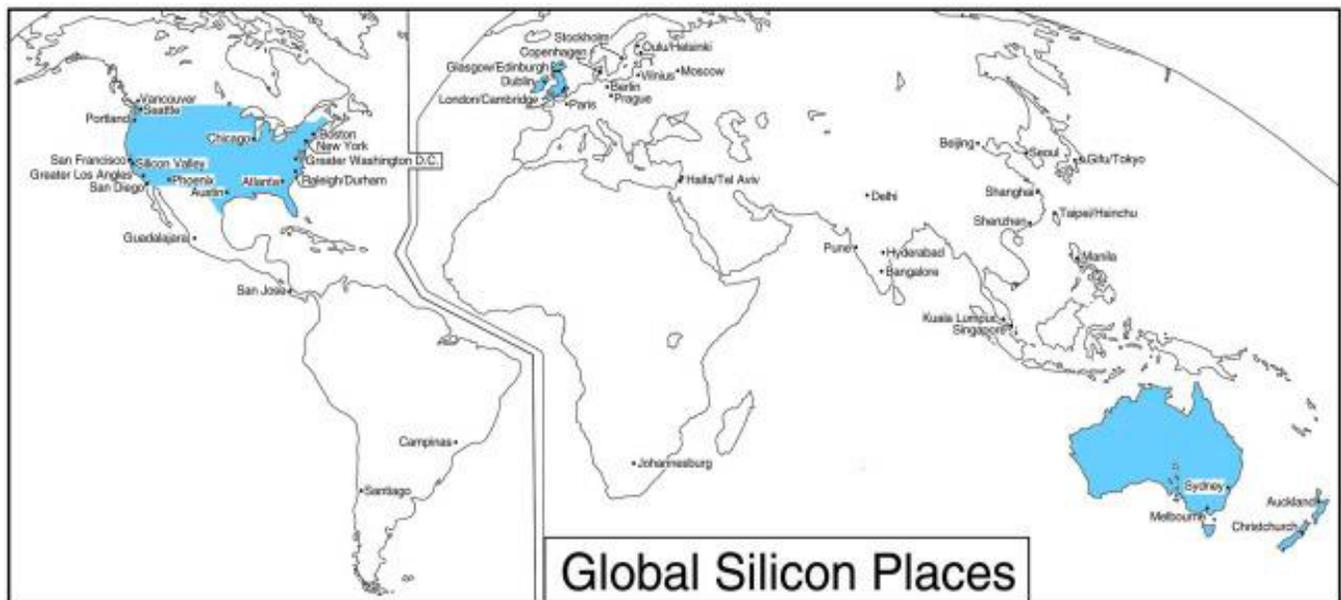
Prosaic Explanations for Silicon Places

Explaining technopoles, has become formulaic:

- > 2 Universities with applied business parks”or silicon places,
- + Big Science
- + Flow of Capital (human, fiscal and technological)

Equals a Silicon Place

In Christchurch a cluster of universities—Canterbury and Lincoln—as well as universities in Wellington, Dunedin and Auckland, complement the big science associated with Antarctic research and agriculture. Partnerships with Christchurch’s city council, sponsorship from the Ministry for Research, Science and Technology (MoRST) and the Foundation for Research, Science and Technology (FRST) and the national organizations of IndustryNZ, TechnologyNZ and TradeNZ support economic growth. Historic agricultural and electronic industries train people and give them technical skills.



Alternative Frameworks for Understanding Silicon Places

Such formulaic explanations leave little room for exploring cultural creation, positionality, and the role of place within the larger global silicon network. Different research questions can yield a more nuanced view. For example, if creating a silicon place identity involves consciously “branding” a community, how do various cultural narratives and practices influence this process? How does history, particularly the colonial legacy, shape these narratives and practices? How is this process viewed from the perspective of different stakeholders? Where are the tensions and contradictions that emerge from the process of community commodification? Where do work, educational and governmental organizations fit into everyday choices and experiences? How do competing forms of social organization, such as networks and company cohorts, play out in the way the community works? What are the assets and deficits that emerge from existing social structures? What are the consequences of producing a silicon identity for various stakeholders? Pakeha? Immigrants? Maori? University educated male engineers and the working mother equivalent of the “ordinary bloke?” What futures can be anticipated within the context of this choice?

Cultural Narratives and Practices

A rhetoric of frontier inventiveness is imbedded in the New Zealander idea that anything can be fixed with #8 fencing wire. The creation of the innovative Britten racing motorcycle is another icon of invention.

Ernest Rutherford, the nuclear physicist, has become legend as “the story of a Kiwi genius.” His favorite aphorism, “We have no money therefore we must think” adorns workspace walls and is ironically invoked.



New Zealanders know they are at the “End of the World”

The last stop out before Antarctica, New Zealand has created a narrative around being at the “ends of the Earth.” A tolerance for quirkiness is something that informants viewed as integral to New Zealander’s ability to innovate.

Niche research and development are key to New Zealand’s place in the global silicon network. They do not develop revolutionary technologies, but refashion and apply existing ones. Examples include creating a technology for spraying bees with precise amounts of pollen to deliver to crops, converting airbag sensors into cheap but sensitive seismic detectors, niche search engines, or programs that can record and reproduce key strokes.



Startups create niche technologies

“Clean and Green”

Developing outdoor clothing designs, selling outdoor experiences and a healthy active lifestyle are part of the “clean and green” image that redirects the traditional wool industry and provides an ethos for attracting tourists, specialized immigrants and bringing back Kiwis who fled overseas.



“Clean and Green”

Networks and company cohorts

Now sponsored by the Canterbury Software Cluster, a Friday night “techie BBQ” forms a predictable venue for entrepreneurs and creatives to network. Electronics/software firms such as Tait or Jade form incubators for technical expertise.

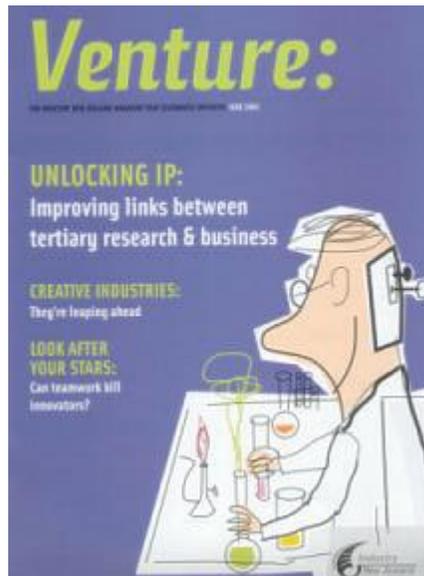


Techie BBQ's met every Friday in downtown Christchurch

Strategies and Organizations

Unlike Ireland, whose strategy was to leverage the presence of multinational corporations into incubators for Irish indigenous technology companies, New Zealand begins with local niche innovation and then sells assets to multinational corporations hoping they will stay onshore. Partnerships between industry and universities, such as Canterprise, have been problematic. Venture capital is not widespread and innovators tell stories about being forced to mortgage real property to get start-up funds. Organizations such as TradeNZ, IndustryNZ and TechnologyNZ, nurture and

incubate entrepreneurs. Those entrepreneurs may get caught between these organizations as they compete with each other. Novel approaches may be lost between the cracks or fall prey to shifts in policy, such as the governmental policies towards biotechnology and GM (Genetic Modification).



History...

For more than a hundred years the New Zealand economy was focused on the sheep-based “protein industry” providing these agricultural exports for the former British Empire. Left to fend for themselves with the rise of the European Economic Community they struggle to find new markets and exports. Will the Internet be the “freezer ship” of the twenty-first century?

Pundits have criticized the culture of complaint, dependency, and xenophobia that are attributed to the colonial legacy. That legacy can be seen in older Anglicized immigration preferences and in contemporary preferential trade partnerships with Australia, the U.S. and the U.K. Yet the present of Asia and Polynesia is pronounced, especially in Auckland.

The OE, “the Overseas Experience,” is considered a cultural prerequisite for being a proper New Zealander, although it is not always practiced. It sets the stage for the necessary global connections and potentially damaging emigration. “It’s part of Kiwi creativity to get out and understand other cultures.”

Tensions and Contradictions

Regional identity is strong and divisions between North and South Island, Pakeha and Maori, New Zealand and Australia, Antipodes and Eurasia/North America make it difficult for New Zealanders to create strategic alliances or to present a coherent national “brand.”

New Zealand seeks to establish a global identity as “clean and green” to promote lifestyle immigration, tourism and organic agricultural exports. Yet at the same time, it is being admonished by government and high-tech gurus—such as Oracle’s Ellison—to concentrate on biotechnology. This conflict was a major issue in their 2002 election.

Whose Silicon Identity?

Although the Maori have used websites and film (Once were Warriors and Whale Rider) to create an international presence, they are a clear minority within the techie networks. They have different networks and a place attachment to Aotearoa, not Silicon Plains. Most of the South Island high-tech activity is Pakeha.

Global work patterns that drive 24/7 access directly contradict the New Zealander belief in the sanctity of weekends off and the centrality of family time. Tourism, high-tech work and the halo of services that surround them mean a shift in work rhythms. To Parthena, a working mother with several jobs and an Internet used clothing business, this means not being able to create family time and requires a new social skill—juggling busyness.

A pattern has developed of New Zealanders creating new ideas, approaches and products only to be bought out by Americans, Australians, and British interests. While this generates wealth in the short term, it may merely be a new form of mutton colonialism. In the long term, where will the newly generated wealth reside?

Consequences and Futures

New Zealand is ambivalent about its place in the global economy. Does it want to be an economic player, or does it want to preserve its “ends of the world” identity as a “better Britain?” Does it want to be “clean and green” or does it want to create a high-tech niche? Can it do both?

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