## **Biographical Research and Digital Mapping**

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#### **Abstract**

This paper provides a mid-project report on an Australian Research Council-funded project that focuses on the development of digital tools to map biographical data relating to the history and legacies of British slavery in Australia from the 1830s onward. Through developing innovative methods for biographical research and digital mapping, this data-intensive project is tracing the movement of capital, people, and culture from slave-owning Britain to Western Australia. The paper will begin with an introduction to the Western Australian Legacies of British Slavery (WALBS) project, and then the Time-Layered Cultural Map (TLCMap), which has been used to visualise the project's data, before explaining how these two projects have come together. It will then discuss some of the major questions and tensions that have emerged out of gathering and visualising this data so far. The aims of the paper are to underscore the potential for data collection and analysis specific to this research such as mapping biographies and slavery networks, to demonstrate the benefits of TLCMap for humanities researchers, and to highlight key challenges we encountered with this data including questions around how to navigate bias and power tied up within data, and how to map lives.

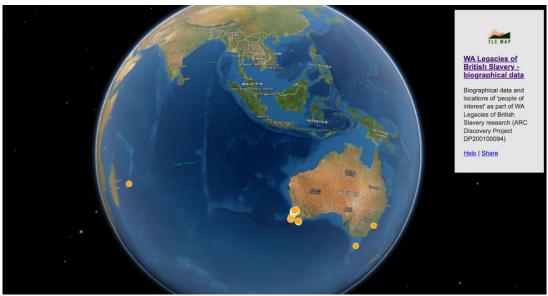
#### **Keywords**

Digital mapping, biography, slavery

# 1. Background: The Western Australian Legacies of Bri sh Slavery project and the Time-Layered Cultural Map

The WALBS project is tracing the movement of people, property, capital and culture from Britain to Western Australia, exploring the links between slavery in the British Empire and settler colonialism. In particular, research has focused on detailed biographical investigations into a series of individuals connected to slavery who were some of the earliest colonists in Western Australia. This research has grown out of the University College London's Legacies of British Slavery (or LBS) project, which started by tracing the 20 million pounds in compensation money paid out to British slavers following the abolition of slavery in 1833. By examining the records of claims made for this compensation money, the LBS project identified around 46,000 claimants, as well as thousands of plantations and estates. This data is publicly available on the LBS online database. Users can search the database to find information including the names, professions, activities and affiliations of men and women who were slave-owners, attorneys, mortgagees and legatees, as well as the names and locations of plantations and estates. The WALBS project builds on this research by tracing individuals who moved to the settler colonies in Australia. Research so far has revealed some striking patterns, including the migration of a number of British slavers and slave-trade beneficiaries from select Caribbean estates to Western Australia in the early 1830s. Some of the key data being gathered in the project include the names, professions, family relations and business associates of individuals, their capital, and connections to particular estates. It also traces individuals' movements, activities, and influence in Western Australia, including amounts and locations of land occupied, and affiliations with particular businesses, institutions, and government.

This data – looking at the movement of people, the distribution of networks, and land – lends itself to mapping and geographic visualisations. In 2021, the WALBS project team began talks with lead investigators and creators of the TLCMap based at the University of Newcastle in Australia. The TLCMap offered a useful tool in visualising and analysing the lives and movements of individuals connected to slavery who migrated to Western Australia. The TLCMap is a set of online tools that allows humanities researchers to compile historical and cultural data using spatio-temporal coordinates. It is not a singular and literal map per se, but a range of accessible software – or 'software ecosystem' – that allows researchers with minimal programming skills to upload, gather, analyse and visualise data themselves.

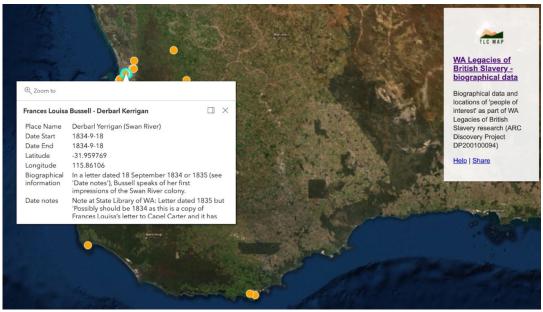


**Figure 1**: The user interface of the Time-Layered Cultural Map software, displaying the entry point for the Western Australian British Legacies of Slavery biographical data.

It was decided that the best TLCMap tool to employ for the WALBS project was the Gazetteer of Historical Australian Places. The Gazetteer allows researchers to create layers on a 3D map which pinpoint locations with accompanying information. This tool allowed us to plot out the journeys of slavers and slave-trade beneficiaries as they moved across Britain, the Caribbean and Western Australia. Figure 1 shows the entry point for users navigating this data. For our trial data we selected six individuals, based on those with the most available data and digital assets, and also those that offered a range in gender, geographical destinations and biographical events. For each individual we created a separate layer, uploaded as CSV files converted from Excel spreadsheets. Data on each individual included latitude and longitude for each geographical place they visited or lived in, place names, short biographical summary text, and links to data stored on other databases and archives (see Figure 2 for a selection of these fields). In the 3D map this translated to a staged journey for each individual, represented by a series of points on the map accompanied by brief narrative text regarding time spent at that location, links to images and further resources (Figure 3 gives an example of one of these points of an individual's journey).

Title	Placename	Latitude	Longitude	Location notes	Date	Date notes	Biographical information	Images
Frances Louisa Bussell - Portsmouth	Portsmouth, England	50.801389	-1.109861	Selected location near the Portsmouth Historic Dockyard, though have not pinpointed the exact dock that the James Pattison departed from.	10/2/1834	We do not have a record of the ship departure date, however in a letter dated S May 1834 Bussel refers to 'those dear hearts who have thought and prayed for us in all their positions for the last 84 days and nights', suggesting that she departed England on 10 February. [5]	Frances Louisa Bussell (née Yates) was born in England in 1782. She married Reverend William Marchant Bussell and had nine children: John Garrett, Charles, Joseph Vernon, Alfred Pickmore, Lenox, Frances Louisa (Fanny), Elizabeth (Bessie) Capel and Mary, Reverend William Marchant Bussell died in 1820. The following decade Frances Louisa and seven of her children left England and became prominent colonists in the southwest of WA. [13]  Bussell left for WA in early 1834 with her eldest daughter Mary, [6] In a letter written to her sisters while anchored at Table Bay, Cape Town, on 5 May, she refers to 'those dear hearts who have thought and prayed for us in all their positions for the last 84 days and nights', suggesting that she departed England on 10 February. She said of the journey: We are in health and spirits and have heard favourable accounts of our dear Augustine. The voyage has been tedious for the impatient but remarkably propitious. Not one passenger would we wish away we have had no storms and very few annoyances or "fikes" as some of our scotch friends term. [5]	
Frances Louisa Bussell - Kincinnup	Kincinnup (Albany)	-35.048278	117.968028		19/6/1834		Bussell and her daughter Mary arrived at King George Sound in Kincinnup (Abany) aboard the James Pattisson on 19 June 1834. [7] They soon salled on to Walyalup [Fremantle]. Sons John Garrett, Charles, Joseph Vernon, Alfred Pickmore had arrived in 1830, and Lenox, Fanny and Bessie in 1833.	
Frances Louisa Bussell - Walylalup	Walyalup (Fremantie)	-32.056861	115.741389		19/8/1834		After delays due to bad weather, the James Pattison arrived at Walyalup (Fremantle) on Tuesday 19 August 1834 (18, 91, 01) in a litter to Elizabeth Capel Carter dated 27 August, Bussell writes: Perploxed and worried as I am in landing and collecting my property and the ships on the point of clinking/saling?] I snatch a moment to say we arrived safe and well. We are now at Fremantle with McDemotas and were to have been conveyed to Perth to day to stay with Lady Stifring till the arrival of the Colonial Schooner which is to embark us for Augusta. [11]	trove.nla.gov.au/newspaper/article/ 641393? searchTerm=%22james%20pattiso

**Figure 2**: For each individual of interest we created a spreadsheet, with a new row for each new location, detailing coordinates of the location, place name, date ranges, narrative biographical text, and links to assets such as images. Additional fields of data are discussed later in the paper.



**Figure 3:** The user interface of WALBS biographical data once uploaded to TLCMap software, the Gazetteer of Historical Australian Places.

For the WALBS team, the TLCMap offered a number of advantages. Embedding links to records in other collections and databases allowed us to point to entries in the LBS database. It also offered unique opportunities for visualisations and analysis of patterns. While other databases – such as People Australia, created by the National Centre of Biography at the Australian National University – enable network analysis to reveal family, business and other connections between individuals, the TLCMap is

the only purpose-designed research tool in Australia to visually represent these connections, allowing researchers to identify geographical clusters and parallel journeys by sight.

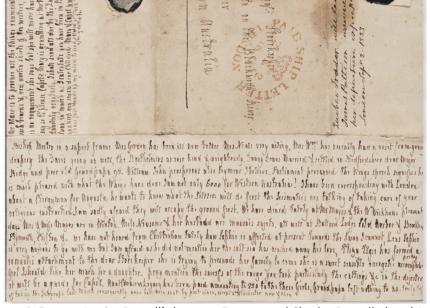
#### 2. Mapping biography: Maps as life stories

Plotting out these geographical and temporal journeys based on biographical details constructs a sort of visual life story, representing the movements, encounters, and places called home by an individual over time. Maps are indeed forms of storytelling. Robert T. Tally contends that 'In many ways, telling a story is like drawing a map, and vice-versa' (Tally 2016, 26). The field of literary cartography explores this relationship, examining the visual and spatial potential of literature to function as a figurative map. In his analysis of contemporary American fiction, Fabrizio Di Pasquale states that 'every novel is a map, every map tells a story, and every story is connected to a territory.' (Di Pasquale 2016, 47). Similarly, John McCrystal writes that

The earliest cartographic technology is story. Ancient stories contained useful information, such as the relation of changes in the night sky to the rhythms of nature; they also contained navigational and cartographic information. (McCrystal 2019, 11)

Mapping can offer a methodology in tracing and recording an individual's life story. Writing about 'Aboriginal mapping' in Australia, Justin Butler describes a process of asking Aboriginal people a series of questions about their identity, including questions regarding connections to family and land (Butler 2017). For Butler, 'mapping' does not refer to the creation of literal maps per se, but is a practice concerned with narrative therapy and storytelling, which places at its heart the individual and custodian of that life story.

There are many challenges and complexities in mapping a life. This begins with choices around what information is presented and what is left out. In selecting biographical data to map out the WALBS people of interest, we were guided in part by parameters regarding the functionality of the TLCMap software. In particular, data was structured around geographical and temporal coordinates. Due to the research theme, another mandatory field of data was 'links to slavery', where brief narrative text outlined the particular family or business connections an individual held with the slave trade. However, as individuals and journeys dated back approximately 200 years, furnishing their stories with rich biographical data was not always possible. Often, records were limited and the issue of missing or 'fuzzy' data was a recurrent one. At times we could identify accurate spatial coordinates, for example by looking at ship records to locate particular ports of departures and arrivals, or identifying specific estates or plantations. But much of the time this information was less precise - for example an individual's diary entry referring to a broad region, or a former place name that no longer exists. (Figure 4 shows an excerpt of a letter written by one of the individuals selected) In these instances we made estimates, and included fields for notes - 'Date notes' and 'Location notes' - where we could explain the limitations of our data and our process for devising estimations. An example of this is the journey of James Walcott from Western Australia to Mauritius in 1837 – while a record was obtained indicating Walcott's date of departure, no date of arrival was available. An estimated time of one month was calculated based on a proposal written in 1826 by James Stirling, in which Stirling estimates three weeks' travel from the Swan River Colony to Mauritius (Project Gutenberg Australia 2014). This calculation is detailed under the 'Date notes' field.



**Figure 4:** Frances Louisa Bussell's letter to Frances and Charles Bussell, dated August 30, 1833. Letters written by the WALBS individuals of interest were rich in detail but still often made only vague reference to key data such as locations and dates of events. Courtesy State Library of Western Australia.

## 3. Mapping influence: Deconstructing power and bias in data

Tracing the lives of these early colonists in Australia, tensions emerged around power and bias tied up within the data. Olaf Berg reminds us that data are never found but always created, through many moments of complex interpretation and decision-making (Berg 2020). The content and storage of data reflects relations of power at the times of it being recorded as well as retrieved. In the WALBS research, we noticed the influence of colonial authorities and frameworks underlying our data. Frequently, the names, lives and experiences of Aboriginal people, migrants, and people of colour were obscured or written out of colonial records. Documents such as diaries, paintings, and indeed maps, presented narratives that glorified colonial exploits and laid European claims over lands. For example, when researching the life of Frances Louisa Bussell – an early Western Australian colonist and cousin to Thomas Legal Yates, one of Jamaica's biggest slave owners - a book detailing the family history downplayed the events of a significant massacre led in part by one of the Bussell sons (Shann 1926). Similarly, surveying maps that outline which land was allocated to specific colonists, land is described as being 'granted' to Europeans when in fact it was never granted by Aboriginal people but only by colonial authorities. In using and presenting these sources to map out biographical data, we face the potential of inadvertently reconstructing colonial narratives. Thomas J. McGurk and Sébastien Caquard underscore the potential for mapmaking to serve as a 'tool of dispossession' (McGurk and Caquard 2020, 52). They explain that through colonisation, the primary function of maps quickly shifted from a means of communication and passing on of cultural knowledge, to claiming and carving up territories, thus framing land and resources in economic terms. When creating new maps based on data regarding powerful colonial figures, we have been mindful of these legacies. This is especially the case when drawing upon colonial maps themselves.

On the other hand, displaying these materials allows them to be interrogated and deconstructed. The narrative text fields were useful for these commentaries, for instance offering spaces where it could be explained that land was not in fact 'granted' by Indigenous people to colonists. Closely examining the biographies and narratives of the WALBS people of interest also offered opportunities to deconstruct the relations of power and discourses they embody. Explicitly mapping out the movements and activities of colonists and slavers - detailing their connections to particular institutions, businesses, and one another, as well as identifying hives of activity – visually represents their networks and spheres of influence. Catherine Hall, Principle Investigator on the LBS project, stresses the significance in interrogating slavers' and colonists' creations of narratives around empire and 'race', and frameworks of racial thinking and racial logics that construct 'otherness', to explore racisms and cultures that are still operating today (Hall 2018). We therefore targeted data such as first-hand comments regarding race, class or labour, as well as contextual biographical information that could shed light on individuals' ideological frameworks. For instance, we identified a report written by James Stirling – Western Australia's first governor, with ties to the slave trade – in which he describes Aboriginal people under the heading of 'Animal Productions', as well as a description in Stirling's biography that refers to his 'enviable Scottish pedigree and enormous family pride.' (Statham-Drew 2003, 1)

Despite the colonial legacies of maps, many have pointed to the decolonising potential of mapmaking. In her analysis of Sami activist and artist Hans Ragnar Mathisen, Maria Therese Stephansen illustrates how Mathisen's maps and mapmaking practices construct counternarratives that reinstate cultural knowledge of the Sami people – Indigenous people of the Sápmi region in northern Europe – in the face of official histories from Norway, Finland and Sweden (Stephansen 2017). She refers to Mathisen's well-known map of Sápmi, produced in 1975, which presents the region through the Sami people's cultural and geographical terms. This includes the use of Indigenous language – it features 920 Sami place names. The mobilisation of language can be a key means by which maps challenge colonial frameworks. Reflecting on the development of TLCMap for a project mapping out colonial frontier massacres in Australia from 1788 to 1930 (the 'Massacre Map'), System Architect Bill Pascoe refers to questions around the naming of particular sites and massacres that have both Aboriginal and non-Aboriginal names. Pascoe also highlights the choice of words such as 'perpetrators', 'murderers', 'attackers', 'killers' and so on, underscoring the politicised nature of particular terms (Pascoe 2022). In terms of data used in the WALBS project, similar questions are faced. When locating individuals at particular geographical locations, we use Aboriginal places names where possible, with non-Aboriginal names in brackets. Similarly, the narrative biographical text describes individuals of interest as 'colonists' and 'slavers' rather than 'settlers', and chronicles their acts using terms such as 'colonised' rather than 'discovered'.

The use of imagery and aesthetics also offers a powerful means by which to navigate and challenge colonial bias. Pascoe explains that rather than presenting a warning to Aboriginal audiences about photographs of deceased people, the Massacre Map project team chose not to include these images at all. He also speaks of considerations around the overall 'tone', for example which colour to make the dots placed on the map (Pascoe 2022). After initially selecting the colour red, Pascoe explains that to some this appeared too sensationalist and even violent, while others argued that this was in fact apt. At the same time, certain Indigenous communities view and use red as a colour of celebration, making it seem an inappropriate choice (the colour yellow was ultimately chosen). Imagery and tone in Mathisen's work is a key feature. His 1975 Sápmi map is detailed with references to Sami mythology and culture including a sun representing the gods, a shaman drum, a milk bowl (nappi), and old rock carvings, as well as traditional Sami designs and patterns (Stephansen 2017). When surveying available digitised images to illustrate the biographies of the WALBS individuals of interest, the majority were records such as early colonial paintings, maps, and photographs of colonists. Taken as a whole, and accompanying the biographies of slavers and slavery beneficiaries, these created a traditionally

European aesthetic reminiscent of early colonial histories. In an attempt to counter the weight of these archival materials, the WALBS team investigated the use of alternative images, for instance contemporary Aboriginal artworks. The work of Chris Pease, an Australian artist of Indigenous and European heritage, takes the traditional aesthetics of early European landscape paintings of Australia and superimposes imagery such as bullseyes, or land allocations created by white authorities, to underscore the impacts of colonisation on Indigenous people and land (see Figure 5). Juxtaposing biographical materials obtained from colonial and state archives with such contemporary imagery and narratives highlights the power, politics and omissions in archival data.



**Figure 5:** Chris Pease, *Land Release 3*, 2008. Contemporary artworks such as this might be used to provide counternarratives to early colonial paintings, maps and state archival materials.

## 4. Mapping digital lives: Embracing process and non-linearity

When navigating the complexities of mapping lives, endeavouring to present rich biographical data as well as conflicting narratives of the past, one approach might be to present multiple layers of data rather than singular journeys, fixed points, or static maps. This aligns with an increasing emphasis in cartography in thinking of mapping as a process rather than of maps as final objects or outcomes. Some have suggested this process-oriented approach is more common in Indigenous communities. Referring to the work of Gwilym Eades, McGurk and Caquard explain:

According to Eades (2015) ... while Indigenous persons were "mapping," which is a process-oriented activity indicative of an Indigenous way of seeing, Europeans were "mapmaking," which is an object-focused activity that reflects a Eurocentric worldview. (McGurk and Caquard 2020, 52)

McGurk and Caquard also draw upon Margaret Wickens Pearce's assertion that by viewing maps as processes, this allows for 'more experimental forms of mapping that can better mobilize the strengths of oral and performative formats as a means of transmission of Indigenous knowledge.' (McGurk and Caquard 2020, 52). Tristan Schultz, designer and Gamilaraay man with both Aboriginal and European Australian heritage, argues for a decolonising method that focuses 'on experimentation, creative insight, iteration and reflection of *how* mapping with people in situated contexts can occur, rather than *what* has been articulated.' Schultz points to the value in creating and recording conversation, narrative, workshops, and encounters (Schultz 2019, 2).

Finding ways to present the processes underlying mapmaking demands a rethinking of what maps look like and how they function. Sébastien Caquard and William Cartwright explain that 'Telling the

story about how maps are created and how they come to life in a broad social context and in the hands of their users has become a new challenge for mapmakers' (Caquard and Cartwright 2014, 101). Digital formats might be particularly well-suited to capturing these iterative processes by displaying layers of multiple, fluid, and diverse data. In their analysis of Indigenous web-mapping sites in Canada, McGurk and Caquard argue that online mapping offers significant potential in underscoring the complexities of place names and how they come to be, by allowing for the presentation of diverse multimedia content accompanying maps (McGurk and Caquard 2020). They cite Pearce, who highlights the ways that digital technologies allow for the linking of place names with their oral origins by embedding audio and visual files, thus contextualising places and names within broader historical and cultural stories (Pearce 2008, cited in McGurk and Caquard 2020). That is, digital modes might be particularly useful in presenting not only data such as geographical and temporal coordinates, place names, and so on, but data that contextualises how this geotemporal data was obtained and constructed. In terms of the WALBS data, an instance where this contextualisation might be useful is the contested location of the 'Peel settlement'. This is where one WALBS person of interest - Adam Wallace Elmslie - was based as agent to one of Western Australia's early colonists, Thomas Peel. Archaeologist Shane Burke has located the Peel settlement at a different location from historians Pamela Statham-Drew and Ruth Marchant James (Burke, Di Marcho and Meath 2010). This debate has been included in the narrative text, but digital content might also allow for layers of alternate locations or links to oral and written discussions around the debate. Digital layers of content could also be used to underscore the complexities of biographical data and narratives. For example, the life and history of Stirling has been the subject of debate due to Stirling's leading of the notorious Pinjarra Massacre. This debate intensified recently with calls to rename the city of Stirling (which were subsequently rejected). Within TLCMap, Stirling's biographical entries might include links to discussions around this history, including radio episodes and print media articles (ABC News 2021).

The fluidity of digital content can also enable non-linear approaches to the presentation of data. Though it remains in a theoretical stage, we have looked at organising data in non-hierarchised formats. In this conception, rather than data appearing through a series of stages in which users begin by clicking on place names which then lead to more layers or hierarchies of information, data would instead all appear at once. For example, when exploring an individual's mapped life story, users would be able to dive in through any piece of data, not only geographical points: all place names, images, links, and pieces of text would be given equal prominence. Pascoe describes this democratising approach using the metaphor of a tree: rather than presenting data in a structured hierarchy akin to branches and trunks, presenting it like a collection of leaves. Future research could experiment with how this might look in practice. The next step in our project is to extend this prototype to include a wider selection of individuals, incorporating further findings from the WALBS project, which will be ongoing until the end of 2023.

## 5. Acknowledgements

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#### 6. References

- [1] G. Arnott, Commemorating James Stirling? ABC News, 2021. https://www.abc.net.au/radionational/programs/the-history-listen/commemorating-james-stirling/13642650.
- [2] O. Berg, Capturing displaced persons' agency by modelling their life events: A mixed method digital humanities approach. Historical Social Research 45. 4 (2020) 263-89. doi: 10.12759/hsr.45.2020.4.263-289.
- [3] S. Burke, P. Di Marco and S. Meath, The land 'flow[ing] ... with milk and honey': Cultural landscape changes at Peel Town, Western Australia, 1829-1830. Australasian Historical Archaeology 28 (2010) 5–12.
- [4] J. Butler, Who's your mob? Aboriginal mapping: Beginning with the strong story. The International Journal of Narrative Therapy and Community Work 3 (2017) 22-26.
- [5] Fabrizio Di Pasquale, Cartography and the contemporary American novel. Nic Pizzolatto: An Example of Geocritical Analysis, in: E. Peraldo (Ed.), Literature and Geography: The Writing of Space Throughout History, Cambridge Scholars Publishing, Newcastle Upon Tyne, 2016, pp. 37-49.
- [6] C. Hall, 2018. Doing reparatory history: bringing 'race' and slavery home. Race & Class 60. 1 (2018) 3–21. doi: 10.1177/0306396818769791.
- [7] J. McCrystal, Singing the trail: The story of mapping Aotearoa New Zealand. Allen & Unwin, Sydney, 2019.
- [8] T. J. McGurk and S. Caquard. 2020. To what extent can online mapping be decolonial? A journey throughout Indigenous cartography in Canada. The Canadian Geographer 64. 1 (2020) 49-64. doi: 10.1111/cag.12602.
- [9] A. R. Novaes, 2020. Mapping Cross-Cultural Exchange: Jaime Cortesão's Dialogues and Documents on the Role of Indigenous Knowledge in Brazilian Exploration, in: B. Schelhaas, F. Ferretti, A. R. Novaes and M. Schmidt di Friedberg (Eds.), Decolonising and Internationalising Geography: Essays in the History of Contested Science, Springer, Cham, 2020, pp. 1-16.
- [10] B. Pascoe, The Massacre Map, Space, Data, Place: Digital Tools for Australia's Deep Past, 2022.
- [11] M. W. Pearce, Framing the days: Place and narrative in cartography. Cartography and Geographic Information Science 35. 1 (2008) 17–32.
- [12] Project Gutenberg Australia. Official Papers Relating to the Settlement at Swan River West Australia. December, 1826-January, 1830, 2014. https://gutenberg.net.au/ebooks14/1402751h.html.
- [13] T. Schultz. Decolonising Design: Mapping Futures, PhD thesis, Queensland College of Art, 2019. doi: 10.25904/1912/2253.
- [14] E. O. G. Shann. Cattle Chosen: The Story of The First Group Settlement in Western Australia. Oxford University Press, London, 1926.
- [15] P. Statham-Drew, James Stirling: Admiral And Founding Governor Of Western Australia. University of Western Australia Press, WA, 2003.
- [16] R. T. Tally Jr., Adventures in literary cartography: Explorations, representations, projections, in: E. Peraldo (Ed.) Literature and Geography: The Writing of Space Throughout History, Cambridge Scholars Publishing, Newcastle Upon Tyne, 2016, pp. 20-36.
- [17] M. T. Stephansen, A hand-drawn map as a decolonising document: Keviselie (Hans Ragnar Mathisen) and the artistic empowerment of the Sami Movement. Afterall: A Journal of Art, Context, & Enquiry, 44. 1 (2017) 112–121. doi: 10.1086/695520.