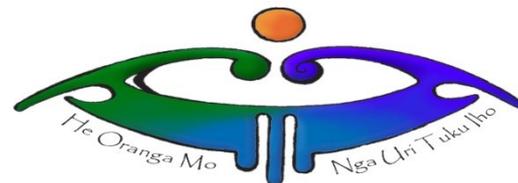


Weaving the Korowai

Tools for Adaptive Governance: Social Network Analysis

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Introduction: Social network analysis

- Focuses on relationships rather than attributes of individuals
- Gives visual clues about relational connections



**Weaving
the Korowai**

Why is SNA a useful analytical tool?

Provides visual and statistical insights/clues about relational connections

Identifies informal relationships, e.g. family, friends, colleagues (independent of their organisations)

However, it's based on a specific relational question and can't be generalised beyond this, e.g.

- 'Who do you talk to about finding a new job?' or
- 'Who do you go to for information about environmental issues?'

But ...

Data collection is time consuming and potentially very sensitive

Interpreting SNA

Mixed methods facilitate interpretation of SNA data including

- Quantitative data used to understand the effect of network structure on change processes
- Visual data (sociograms/network graphs) used to present models of relationships
- Qualitative data used to understand how and why relationships enable or constrain change processes

Interpreting SNA cont.

Explanatory theory provides a framework for explaining network phenomena:

- For example social capital theory relating to bonding, bridging and linking (Putnam, Woolcock, Mateju and Vitaskova); weak and strong relational ties (Granovetter, Burt); access to and mobilisation of resources (Lin)
- Resilience theory (Ostrum, Harris; Prell) re network diversity, modularity, feedback loops, redundancy

Making sense of SNA insights

- To what extent is the network well connected? Are there critical gaps in the network?
- To what extent is a network stable and/or evolving?
- What network roles are present (or absent) in the network such as leaders, 'stars', brokers/intermediaries, gatekeepers, boundary spanners?
- How are resources shared?
- What enables or constrains collaboration processes?

SNA as a tool for understanding Adaptive Governance

Provides insights and understanding of

- Current and potential leadership within a network
- Conduits for information and knowledge flow (e.g. gatekeepers and brokers)
- Diversity of actual and potential network resources
- Social capital and its impact on change processes

Doing SNA: Checklist

- Decide on a relational question:
(Who do you talk to about ...?)
- Identify network actors
- Design data collection instrument
- Decide if qualitative data are needed (mixed methods)
- Pilot test questions and revise as needed
- Collect data from selected network actors
- Input data to SNA programme (e.g. Gephi, Pajek)
- Check SNA output for quality
- Interpret data
- Feedback to network actors – does the network make sense?
- Final analysis and report

Example of how SNA was used to map community networks in WtK



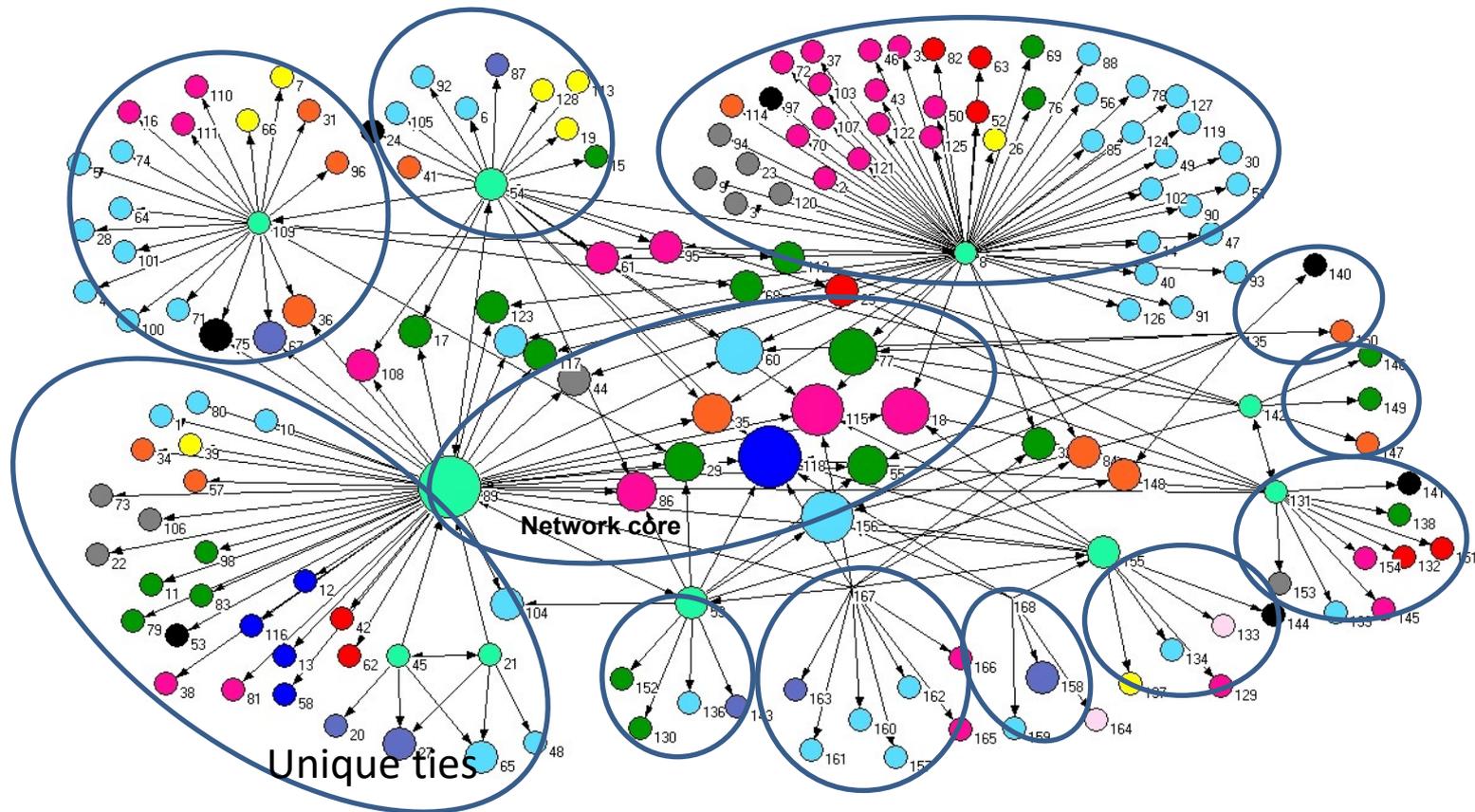
SNA in the context of WtK

- The WtK networks are based on information shared by hapu and rangatahi participants to map their networks in 2016 and 2018
- Purpose of the tool: to understand who people go to for information and knowledge to enable restoration of the Waiapu Catchment
- Longitudinal changes in the network between 2016 and 2018
- The relational question was:
'Who do you talk to about restoration of the Waiapu Catchment?'

Sociogram Key: Network roles

Node cluster	Role of node		Node cluster	Role of node	
1	Adviser		7	Local Government	
2	Advocate		8	Media	
3	Business		9	Participants	
4	Central government		10	Ngati Porou Iwi	
5	Education		11	Research	
6	Land Trust		12	Whanau	

2018 all combined WtK social network: Network core, shared and unique ties



WtK Network statistics 2016 and 2018

Network model 2016	Respondents	Network size (No. nodes)	Total no. of connections (no. of lines)	Network density	Average degrees
hapū 1	10	147	210	0.0097	2.85
hapū 2	9	94	132	0.015	2.81
Rangatahi	7	43	62	0.034	2.88
Combined network	26	228	390	0.0075	3.42

Network model 2018	Respondents	Network size (No. nodes)	Total no. of connections (no. of lines)	Network density	Average degrees
hapū 1	6	128	154	0.01	2.41
hapū 2	5	42	53	0.03	2.52
Rangatahi	2	21	21	0.50	2.00
Combined network	13	168	226	0.008	2.69

Insights from longitudinal analysis

- Smaller networks but greater focus on sources of environmental information and knowledge
- Increased focus on education
- Development of unique networks by several people
- Reduced connections with business
- Limited connections with local government and iwi (runanga)
- Potential growth points

However

- Community networks overall require ongoing support and resourcing as they continue to be reliant on two key people

Network exercise: Mapping your own network

For this exercise you are asked to focus on professional relationships that enable you to do your job effectively (it can also be used to map personal networks)

Relational question: Who do you talk to about environmental issues with respect to your current work role?

Review

- What did you learn doing the network exercise?
- How did it help you focus on your relationships?
- How could you now develop your network further?
- What are the pros and cons of a network approach?

Useful SNA resources

- Cross, R. & Parker, A. (2004). The Hidden Power of Social Networks: Understanding how work really gets done in organisations. Boston. Harvard Business School Press.
- Scott, J. (2013). Social network analysis: A handbook. Thousand Oaks, CA. Sage Publications.