Designing for Language Revitalisation

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Abstract

How do we design technologies, places, and activities that increase the survival prospects of a threatened language? The answer begins and ends with people, especially those who speak the languages in question. Too often, technologies for capturing languages do not offer an effective value proposition that would encourage large-scale participation by linguistic minorities in documenting their languages. A case in point is the Aikuma mobile app for crowdsourcing oral language documentation. I discuss Aikuma before reporting new designerly approaches in the areas of storytelling and language learning. These new approaches address the same challenge as before, only with better value propositions, while promising to deliver language documentation as a byproduct.

Keywords: oral cultures, storytelling, language learning

1. Introduction

How can people from dominant cultures encourage linguistic minorities to keep their languages strong? Language resources and technologies do not appear to be slowing the pace of language loss. Moreover, in our rush to preserve languages we may recapitulate the causes of language endangerment. Our preservation technologies enact *our* agendas. Our agency overrides local autonomy and self-determination. We enter marginalised communities with money, technology, a global language: an intoxicating blend that leaves local people in no doubt about where the real power lies.

In this paper I report on three design innovations that I have been exploring over the past decade in a bid to answer the opening question. The first innovation is technologisation, or: 'I will make you a thing' (Section 2.). The second works to extend the reach of multiculturalism: 'I will recognise your language' (Section 3.). The third seeks to leverage technology to transform the interactions between speakers of threatened and dominant languages in any place where they are thrust together; in effect we ask: 'How do I show respect and behave appropriately?' (Section 4.).

Figure 1: Recording Tembé (Cajueiro, Pará, Brazil)

2. Capturing Languages

It is not difficult to record large quantities of audio in minority communities (Figure 1). The challenge is to ensure that recordings are interpretable – to know what was said and what it meant – especially in the presence of ambient noise and audience participation. With 'careful respeaking', the source is repeated phrase by phrase in a quiet place (Woodbury, 2003). With 'oral translation', it is interpreted sentence by sentence into a language of wider communication. We bypass the 'transcription bottleneck' (Figure 2).

The Aikuma app provides a text-free interface to support respeaking and oral translation, shown in Figure 3(a) (Hanke and Bird, 2013; Bird et al., 2014). Users press and hold the left play button to hear the next segment of audio source. They can press it multiple times to hear the same segment over again. They press the right record button to respeak or translate. This process continues until the source has been fully processed. Aikuma generates a second audio file, time-aligned with the source. It supports playback of the source or translation or the two interleaved. The target language audio can be transcribed, resulting in audio, phrase-aligned to a written translation (Figure 3(b)).

The Aikuma app supports peer-to-peer file sharing, enabling us to demonstrate the concepts of storage and transmission to people who live far off-grid in remote villages and who have never experienced the Internet or digital archiving.

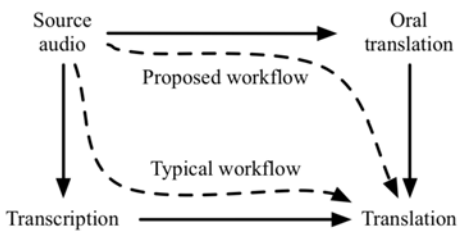
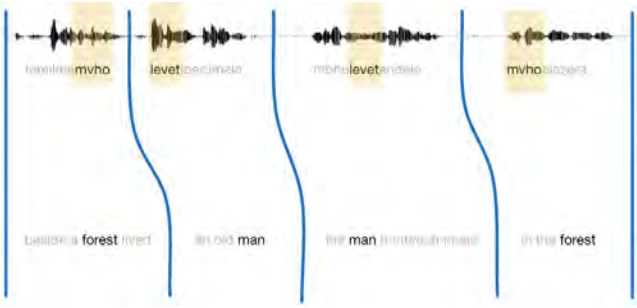


Figure 2: Bypassing the Transcription Bottleneck

(a) Translating into Portuguese



(b) Bilingual audio phrase-aligned with translation

Figure 3: Recording and translating using the Aikuma Android app

The Aikuma app has been extended with support for elicitation and editing (Blachon et al., 2016), and with support for images and gestures (Bettinson and Bird, 2018).

The premise of Aikuma was crowdsourcing, yet this did not happen. We had no value proposition for participation (Bird, 2018). Why should speakers of endangered languages use this app?

Aikuma was designed with two audiences in mind: elderly people who command the 'ancestral code', and unborn generations who want to revitalise their ancestral language. As such, it did not resonate with the very people who would need to animate the work in the present generation. In my experience in many minority communities, local people prioritise their economic prospects over their linguistic heritage. They are far more likely to ask for help with the dominant language than to ask for help with documenting a local language.

In our search for an effective value proposition, my colleagues and I tried to articulate a guiding vision. There were plenty of organisations promising to *halt* or to *slow* the tide of language loss, visions that seemed alternatively unrealistic or uninspiring. In time, we settled on a new vision, to *create a world that sustains its languages*. We inaugurated the Aikuma Project in 2015 with an initial task of designing a new storytelling format, returning to the meaning of Aikuma as 'meeting place'. At first we adopted the name 'treasure language', proposed by the Rama people of Nicaragua as a more positive alternative to terms such as threatened, disappearing, or dying language. In 2019, reflecting on the goals of celebrating and connecting, we changed the name to 'Language Party'.

3. Celebrating Languages

A *Language Party* is a community gathering where people celebrate locally-spoken languages and recognise those who are keeping them strong. Local storytellers share tales in their mother tongue then translate them into the dominant language of the audience (Figure 4).

Storytellers include indigenous people, migrants, expatriates, and refugees. They are not professional performers, but living conduits for languages that are little known. By speaking and sharing their languages, storytellers forge a deeper connection to their community, enriching its common life. Storytellers and story-listeners renew their resolve to keep their languages strong. Everyone comes to belong in a new way. Audience members have described the experience as 'an awakening', 'unexpectedly enjoyable and inspiring', 'moving and compelling' and 'a privilege to be part of'.

We have held Language Parties in places with strong linguistic diversity, starting in the San Francisco Bay Area, expanding across Australia, and spreading to many other places during the International Year of Indigenous Languages in 2019 (Figure 4(b)). Many events have been recorded, and the stories and their translations may in time come to be treated as a corpus in its own right.

The effectiveness of a Language Party lies in the storytellers, in the connections they make as they prepare for the performance, and in the chemistry that develops between storytellers and story-listeners.

Language parties extend the multiculturalism movement beyond cuisine and costume into a space that is a primal index of identity. We believe that many of the world's languages can be sustained if we adapt our urban places to embrace diversity, creating culturally safe spaces where people do not need to forget who they are in order to belong.

The approach works because it connects with the struggle of minority groups for *recognition* (McBride, 2013). Recognition Theory explains how personal identity is shaped by recognition, and how non-recognition inflicts harm on ethnic and linguistic minorities 'imprisoning someone in a false, distorted, and reduced mode of being' (Taylor, 1994, 25).

The framework of recognition also helps explain the popularity of technologies that are claimed to 'save languages' (Arnold, 2016), but whose power derives not from their content but from the recognition they bestow, in this case, recognition in the digital realm.

Both language apps and language parties leverage the prestige of the dominant culture in order to create symbolic spaces for the speakers of threatened languages, who are invited to enter and perform.

This is not to deny the significance of the approaches but to account for it, and to highlight the ongoing need to decolonise the intersection points of threatened and dominant languages. We conclude by discussing another space for design, beginning with the question: what happens when we take seriously local desires to participate in the mainstream economy and to learn the dominant language?

(a) Storytellers from Language Parties

(b) Language Parties: Prospective, Planned, and Confirmed

Figure 4: 'Stories in the original languages told by people who live in our midst' (`languageparty.org`)

4. Learning Languages

Threatened languages do not exist in isolation but in competition with a locally dominant variety. Speakers may use the local language at home and in the marketplace, switching to a dialect of the dominant language at school or in the workplace or when travelling to the provincial capital. The domains of use demonstrate the prestige indexed by each language (Fishman, 2001). When people representing the dominant culture enter this contested space, it is usually for a well-defined purpose and they generally speak the dominant language. However, there is another possibility, as we see in a remote community in Western Australia:

> The desire of non-Indigenous people (such as teachers, nurses and other community workers) to learn a Pilbara language was recognised as having the potential for positive flow-on effects throughout the community, in terms of improved provision of key services (especially in the health and education spheres), as well as increased awareness of Indigenous people's language rights. Both outcomes increase the prestige of Pilbara Aboriginal languages and create space within the broader community for language revitalisation to occur. (Dixon and Deak, 2010, p126)

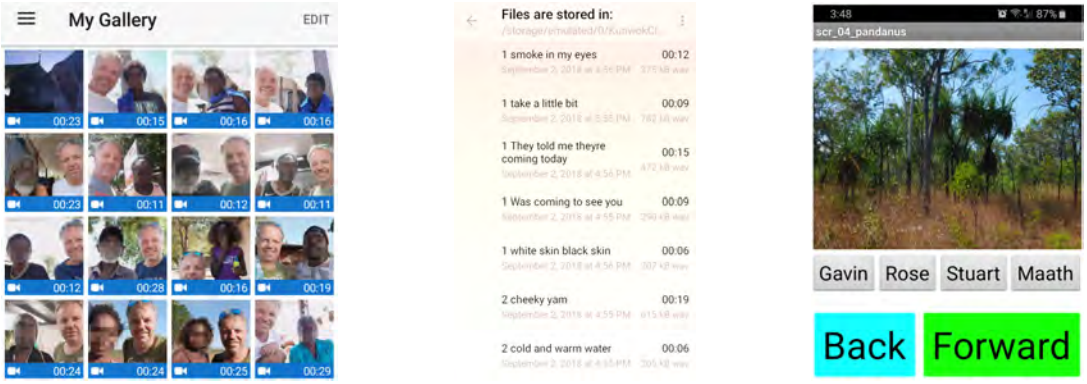
There is a risk of recolonisation when outsiders appropriate the local language. However, in places where there is already a long history of contact, a newcomer's efforts to learn language can be a welcome form of recognition. A choice phrase or greeting creates a 'moment of connection' (Galliford, 2010). Community engagement and language learning can take place concurrently (Christie, 2008). In learning the local language, outsiders remind themselves that they are in someone else's place, and acknowledge "the freedom of [local] people to lead the kind of lives they have reason to value" (Sen, 1999).

I have begun to explore this approach by learning Kunwinjku, an indigenous language of northern Australia spoken by 2,000 people. In the course of this work I have appropriated general-purpose mobile technologies to support my own oral language learning (Bird, 2019). The first is for learning the culturally appropriate way to address people, such as a kinship term, by capturing a selfie and recording a bilingual conversation about how we address each other (Figure 5(a)). The second is for efficiently capturing key vocabulary and phrases for achieving the task that justifies the outsider's presence (Figure 5(b)). The third is for obtaining 'comprehensible input', speech just beyond one's current level where one can leverage physical context to make meaning without access to translation (Krashen, 1981). These methods create bilingual resources which serve language learning *in either direction*. I used these methods to support my learning of Kunwinjku, and local people used them in learning English.

5. Conclusion

Most technology panaceas aimed at 'saving languages' are driven by hyperbolic valorisation, capturing language with minimal regard for local people and their struggles (Hill, 2002). There has been no theorisation about how language capture technologies reverse language shift, and no systematic evaluation of their effectiveness. There are other opportunities for language technologies: to support learning of threatened languages, and to support automatic processing of the low-prestige varieties of dominant languages that these people may already use to engage the outside world. Instead of treating the speakers of threatened languages as mere conduits, they could be viewed as collaborators or even commissioners of language work, as has occasionally been advocated by linguists (Rice, 2011; Sapién, 2018). This is consistent with their entitlement to autonomy and self-determination as set out in the United Nations Declaration on the Rights of Indigenous Peoples.

How then can people from dominant cultures encourage linguistic minorities to keep their languages strong? We must engage with local people in addressing the causes of language shift, and in strategising about which domains can be reclaimed from the dominant language (Fishman, 2001). I have outlined two highly generative responses to the question. The format of 'Language Parties' brings speakers of stigmatised varieties into places of high culture where recognition leads to pride and a new sense of belonging. Learning of a stigmatised language by outsiders, with permission, demonstrates deep respect for local knowledge authorities. Language resources – and even language vitality – may emerge, but we do not lose sight of the speech community and their sovereignty.



(a) Learning terms of address by capturing selfies and recording a short bilingual dialogue

(b) Learning key phrases by capturing spoken terms and translations

(c) Learning linked to descriptions of places

Figure 5: Appropriating Simple Apps to Support Oral Language Learning

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