Western Arrarnta Seasonal Chart

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Abstract

The way that Western Arrarnta people pass knowledge down through generations has changed drastically in the last 150 years. Western Arrarnta young people today are educated through a modern Australian classroom, and spend limited time on their traditional lands. This has lead to a gradual reduction in traditional knowledge, which is based on close observation and practical experience of the natural environment, and the observation of elders performing traditional knowledge.

Italk library, in collaboration with Western Arrarnta Media, Tjuanpa Rangers and Ntaria School, is developing an interactive Western Arrarnta Seasonal Chart.

This paper will discuss how digital technology can be used to communicate traditional meteorological and seasonal information to young Western Arrarnta speaking people. It will also look at the challenges inherent in the digital representation of Indigenous Ecological Knowledge.

Research question

This research assesses the capacity of mobile device technology to deliver inter-generational education concerning meteorology, seasons and seasonal plant and animal activity between older to younger generations of Western Arrarnta people.

Methodology

We have reviewed published and unpublished seasonal charts from Central Australia and other Australian regions and international examples. We have researched peer-reviewed papers online via databases including EBSCO, ProQuest, and JSTOR which discuss seasonal charts, Natural Resource Management, Indigenous Ecological Knowledge (IEK) and the implications of 'representational' approaches to Indigenous Ecological Knowledge.

Aboriginal words for plants, animals, seasons and associated language group names were determined from identifiers in the cited sources. Western Arrarnta words have been spelt according to the orthography of the Western Arrarnta Picture Dictionary (Roennfeldt, D, et al 2006). Terms related to the *Anpernirrentye* framework are spelt according to the orthography of the Central and Eastern Arrernte Dictionary (Henderson, J. and Dobson, V (Eds) 1994).

Discussion

Many older Aboriginal people view young people as responsible for carrying knowledge forward for the benefit of future generations (Sherry and Myers 2002, Green et al. 2003, Dobson 2007). As the custodians and/or legally recognised owners of vast land tracts, younger Aboriginal people will be expected to play key roles in Natural Resource Management as they mature. However Aboriginal young people today learn largely in classroom contexts rather than through direct experience and instruction from elders.

In central Australia today, Indigenous Ecological Knowledge is fragmented and endangered (Prober et al 2011). A comparison between historical and modern Western Arrarnta dictionaries indicates a

change in language related to the seasons. Strehlow's Western Aranda dictionary from ~1904 gives distinct names for the transition periods Spring (*Arlpurlpa*) and Autumn (*Danungkua*), however in the modern Western Arrarnta dictionary (Breen et al 1997**)** these periods are found under Summer and Winter and referred to as *lhurrpa karta* (half Winter) and *eturna karta* (Half Summer). This corresponds with anecdotal use of these terms by interviewed Senior Western Arrarnta speakers. A Senior Western Arrarnta man (unnamed for this paper) holds the modern view that only two seasons exist (*Eturna* (Summer) */ Lhurrpa* (Winter)) compared to five seasons recorded by Strehlow. The language he uses to refer to the wind has also changed since Strehlow's time, referring to all winds as *twerrkerre* (West wind); where in the past at least five different wind names were used. (Kennedy, E, 2014 (1))

Many existing seasonal charts, including the Warlpiri, Eastern Arrernte, Larrakia, and Nyoongar, rely upon an everyday use and understanding of written language, either English or vernacular. Kral argues that "(the Arrernte) community today, although essentially bilingual in Arrernte and English as a second language, could not be described as biliterate. The majority of adult Arrernte speakers do not read and write in the vernacular and the opportunity to engage with written Arrernte text is limited. In addition, levels of adult literacy proficiency in English are generally low." (Kral 2000 p. 6)

The charts reviewed for this paper all suffer from attempting to force one system of knowledge (traditional Aboriginal) into the parameters of another system (Anglo-Australian, derived from Europe). The Warlpiri, Eastern Arrernte, Western Arrarnta, and Anmatyerr calendars all show highly irregular local seasons within a referential framework defined by the European months (highly regular and predictable from year to year). The construction of the Western Arrarnta seasonal chart immediately highlights the challenge of representing information that is highly variable. While some seasonal events are considered regular, such as the flowering of *Urlepe* (Acacia Victoriae) in September, others, such as rainfall, could occur at almost any time of year. Rainfall and fire significantly influence the behaviour and availability of many plants and animals. It is Interactive digital medias that offer the possibility of incorporating the variability that posters, tables and written descriptors cannot.

Traditional Indigenous Ecological Knowledge intrinsically connects to place, the people responsible for it, and the continuing use and performance of knowledge by those people in that place (Christie and Verran 2013). Representing Indigenous Ecological Knowledge digitally introduces Western systems of categorisation. Christie and Verran (2013) argue "representation" is one of the "colonising impulses of … contemporary digital knowledge work". Structurally, the categorisation of information according to Western systems (categories of 'photos', 'people', 'places' for example) can have dangerous and unintended consequences. A Yolngu studies lecturer likened the Northern Territory Library's Knowledge Centre databases to the mission cemetery, "where lifeless but potent bodies of all different connections were amassed together unsupervised" (Christie and Verran 2013). Christie and Verran propose employing the practice of 'accountable design' in digital resource creation. In particular 'located accountability', in which designers must recognise users as designers (2002: pp.95–96). With accountable design, communities are involved in the creation of language resources and own their content.

Mobile device technology and affordability is developing rapidly, and mobile device ownership in Australia is widespread. In 2013, smartphone penetration in Australia reached 84% of the population (Business Insider Australia). The Telstra 3G network extends to *Ntaria* (Hermannsburg), and mobile phones are commonly owned and used by young people living in for both connectivity and as private mobile storage spaces. However, the language used by young people engaging with digital technologies is predominantly English. According to Kornai, "more than 95% of the languages and dialects known today are dead in terms of digital representation" (Kornai 2013). Producing digital resources in Western Arrarnta creates a bridge towards digital use of the language.

The goal of preservation, promotion and growth of Aboriginal language and cultural information requires a three-phase strategy for robust digital preservation projects (Robbins 2010). These stages are: 1) Documentation/ Digitisation to ensure baseline, snapshot preservation of the language or traditions. 2) Translation into new technology and/or habits used by young people, such as iPhone, iPad and facebook apps and games, and 3) Application of principles to new technology development. Documentation of the Western Arrarnta language is strong, relative to other Australian Aboriginal languages. The development of the Western Arrarnta Seasonal Chart is a progression into the second stage of language preservation, promotion and growth.

The Western Arrarnta Seasonal Chart follows these principles:

- Interactivity to show 'climate response seasons' such as green times, dry times and burning.
- Meeting Low levels of vernacular and English language literacy through the use of audio recordings in addition to written text.
- The use of accountable design.
- Only knowledge considered public may be used.

References

Australian Institute of Health and Welfare (AIHW), 2009, *A picture of Australia's Children 2009,* Australian Government, Australian Institute of Health and Welfare, Canberra, Australia

Breen, G, (ed), Rubuntja, E and Armstrong, G, 1997, *Introductory Dictionary of Western Arrernte,* Institute for Aboriginal Development Press (IAD), Alice Springs.

Buschenhofen, P, and Robertson, G. J, 1981, Warlpiri central Australian seasonal calendar, Warlpiri Bilingual Resources Unit, Yuendumu.

Christie, M and Verran, H, 2013, Digital lives in postcolonial Aboriginal Australia, *Journal of Material Culture* 2013 18: 299, http://mcu.sagepub.com/content/18/3/299

Commonwealth Scientific and Industrial Research Organisation (CSIRO), date unknown, Gulumoerrgin/Larrakia calendar, http://www.larrakia.csiro.au/

Dobson, V. P., 2007, *Arlhe-kenhe Merrethene: Arrernte traditional healing.* IAD Press, Alice Springs.

Government of Western Australia - Department of Parks and Wildlife, 2013, Sharing the Dreaming, https://itunes.apple.com/au/app/sharing-the-dreaming/id642267711?mt=8

Henderson, J. and Dobson, V (Eds) 1994. Eastern and Central Arrernte to English Dictionary. Institute for Aboriginal Development Press, Alice Springs.

Hull and Nelson, M. E., 2005. 'Locating the semiotic power of multimodality', *Written Communication*, 22 (2): 224–61.

Ilyas, S, 2013, Nakaiy Nevi, https://itunes.apple.com/hk/app/nakaiy-nevi/id590349589?mt=8

Kennedy, E, interview (1), available on request

Kornai, A, 2012, 'Language Death in the Digital Age. META-FORUM 2012', m.youtube.com/watch?v=omBiRSbMUb8Kornai, A, October 2013, 'Digital Language Death', PLOS One, Volume 8, Issue 10

Kral, I, 2010, Plugged in: remote Australian Indigenous Youth and Digital Culture. Centre for Aboriginal Economic Policy Research, Australian National University.

Kral, I, 2000, The socio-historical development of literacy in Arrernte: A case study on the introduction of writing in an Aboriginal language and the implications for current vernacular literacy practices, University of Melbourne (Master of Arts thesis)

Latz, P. 1995. Bushfires and Bushtucker: Aboriginal Plant Use in Central Australia. Institute for Aboriginal Development Press, Alice Springs.

Moore, S, 2010, *Anmatyerr Seasonal Chart,* Northern Territory Department of Education, unpublished

Prober, S, O'Connor, M and Walsh, F, 2011, *Australian Aboriginal Peoples' Seasonal Knowledge: a Potential Basis for Shared Understanding in Environmental Management,* Ecology and Society, 16(2): 12, http://www.ecologyandsociety.org/vol16/iss2/art12/

Robbins, C, 2010, Beyond Preservation: New directions for technological innovation through intangible cultural heritage, *International Journal of Education and Development using Information and Communication Techonology (IJEDICT)*, 2010, Vol. 6, Issue 2, pp 115-118

Roennfeldt, D, (ed), 2006, Western Arrarnta Picture Dictionary. IAD Press, Alice Springs.

Sherry, E, and Myers, H, 2002, Traditional environmental knowledge in practice. *Society and Natural Resources* 15 (4): 345-358 http://dx.doi.org/10.1080/089419202753570828

Strehlow, C, ~1904, Aranda Dictionary, unpublished – held at the Strehlow Research Centre, Alice Springs.

Suchman, L. (2002) 'Located accountabilities in technology production', *Scandinavian Journal Of Information Systems*, vol.14, no.2, pp. 91–105.

Verran, H, Christie, M, Anbins-King, B, Van Weeren, T & Yunupingu, W, (2007) Designing digital knowledge management tools with Aboriginal Australians, Digital Creativity, 18:3, 129-142, DOI: 10.1080/14626260701531944