Afterword

Michael Falk

Why in "Indian Rim"? When we began DH in the Indian Rim, we had the utopian desire to construct a new research network in the Global South, to rival the Transatlantic network that continues to dominate scholarly life. What could digital humanists in South Asia, Australasia, East Africa and the Persian Gulf teach one another about digital scholarship? How does Digital Humanities (DH) look from the Indian Ocean?

The Indian Ocean does present challenges as a shared space to work. There are few existing institutional links, and what links there are, are typically mediated by Atlantic institutions. This was readily apparent at our first conference, *digital + humanities*, held online in 2019. At that conference, we successfully attracted speakers from South Africa, Nigeria, Abu Dhabi, Mauritius, Australia and India. But our participant from Abu Dhabi worked at a satellite campus of New York University, our Mauritian colleague worked in an academic program certified by a French university, and many of our collaborators from India were either educated or held Faculty positions in Britain or America. I myself convened the conference from my home office in England.

Is it possible—or even desirable—to try and escape the Atlantic? What have we been able to achieve, working within and across the Indian Ocean? Does it even make sense to think of the Indian Ocean as a distinct intellectual *milieu*, when so many scholars from the region have taken up degrees or faculty positions in countries outside it?

Today, India and Australia are well-established players in global DH. It is no surprise that this book, though it began with higher aspirations, has resolved into a collaboration between scholars from these two nations. As these contributions indicate, scholars in India and Australia are flourishing in the mainstream of DH: they build databases, remediate archives, analyse text computationally, critique technology humanisitically, and wonder how to convert DH from a field of research into a viable teaching program under local conditions. In these respects, neither Indian nor Australian DH need to make excuses for themselves.

This is not enough to justify "DH in the Indian Rim," however. If scholars around the Indian Ocean Rim wish to form a distinctive group, then their group must have some distinctive qualities. What are they?

As Cohen and Jana suggest in their introduction, the distinction lies in our shared histories of colonisation. To be sure, these histories are not the same. Australia is a settler-colonial state with a white majority, hundreds of Indigenous peoples and a growing plurality of global migrants—including some 600,000 from India (Chand, this volume). India is a large federation of postcolonial states, with an enormous global diaspora, and its own history of domination by caste, religion, language and region. On the surface, these histories of colonisation seem hardly the same, but they have bred in both countries a powerful hunger for postcolonial—or decolonial—approaches to DH.

In what follows, I discuss three main strands of postcolonial DH, indicating how Indian and Australian digital humanists have made unique and complementary contributions to them. The strands are *counter-archiving*, *multilingual DH* and *jugaad*, or *minimal computing*. Like all strands, these three are intertwined, but I hope to make them sufficiently clear for discussion. I conclude with a reflection on possible futures for DH in the Indian Rim. Indigenous scholars are entering the Australian academy in greater numbers. Indian scholars are reviving Sanskrit learning, and using it to critique dominant Western methodologies, with ever greater success. These developments raise the possibility of a fundamentally new kind of Digital Humanities, with new origin stories and new directions, liberated from the inspiring but also stifling myths that have hitherto given DHers their sense of academic identity (see Jones 2016).

Counter-archiving

Cohen presents a splendid example of *counter-archiving* in his chapter on the Strehlow Research Centre (SRC). In this case, the project 'counters' traditional archives by respecting the cultural authority of its subjects. Although much of the research Cohen describes is technologically at the cutting-edge, he asserts quite rightly that the project's real innovation lies "in developing protocols and processes for digitising culturally sensitive films" (this volume). The SRC is a closed, rather than an open archive. It gives Arrernte people control over their cultural heritage. As Cohen's impressive bibliography demonstrates, this closedness of the archive has not prevented research. Articles and monographs continue to flow. It is quite possible that closing the archive may have *opened* Arrernte people to research, by giving them confidence that they can set the terms. Of course the most important aspect of the project is its usefulness to traditional owners, who are drawing on the archive to "revitalise ceremonies that haven't been performed for generations."

The preeminent theorist of postcolonial DH is Indian-American scholar Roopika Risam. In *New Digital Worlds* (2019), she prpounds a theory of postcolonial "world-making," which can usefully be applied to Cohen's project. As Risam sees it, postcolonial DH is both critical and practical. On the critical side, postcolonial DH scholars "addresses underexplored questions of power, globalization, and colonial and neocolonial ideologies that are shaping the digital cultural record in its mediated, material form[.]" On the practical side, postcolonial DH scholars "[design] new tools, methods, and workflows that are based in local practices [...] to create space for underrepresented communities to populate the digital cultural record with

their own stories." (Risam 2019, 9) Both these sides of postcolonial DH are exemplified in Cohen's project. It began with a critique of the Strehlow Research Centre's settler-colonial heritage, and morphed into a practical project to digitise the archive according to Arrernte cultural protocols.

India's history of colonisation is different to Australia's, and accordingly the critical side of counter-archiving is different. The practical side, however, is often similar. Consider the reflections by C.S. Lakshmi, long-time curator of the SPARROW archive in Mumbai. She set up the archive to combat dominant narratives about the "Third World," which is "supposed to worry about slums, environment, legal aid for women, health care, rural development and so on" (quoted in Kalra and Nene 2020, 142). Her archive allows women to tell the stories they wish to tell about themselves, rather than fit into a global developmental narrative. On the critical side, therefore, this project is quite distinct from Cohen's: Cohen critiques a settler-colonial archive in the possession of a white ruling class, and helps to return the archive to its traditional owners. Lakshmi sets up a new archive to tell stories that are missing from existing archives about the "Third World." On the practical side, however, Lakshmi's project converges with Cohen's:

> What happens is the demand for fully open archiving comes from the West. I'm not for fully-open archiving. I'll tell you why. For example, let me say I have interviewed an Indian woman worker who tells me all about her life: her personal life, her sexual life, everything. It's available with the archives. We have also digitized it in a way that people can read it on their computer; it's possible. I can give excerpts of it, for example, but we can't make the whole thing available online because I feel that when you put it on the web, millions of people can read it for no purpose. (quoted in Kalra and Nene 2020, 143)

Like Cohen, Lakshmi has developed protocols that rub against the dominant digital ideology of "openness" or the "free flow of information" (see Tkacz 2015, chap. 1). In this case, Lakshmi has developed protocols informally over many decades with her informants, devising a locally appropriate division between revelation and concealment (she rejects the public/private distinction: Kalra and Nene 2020, 150). Lakshmi is typical. Surveying the scene of Indian DH, Shah (2019) argues that India has entered a "post-access" phase of digitisation.

In Australia, counter-archiving is increasingly well organised, overseen by Indigenous scholars and archivists. Kukutai and Taylor (2016) have edited a seminal collection on *Indigenous Data Sovereignty*, with contributors from Australia, Aoteoroa/New Zealand and North America. Organisations such as the Indigenous Data Network and the Indigenous Archives Network provide platforms for Indigenous scholars and archivists to critique existing archives and organise to build new ones. The Commons (2022) has subsequently adopted the CARE principles as core guidelines, alongside the more familiar FAIR principles.[1] Major DH archives such as

[1]CARE (Collective benefit, Authority to control, Responsibility, and Ethics) emphasises the rights of groups to control data about them, as opposed to FAIR (Findable, Accessible, Interoperable, Reusable), which emphasises the importance of sharing data to guarantee the integrity of research.

People Australia, Austlit/Blackwords, and Trove have, with varying degrees of success, either brought in Indigenous managers or adopted more culturally sensitive practices. Indigenous scholars are increasingly prominent in public debates about knowledge institutions. In the last two years, Thorpe, Sentance, and Booker (2023) and **FIRST NATIONS FOCUS GROUP** have released highly publicised reports full of stark but constructive criticism about the world's pre-eminent knowledge institution: Wikipedia. Although many Australian researchers (the author included) continue to work in the traditional digital fields of text analysis and cultural databasing, it seems that Australia is entering its own "post-access" phase of DH.

Chinese/Indian archives in Oz; diasporic DH?

Multilingual DH

India and Australia are profoundly multilingual, as are most countries in the Indian Rim. India is **GET STATS**. Australia is home to more than 200 Indigenous languages, and hundreds more community languages, although the hegemony of English renders many minority languages vulnerable **CHECK STATS**. In this respect, DH in the Indian Rim again contrasts with its Atlantic counterpart. Although of course there are many Indigenous languages in North America, and several European nations with more than one official language, DH in the Atlantic has seldom had to grapple with the same degree of multilingualism as DH in the Indian Rim.

In India, multilingualism is essentially compulsory. It is not possible to research digital artefacts or platforms without encountering multple languages. This is illustrated beautifully in Chand's chapter. Chand is doubly diasporic: a member of Fiji's Indian minority, who subsequently migrated to Australia. Her research into dating apps reveals a network of languages linking members of the Indian diaspora across cities and oceans. Some languages are supported on some platforms, and some on others. She must rely on her own multilingual proficiency in order to examine and understand the platforms. Compulsory multilingualism is also a feature of Nayak and Rana's research. Even though they use an English translation of the text, they must be constantly mindful of the underlying Sanskrit. Sometimes a Sanskrit word surfaces in the English translation (e.g. *stridhana*). At other times, the translation requires careful interpretation (e.g. when the word "class" is used in the meaning of "caste"). English has not been in contact with Sanskrit as long as it has been in contact with Latin or Greek. The Indian scholar writing in English must always be aware of a gap between the text under study and the academic text they are writing. Thus in this case, too, multilingualism is *compulsory*, where in the Atlantic world it is often avoidable.

Indian DH projects are almost inevitably multilingual. The Asian Art Archive's Bibliography of Modern and Contemporary Art Writing of South Asia records more than 12,000 pieces of art writing in 12 languages (Ragavan 2020). **Other examples**

Despite the hegemony of English, DH in Australia has been unusually multilingual for a long time. This is probably due to the relative prominence of field linguists, archaeologists and

anthropologists in Australian DH. The flagship project for multilingual DH in Australia is PARADISEC, a large digital archive that aims to conserve the cultural and linguistic heritage of the Australia-Pacific. It is a venerable project, now in its **25th** year. It contains recordings, videos and written materials in **INSERT NUMBER** languages from across Australia and the Pacific. As I discuss in the next section, PARADISEC has taken special measures to make its materials available to the communities it represents, and has control measures in place to allow them to protect their cultural data. Other Australian projects in a similar vein include: Austlang, which provides metadata abotu Indigenous Australian Languages; the Living Languages Platform, which provides free dictionary apps of Indigenous Australian languages; and the AUSLAN Signbank, an innovative video dictionary of Australian Sign Language.

These classic Australian examples of multilingual DH have mostly been aimed at specialist researchers and the communities they study. More recently, innovative DH researchers have found ways to reach a wider audience. As part of the *Waves of Words* project (mentioned in Burrows, this volume), Hendery and Burrell (2019) developed *Glossopticon*, a virtual reality experience in which users could explore the linguistic diversity of the Pacific with all the senses. Users could fly across the Pacific, following known canoe routes, and hear recorded speech from PARADISEC on the islands. In a different strand of the project, Antoinette Schaepper and I experimented with machine learning, concept mapping and string matching to hunt for shared vocabulary in Australian, Papuan and Polynesian languages. It has hitherto been difficult to incorporate multiple languages in the traditiona DH fields of text analysis and cultural analytics. But Indian and Australian DHers are steadily making the effort.

Jugaad; or minimal computing

One of the most important aspects of postcolonial DH is *jugaad*, or minimal computing. As the Hindi name for the practice suggests, minimal computing has been a key theme in Indian DH, where internet and computer penetration is far lower than in the Atlantic strongholds of traditional DH. *Jugaad* is an untranslatable word that intersects with the English "makeshift" or "hacking." As Ray Murray and Hand (2015, 144) observe in their canonical treatment of the topic, *jugaad* resembles other practices of "technological disobedience" in the Global South, including "*Gambiarra* in Brazil, *Rebusque* in Colombia, and *Jua Kali* in Kenya." The concept is tricky, as Mukherjee (2020) points out. If *jugaad* is an inherently disobedient practice, how can it be incorporated into the disciplined structures of an academic degree? Ray Murray (2020, 130) herself is more sanguine, observing an interesting fact about DH pedegogy in India: India's first graduate DH degree was not founded in an English or History department, as is usually the case, but was founded in a school of Design. In India, it seems, DH lays a stronger emphasis on *making things work* rather than *analysing the cultural record*.

The same cannot be said for Australia. To my knowledge, only four Australian Universities have offered teaching programs in DH: Monash University, the Australian National University, Western Sydney University and Melbourne University. In no case was the program offered as

part of a degree in Design. Literature, linguistics, history and information science have been the dominant disciplines, as far as DH pedagogy is concerned.

But there has been a role for minimal computing and critical making in Australian DH. The most poetic example again comes from PARADISEC. PARADISEC itself, like many decades-old Humanities databases, is optimised for use on a desktop connected to broadband internet. Desktops with broadband connections are relatively rare in the steamy villages of Vanuatu or the highlands of Papua New Guinea. Desktops are likewise less common than they ought to be in remote Aboriginal communities in Australia. Accordingly the project has developed technology to make linguistic materials available on smartphones using a local WiFi network projected from a Raspberry Pi. Linguistic and cultural data can be loaded onto the computer, which is robust and draws little power. The computer generates a local network, and members of the community can access the database. **REFERENCE**

In my own work, co-ordinating the Digital Studies program at the University of Melbourne, I have taken inspiration from *jugaad*. To teach my first-year students how to make computers do things, I have them play *Turing Tumble*, an AUD$100 mechanical computer. I have them create games using bitsy, a web-based "8-bit" game development program. I have them submit their assignments in the *PechaKucha* format, a highly constrained kind of slideshow. Of course, at the University of Melbourne, such constraints are artificial. We are a wealthy institution where—despite the usual grumbles—resources are plentiful, and our (mostly) privileged students are (mostly) able to obtain what they need. But the inspiring examples of my Indian colleauges—and other practitioners in the Global South—have demonstrated the value of constaint, if we want our students to make things *critically*.

Futures past

DH in the Indian Rim is an incipient community. Ambassadors of Indian DH, such as Rahul Gairola and Asha Chand, have brought their knowledge to Australia. Others, such as Ujjwal Jana, Maya Dodd, Dibyaduti Roy and Nirmala Menon, have invited Australian collaborators into their circles. Building the rest of the network, across the rest of the Ocean, will take time and effort, but I am convinced that both are worthwhile.

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