

# Thought Ritual: An Indigenous Data Analysis Method for Research

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## Abstract

There is an absence of studies on discrete Indigenous data analysis methods in the literature on Indigenous research methodologies. However, data analysis is occasionally incorporated as an aspect of Indigenised research frameworks (Elder & Kersten, 2015, Suaalii-Sauni & Fulu-Aiolupotea, 2014) or, more often, follows emic academic techniques mediated by etic values and paradigms (Hill, Pace, & Robbins, 2010; Gillies, Burleigh, Snowshoe, & Werner, 2014; Castleden, Garvin, & Huu-ay-aht First Nation, 2008; Wright et al., 2012). This chapter proposes a standalone Indigenous data analysis tool that is a hybridisation of ancient oral culture practice and contemporary thought experiment. It is grounded in Aboriginal protocols of communal knowledge production that are aligned with principles of complexity theory. This analysis tool represents a significant departure from western academic approaches, while promoting high levels of intellectual rigour. It also offers the intriguing possibility of examining non-Indigenous data sets using an Indigenous Knowledge process, potentially resolving the issue described by Walters (2005) of quantitative data being, to date, largely ignored in Indigenous research.

## Keywords

Indigenous data analysis – Indigenous research methodologies – qualitative data analysis – Australian Aboriginal research

## 1 The Status of Data Analysis in Indigenous Research

While Indigenous research frameworks, methodologies and paradigms have emerged strongly in the academy in recent decades, most of these innovations have involved plundering ‘the master’s toolbox’ and slightly modifying standard approaches in an effort to de-colonise research practice and centre

Indigenous voices (Walters, 2005). Indigenous methods are mostly concerned with data collection rather than analysis, despite insistence by theorists that Indigenous perspectives and customary practice should inform the design of every step in the research process (Drawson, Toombs, & Mushquash, 2017). Kovach (2010) asserts that Indigenous research paradigms should shape not only the choice of methods, but how the data are analysed and interpreted.

When Indigenous methodologies focus primarily on data collection in their design, the result can be a perpetuation of colonisation through the data analysis phase (Wilcox et al., 2013). This issue has been addressed by some practitioners through extra diligence in the prioritisation of Indigenous values and voices within the data analysis process (Hill et al., 2010), self-location within the data as a potential resolution (or defiance) of subjectivity challenges (Gillies et al., 2014), including participants in data analysis in community-based participatory projects (Castleden et al., 2008), and incorporating sentient non-human elements such as animals, water and wind through storied approaches to data analysis (Wright et al., 2012).

Most Indigenous approaches to data analysis lack a detailed sequence of steps grounded in customary ritual processes of knowledge production. However, there are some notable exceptions, such as the Kaupapa Maori practice of data analysis moving through stages of *noho puku* (self-reflection), *whanaungatanga* (connection), and *kaitiakitanga* (guardianship) (Elder, 2013). Another effective Polynesian approach to analysis involves mapping the data onto a culturally relevant narrative (Suaalii-Sauni & Fulu-Aiolupotea, 2014).

Some particularly radical approaches include attempts to remove the researcher from data analysis and interpretation entirely (Wilcox et al., 2013) and turning over ethnographic data collected by western researchers for a reflexive, narrative-based analysis by local Indigenous participants (Botha, 2012). Another radical departure from the mixed-methods toolbox is relationally responsive analysis (Yunkaporta, 2019) which is a free-ranging method of analysis based on the process of 'walking Country' in Australian Aboriginal contexts. While this approach has been effective, it is also vague and subjective, offering little by way of a generalisable sequence of explicit steps for other researchers to follow, or a theoretical grounding recognisable within the academy.

In order to resolve this issue, Yunkaporta designed the Indigenous data analysis approach outlined in this chapter. This aligns a relationally responsive approach with hybridised Indigenous versions of complexity theory and thought experiment in order to make the approach recognisable to the academy. The method emerged from a three-year process of relationally responsive analysis of the Yunkaporta's home language and auto-ethnographic data from

cultural activity on-Country (Yunkaporta, 2019). At this point, however, the method was merely theoretical. It was made 'real' through a collaborative and practical application with another Indigenous researcher, Moodie, bringing the approach into proper relation through her doctoral research project (Moodie, 2021) and associated networks of affiliation on-Country and in community.

## 2 A Proposed Indigenous Data Analysis Method

A thought ritual is a method of data analysis that is a hybridisation of Indigenous oral culture practice and thought experiment. While western thought experiments involve creating purely abstract simulations of events and fields, thought ritual comprises four stages grounded in Aboriginal protocols of communal knowledge production (Sheehan, 2003). This involves practical activity and generation of images, objects, relationships and story (Jones, Moodie, & Hobson, 2014). As Indigenous Knowledge systems are regarded in this method as complex adaptive systems (Rose, 2005), these activities are also aligned with principles of complexity theory, particularly the way agents behave in complex adaptive systems (Pintea, Tripon, Avram, & Crisan, 2018). Those principles are distilled here into the descriptors of connection, diversity, interaction and adaptation, sitting within a framework of pattern-thinking. They reflect Indigenous ways of valuing, being, knowing and doing (Martin, 2008).

The stages in this process may overlap in the cultural activities employed in analysis, or may take a different order, or be altered from what is described here, but the overall process is as follows:

1. **Connection:** Identify the relational pairs of agents (participants), data points, variables etc. and the networks of pairs these form, and the pairs of networks (i.e. different systems or data sets or thematic categories interacting), using visual modalities to express these relations.
2. **Diversity:** Use narrative in collaboration with other participants to identify similarities, differences and areas of overlap between different variables, agents and data points.
3. **Interaction:** Use oral culture metaphors and forms of expression to replicate the exchanges of energy, information or matter between the different agents, variables and data points in the field.
4. **Adaptation:** Use supra-rational moments of ancestral connection to identify transformative feedback loops and chains of cause and effect in which data points change, attract change or interact with other data points to produce change events. Time is non-linear in this process, so the changes you perceive might be in past, present or future.

The first principle is connection, which involves locating yourself as the researcher within the field by defining all of the relationships in the field and your belongingness in that network of relations. This means extending your ontology to include Indigenous pronouns of I, we-two, we-only, we-all (rather than the limited range of single and plural forms in academic English). This means that every agent (a participant or sentient entity in the field), variable, datum and theme in the data set is defined by relationships within pairs, networks of pairs and pairs of networks. Every item is connected to multiple pairs that form exclusive networks and then connections with other networks within an inclusive whole. These data groupings reflect the independent and interdependent relations that form complex systems.

Inclusion of the researcher as a related element within the data recognises observer effects and uncertainty by embracing subjectivity and belongingness within the field. Rather than contaminating the data (or ignoring contamination through false claims of objectivity), the presence of the Indigenous researcher only enriches the data set by increasing complexity through relatedness and adherence to oral culture knowledge protocols. Observer effects are neutralised as the researcher ceases to be a solitary analyst and becomes part of a self-organising system reflexively observing itself. It is recommended that this stage be executed using visual modalities (images, maps, diagrams, or genealogy-like frameworks), to access supra-rational ways of thinking that enable the perception of complexity. Computer modelling or digital simulations may be used here also.

The second principle is diversity, which involves identifying the individual elements (agents, variables, data points, themes, data sets) within the relationships explored in the first principle, then telling the stories of each element to identify similarities, differences and overlaps between them. It is important to examine these through narrative and yarning (Indigenous modality of dialogue) to ensure adherence to Indigenous protocols of communal knowledge production. Indigenous Knowledge is only valid if it is produced in groups or pairs; individual analysis is considered to be invalid and lacking intellectual rigour.

So, this stage of the process must be completed by the researcher in a group or pair, preferably with research participants who were involved with the data collection but also with mentors, peers, knowledge keepers or Elders. It is storied in order to adhere to Indigenous narrative modalities of knowledge production. The process of seeking similarities, differences and dynamic overlaps is patterned on the practice of 'reading Country'. This involves seeking the changes and forces of change in between different elements and systems to find areas of increase and significance.

The third principle is interaction, which involves the continuous transfer of energy, matter and information between elements in the system (or data set). Without this flow, the spirit of a system becomes stagnant and results in collapse. This stage of the data analysis involves using oral culture metaphors and expression (e.g. dancing, weaving, imaging, storying, carving, walking Country) to perceive the 'forces in between' that are influencing all of the elements in the field. It involves translating the elements of your data sets into oral culture metaphors and moving them into an abstract/spiritual space to create a simulation of the field. You can then manipulate or examine those elements through cultural practice before translating your findings back into the tangible reality. For example, you might represent a data set from interviews with a dance about eagle flight, then an empirical data set of test scores with a dance about that eagle making a kill and feeding. Similarly, cultural metaphors might be employed in a painting, weaving, carving, journey or story. The purpose of this stage is to acknowledge the influences of spirit on the field and find deeper understandings and patterns in your analysis. The intense concentration involved in this process may give rise to the heightened mental state required for the final stage of the analysis.

The fourth principle of adaptation builds on the third by seeking revelatory or ancestrally connected insights about feedback loops, chain reactions and transformations in the field. In Indigenous Knowledge systems these dynamic instances of convergence produce adaptation and increase; these are the rich areas of data that produce the most interesting and transformative findings. The purpose of this stage in the analysis is to achieve an altered state of consciousness through cultural activity, creating a moment of inspiration or realisation. Key findings may emerge in the analysis through extra-cognitive, supra-rational reasoning accessed through a dream, a trance, deep reflection, revealed knowledge (e.g. cellular memory), meaningful coincidence or 'signs' observed on-Country. These are regarded in Indigenous ontologies as ancestral communications, including the observation of unusual phenomena such as sudden wind gusts in treetops, lightning strikes, rainbows, fires and the behaviour of animals. Such occurrences are known as 'a Something' in Aboriginal English.

A Something can also be experienced as a startling moment of synchronicity and convergence in the researcher's lived reality, whether on-Country or in cyberspace or a workspace. It may emerge as an unexpected or unexplainable synchronicity within the data itself. A Something will often indicate the presence of a strange attractor in a complex system – an agent or element in the field that precipitates transformations and adaptation. There will be feedback loops and chain reactions of cause and effect surrounding that strange

attractor – data points that do not exist in isolation but that change in interactions with other data points or combine with others to create new ones. This means your data is not static or fixed, but a living system of knowledge patterned on creation. Time is not linear in this way of knowing, so the changes you perceive in the system may occur in past, present or future. Future changes, when carried back into the linear paradigms of print-based academic reality (i.e. writing up findings), may be reported as extrapolations, predictions or projections.

The overarching framework of pattern-thinking is not a stage in this process but runs as a common thread through all four principles. It involves seeking the trends and relational forces within data sets that might be missed with more linear and analytical modes of thought. During the simulation you are creating through the thought ritual process, you will overlay networks of relationships between data points with storied sites of overlap between those networks and the flows of energy, matter and information across the whole field. While working with the data using Indigenous modalities, the patterns you perceive through cultural practice and ancestral connection will yield deeper understandings, richer findings and emergent applications for those findings.

### 3 Trialling the Indigenous Data Analysis Method

This data analysis approach was applied to a doctoral research project examining cross-cultural engagement issues at the interface between Indigenous and non-Indigenous systems (Moodie, 2021). The researcher organised data sets around three case studies that were reframed as ‘life projects’ within her Indigenous methodology. The data sets included all of the relations within Country and community in the dynamic contexts of the life projects, storied in print, yarns and paintings. Each instance of data analysis was carried out with a partner to establish collaborative rather than individual understandings of the patterned knowledge revealed in the data.

In the initial process of identifying the relationships between every element in the data sets (including sacred sites, stories, artists, art dealers, plant and animal species, Elders, marketplaces, economic transactions, programs, managers, quotes, outcomes, events and more), a significant correlation was found almost immediately that would not have been apparent in a standard thematic analysis.

As the bunya pine was included in the analysis as a sentient participant in the field, interspecies communication and cooperation were considered in the

patterning of the data. The three-yearly cycle of peak bunya-nut production that facilitates periodic multi-national gatherings on that country for feasting, trade and ceremony was examined as an ancient practice of inter-cultural engagement. The elements of engagement in this process were outlined in yarns with a partner and then similar patterns were sought in the data. Another three-year cycle was perceived in the funding rounds of a failed co-management project. All the data associated with this project was brought alongside the bunya feast data and the two engagement processes were analysed in terms of similarities, differences and dynamic overlap.

The researcher inscribed the names of each data point, agent and variable on objects and arranged then rearranged them in different groupings. She began to colour-code them according to the networks they belonged to and began to move these around in simulations of the field for different case studies. Up until this point she expressed a sense of being 'lost' in the complex relations of the data, which triggered a feeling of being lost in forest Country. She had a vivid recollection during this process of her father telling her as a child how to find north when lost by observing the growth of moss on trees. She allowed this to guide the directionality of her practice in this stage of the analysis.

A north to south map of the Great Dividing Range was created and the data were arranged around storied locations on that map. Sites of productive and disruptive engagement on Aboriginal land along that massive songline were perceived at various points of intersection between significant sites and the narrative data about the lives of program participants. A pattern emerged whereby instances of disruptive engagement occurred around activities based on extraction, while productive engagement activities were grounded in the Indigenous concept of 'increase'. Analysis of the data grouped around these themes yielded common traits of both extractive and increase models of engagement that formed a major part of the findings and recommendations from this research.

There were many moments in which a Something was perceived during the thought ritual process. Some of these were previous occurrences that had been forgotten or ignored in the course of the research. In one such example, the researcher moved to a new office in a different state to find a painting there by an Elder who was one of her research participants, now deceased. This Elder had shared a lot of knowledge about the Country and sacred site reported on in the research and continued to do so non-locally through this painting, so the messages perceived in this Something were allowed to guide the researcher's attention in the data analysis.

#### 4 Conclusions

Mario Blaser and Marisol de la Cadena (2018) articulate a concept they call 'Pluriverse', a world of many worlds in the cosmologies of Indigenous South America. The Indigenous cultures of the continent currently known as Australia also comprise a world of many worlds. We have multiple cosmologies inscribed in the landscape and diverse ritual practices centred around thousands of sacred increase sites. Despite this startling diversity, there is a shared pattern of inquiry and analysis across this pluriverse of knowledge systems that the thought ritual method has sought to utilise in a way that is generalisable for all of the custodial groups keeping these diverse knowledges. This patterning of knowledge practice has always involved productive engagement with Country as sentient kin, an increase paradigm giving rise to complexity and sustainability in living systems.

In the project we used to trial this Indigenous data analysis method (Moodie, 2021), complex relations between extractive and increase paradigms emerged that had been overlooked in the initial standard thematic analysis. Extractive paradigms informing settler policies in relation to Indigenous people were revealed in places they had previously been invisible, once the entities of increase sites were viewed as sentient participants and engaged with appropriately.

Non-Indigenous analysis promises much but delivers little from an Indigenous standpoint grounded in an increase paradigm. Manning Clark (1997) wrote of the great forest and the analyses of this ecosystem in the early 1800s that predicted centuries of lumber harvest, while in reality it was depleted within 25 years. Accurate understandings of abundance and sustainability are not possible using analysis tools grounded in extractive paradigms seeking short-term profit from water, earth, Intellectual Property, DNA and other Indigenous resources that are destroyed by this unproductive form of engagement.

The emerging data analysis approach was experienced by the participants in this project as a way of honouring a world of many worlds, worlds including sentient beings usually regarded as inanimate, reinstating their knowledges and healing Country through interaction with increase sites. This work came about through a relationship based on a professional encounter. The encounter became a Something that was found to have a pre-existing presence throughout the entire project, resulting in a realisation that Indigenous analysis is embedded at every stage of a research project, not just following data collection. Further, the analysis could not be constrained by constructs of linear time and was often understood to have predated the research project itself, or even its own 'design' by the researchers.

Family, community, Aboriginal students, academics, and a small cohort of visiting international academics at Deakin University all entered the yarns and rituals of this analysis, co-creating a consensus of shared understandings in a process of joint discovery, speaking, being and thinking. These encounters were physicalised through the art of making and the practice of walking Country. From the practice of art making in land-based cultural contexts, we two found that Country is always at the core of this data analysis method: geological (basalt, sandstone, water, ochre); geographical (cultural boundaries); ecological (flora and fauna); legal (kinship, law, governance); economic (trade routes, resources, industry); and profoundly cultural in ways that make it impossible to separate any of these elements within the process of data analysis.

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