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Language documentation and language description: theory and practice

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Overview

- A bit of history
- Some terminology and definitions
- Relationships
- The future?
- Conclusions

A bit of history

- In the 18th and 19th centuries the study of language was dominated by historical and comparative considerations (diachrony), especially the reconstruction of past histories of languages and their classification into families
- Dominance of 'tree model' of relationships (cf. 'wave theory')
- Data primarily came from books (especially classical languages, e.g. Sanskrit, Ancient Greek, Gothic Bible)
- Interest in 'exotic' languages with data from missionaries, explorers, travelers, colonial officers (cf. 'armchair linguists')
- Following Frazer, Morgan et al. use of questionnaires and written correspondence with data collectors

Man, his relationships, etc.

Aunt ... Baby ... Blackfellow Blackwoman ... Boy ... Brother Brother-in-law ... Child ... Daughter Daughter-in-law Father Father-in-law ... Granddaughter Grandfather ... Grandmother ... Grandson Husband Man ... Mother Mother-in-law... Nephew

Daisy Bates, Western Australia vocabularies

A bit of history

- Some researchers became interested in local folklore and 'dialects', which were seen as disappearing in the face of national (standard languages and cultures), e.g. Grimm brothers
- Beginnings of fieldwork with face-to-face interviews with "best speakers" NORM (non-mobile old rural men) – dialectology. Method: long questionnaire to elicit single word answers. Goal: creation of linguistic atlas showing geographical distribution of forms
- Began and flourished in Germany, France, Italy in 19th century

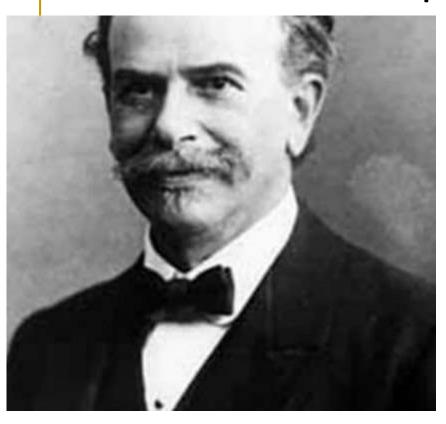
My personal hero



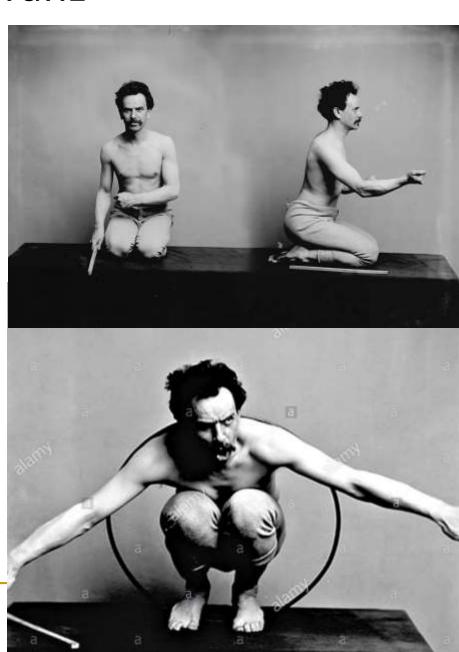
A bit of history

- Edmond Edmont 1896-1900 surveyed 639 rural locations in French-speaking areas of France, Belgium, Switzerland and Italy using 1900 item questionnaire
- for Jules Gillieron's Atlas Linguistique de la France (published in 13 volumes 1902-1910)
- Became a model for dialectology data collection elsewhere, not seriously challenged until 1960s

Our next hero – Papa Franz



Read more in King 2019



Language documentation 1

- Term widely used in late 19th and early 20th century to refer to the study of indigenous languages in the Boasian tradition, characterised by:
 - brief summer fieldwork
 - collection of dictated texts, vocabulary and grammatical forms
 - part of broad anthropological enterprise to 'save' disappearing cultures
 - part of a humanistic enterprise to understand the nature of human beings and societies, combatting racism and discrimination (King 2019)
 - training and engagement of native speakers as data producers and co-authors
 - use of latest technology



- goal: production of 'Boasian trilogy': text collection, grammar, dictionary
- (much material ends up in archives but not as a goal)

Language documentation 2

 "concerned with the methods, tools, and theoretical underpinnings for compiling a representative and lasting multipurpose record of a natural language or one of its varieties" (Himmelmann 1998)

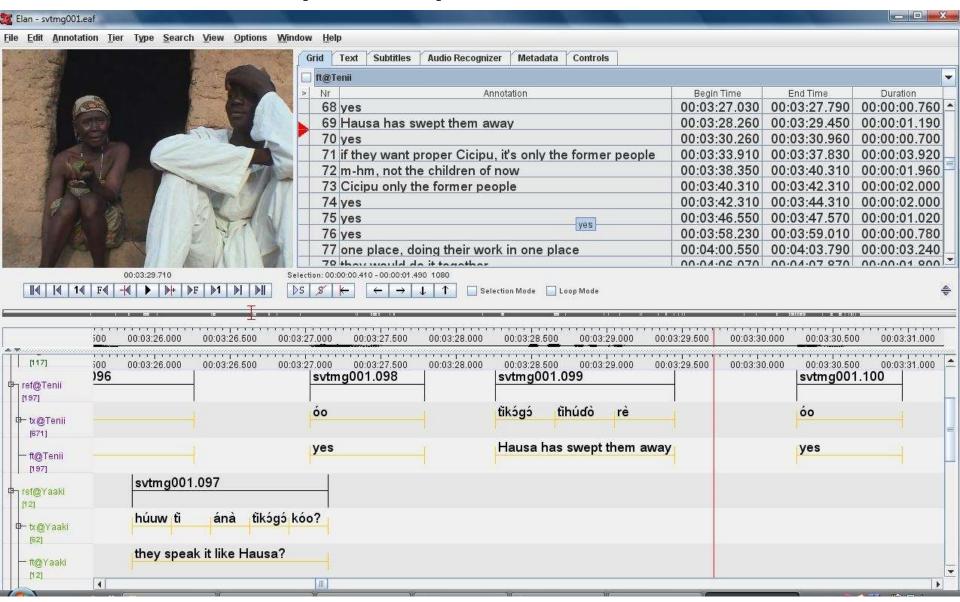
Features:

- Focus on primary data and analysis
- Accountability
- Long-term storage and preservation of data and analysis
- Interdisciplinary teams
- Cooperation with and direct involvement of the speech community

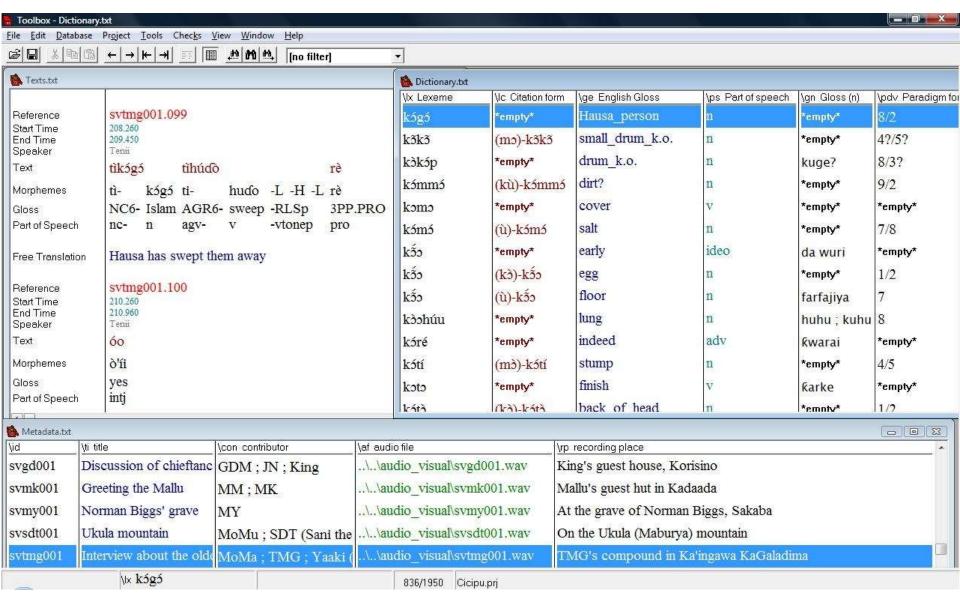
Language documentation – outcomes

- Narrow view: outcome is annotated and translated corpus of archived representative materials on use of a language, cf. DoBeS/TLA, ELAR separate from description (language as system)
- Broad view: outcome is transparent records of a language ("for philologists in 500 years time"), with description and theorisation dependent on them (Woodbury)

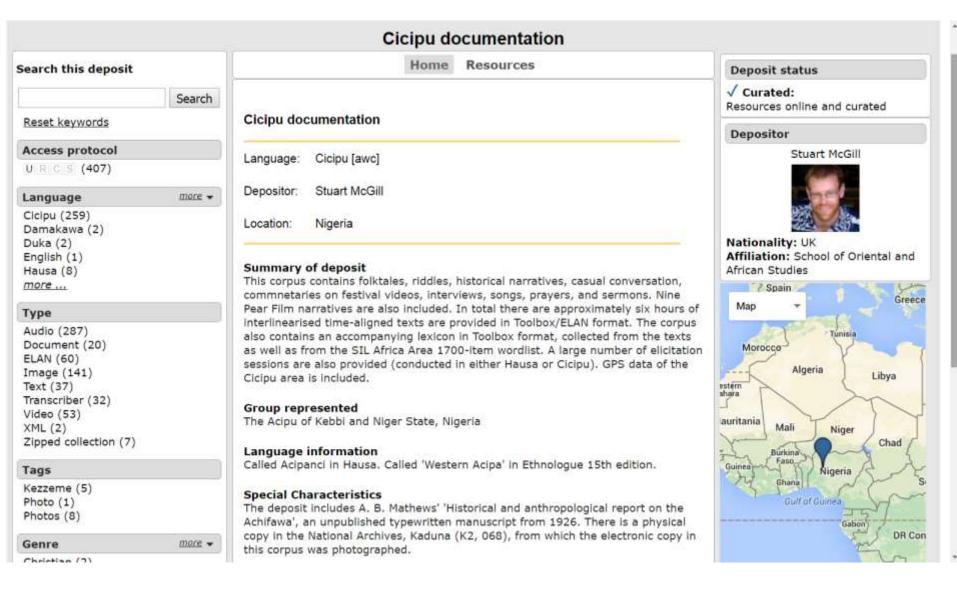
McGill Cicipu corpus



Cicipu annotations



Cicipu archival deposit



Language documentation 2 – drivers

- developed since 1995 in response to the urgent need perceived by researchers to make an enduring record of the world's many endangered languages and to support speakers of these languages in their desire to maintain them, fuelled also by developments in information, media, and communication technologies
- concerned with roles of language speakers and communities and their rights and needs
- is not limited to endangered languages can be applied to any linguistic variety with any level of vitality

What's new in language documentation 2?

- Data focus Himmelman's "primary data", but also structured data derived from processed materials (transcribed, translated, annotated digital files). A collection of such material is called a corpus. See Himmelmann 2012.
- Accountability we expect the materials ("primary" and analysed) to be made available to others. Some have argued for reproducibility, i.e. the possibility of recreating the researcher's analytical steps to see if the outcome is the same (or different). See Berez-Kroeker et al 2017. We discuss this later.
- Preservation long-term storage in safe archival facilities where the data and analysis (corpora) can be safeguarded for the long term (including refreshing data formats to take into account changing software)
- Reliance on software tools data and analysis is stored in digital files and access is mediated via computer software

Language description

- Looks at language as a structural system, abstracted away from use
- Is concerned with questions like:
 - What is a language system/grammar?
 - To what extent are languages alike and to what extent are they different?
 - What does this tell us about the human mind?
 - What does this tell us about human communication?
 - How does a language system work and how is it acquired?

Language description requires

- Asking the right questions/collecting relevant data. Rice (2005: 236) argues that formal syntactic theory forces a grammar writer to ask questions that are not very likely to be asked otherwise.
- Making generalisations and drawing distinctions about the grammar of languages. In other words, descriptions must be generalizable, rather than simply observational, i.e., must represent broad statements about the described linguistic system.
- Labelling and categorizing the phenomena in one way or another (i.e., you need a 'metalanguage', comparative concepts, terminology ...)

Language description requires

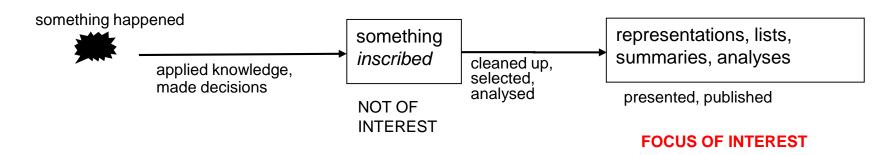
- A theory ('framework') that underlies the labels and categories, e.g., 'generative' or 'functional' mechanisms, and a model for argumentation and explanation
- Presenting data and analyses in a way that is acceptable and interesting to a wider audience – a "grammar" or "dictionary" as an academic object, organized in a particular socio-culturally accepted way

Documentation <--> Description

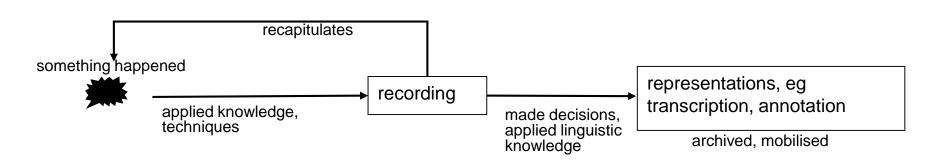
- Himmelmann 1998 claims they are essentially separate activities and have different epistemologies, methods, and goals
- Description typically uses a narrower range of methods than language description: elicitation (word lists, questionnaires, translation, grammaticality judgements) vs. participant observation and data collection in its socio-cultural context ('naturalistic language', e.g. conversation), and/or experimentation (stimuli, games).
- Descriptive sources often not tracked (Gawne et al. 2017) and hence research is not reproducible (Berez-Kroeker et al. 2019)

Workflow

Description



Documentation



Description vs. Documentation 2

- Documentation 2 needs an epistemology for media capture audio and video recording
- Need to pay attention for good practices in recording eg. microphone choice and spatiality in audio, framing-lighting-editing for video ("recording arts")
- Some concern for socio-cultural context ('ethnography of speaking')
- Concern for data structuring and data management eg. 'portability', relational modelling, XML
- Concern for 'standards' and cross-project comparability, especially typology and data mining
- Concern for ethics of research documentation collects language use in 'intimate' personal contexts, impacts on potential users and uses of documented speech events
- Changing models of research and relationships with people

Components of documentation

- Planning language, funding, fieldwork, equipment
- Recording of media and text (including metadata) in context
- Transfer to data management environment
- Adding value transcription, translation, annotation, notation and linking of metadata
- Archiving creating archival objects, assigning access and usage rights
- Mobilisation creation, publication and distribution of outputs

Recording

- audio basic and familiar in modern linguistic work.
 Important considerations: environment, equipment choice, microphones, monitoring, file type (wav not mp3 generally recommended)
- video immediate, rich in authenticity, multi-dimensional in context, great interest to communities, can be produced independently by community members BUT more difficult to produce, process, access without time-aligned annotation, transfer, store and preserve
- text compact, stable, easy to store, access and index, can express hypertextual links to other text and media BUT relies on literacy and is less rich than audio/video

- metadata data about the data: needed to identify, manage, retrieve data. Provides context and understanding of data to oneself and others. Types:
 - Cataloguing identifying and locating data, eg. language code,
 file id, recorder, speaker, place of recording, date of recording etc
 - Descriptive kind of data found in a file, eg. abstract/summary of file contents, knowledge domain represented
 - Structural specification of file organisation, eg. textfile is a bilingual dictionary
 - Technical file format, kind of software needed to view, preservation data
 - Administrative work log, intellectual property rights, moral rights, access and distribution restrictions

meta-documentation – documentation of language documentation models, processes and outcomes, goals, methods and conditions (linguistic, social, physical, technical, historical, biographical) under which the data and analysis was produced (should be as rich and appropriate as the documentary materials themselves)

Adding value

- requires decision making (selection, editing, choice of method and theory) and is very time consuming (eg. annotation can be 100:1 in terms of time required)
- linguistic value adding ('thick' meta-data):
 - transcription textual representation of audio signal (orthographic, phonemic, phonetic) typically time-aligned to media
 - annotation overview, code, morphological, grammatical, semantic ('gloss'), syntactic, pragmatic, discourse. Fixation among documenters on 'interlinear glossing', cf. overview annotation/summary
 - translation levels: word, sentence, paragraph, text. Types: literal, running, parallel, literary (Woodbury 2005, Evans & Sasse 2005)

Tools for value adding

- application programs, components, fonts, style sheets
- application programs:
 - general purpose software user must design data structures and manipulation routines, eg. LibreOffice, MS Office (Word, Excel, Access)
 - specific purpose software designed for particular tasks, eg. Transcriber, ELAN, Arbil, FLEx, Toolbox, SayMore
- Important: design and use a workflow that enables data transfer (export, import) without loss/corruption of encoded knowledge

Archiving

A digital language archive:

- is a trusted repository created and maintained by an institution with a commitment to the long-term preservation of archived material
- has policies and processes for acquiring, cataloguing, preserving, disseminating, and format/content migration
- is a platform for building and supporting relationships between data providers and data users

Mobilisation

- Creation of usable outputs for a range of different audiences, eg. multimedia websites, sub-titled video, apps
- There are tools to help with this (LexiquePro, CuPed) and people working on app development who can help, e.g. Ma! Iwaidja



Frameworks for language research



(Cameron, Frazer, Harvey, Rampton, and Richardson 1992)

1. "Research ON a language"

- Usual in first half of 20th century
 - "Salvage linguistics"
- Who is language documentation for?
- Still continues: 'lone wolf' linguist encouraged by some funding models
- "Community members report sometimes feeling that the linguist comes in, reifies the language, turns it into a commodity, and then takes it away." (Bowern 2011: 468)

2. "Research FOR the community"

- Developed in 1960s
 - period of civil rights movements in USA
- Fieldworkers 'give something back to the community'
 - e.g. educational materials,
 - advocacy: Labov 1982
- Endangered language speakers are not just sources of data
 - often economic and social problems contribute to language shift
- Not all linguists have other needed skills (e.g. social work, medical expertise)

3. "Research WITH the community"

- Developed in 1980s
 - "Action Research"
 - "Negotiated fieldwork"
- Equal say and partnership to speakers of the language
 - Full participation, from planning to outputs
- Now dominant model
 - at least in rhetoric!
- May be difficult to find funding for

4. "Research BY a community"

- The project is community-driven
- May include maintenance/revitalisation measures, creating language teaching programmes, etc.
 - e.g. Dieri Aboriginal Corporation
- Multidisciplinary approach
- Role of external linguist:
 - Training, teaching, mentoring native speakers ...

Issues in language documentation 2

- Objectification and commodification of languages
 - 'Community members report sometimes feeling that the linguist comes in, reifies the language, turns it into a commodity, and then takes it away.' (Bowern 2011: 468)
 - 'Technical parameters such as bit rates and file formats are now often foregrounded to the point that they eclipse discussions of documentation methods' (Dobrin, Austin & Nathan 2009: 42)
- Arguably, we should document language ecologies, not just individual languages
 - Multilingual repertoires, mixed codes, translanguaging, contact effects (Mühlhäusler 2003, Grenoble 2011)

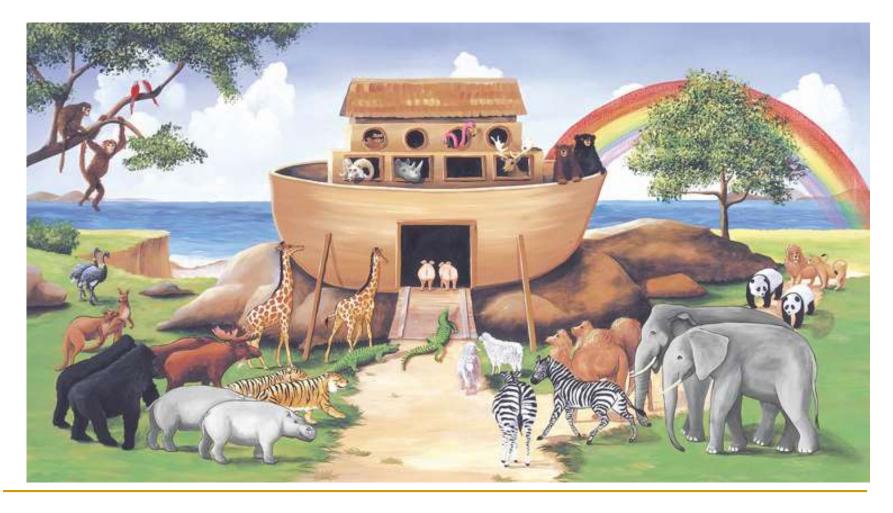
- lack of audio skills: little or no knowledge about recording arts and microphone types, properties and placement (microphone choice and handling is the single greatest determiner of recording quality)
- video madness: video recordings made without reference to hypotheses, goals, or methodology, simply because the technology is available, portable and relatively inexpensive
- corpus taming: little ability at corpus and metadata management, file naming and bundle organisation – ELAR spent huge amounts of time and energy simply cleaning up deposits before they could be archived.

Despite the rhetoric



- lone wolf linguists primarily focussed on language
- little real interdisciplinary interest
- the linguist decides what to deliver to academia and communities and produces familiar and traditional outcomes (dictionaries, orthographies, story collections, etc.)

The documentation model 1995-2010



Noah's arc(hive) – saving the morphemes 2-by-2

There is an output gap

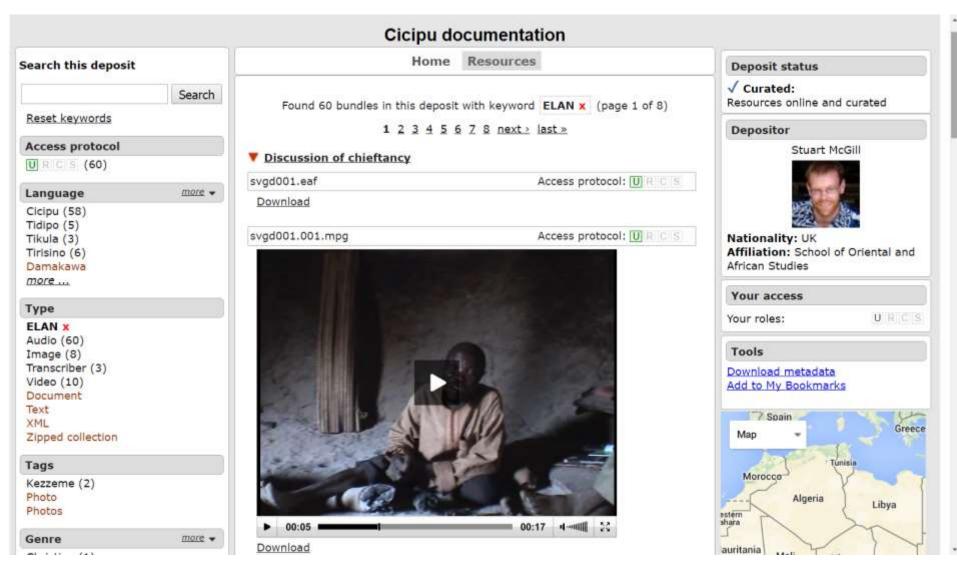


The output gap

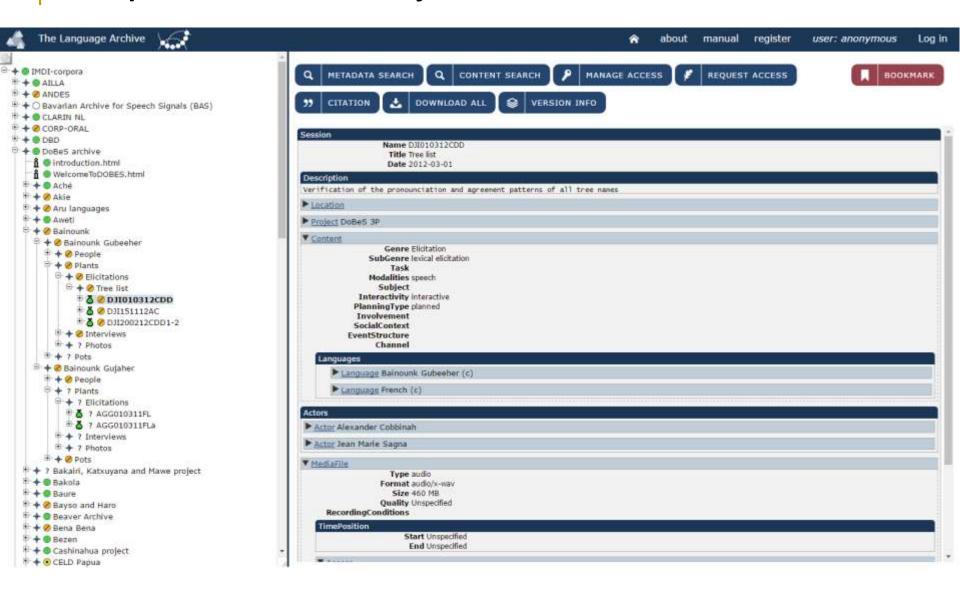
Outputs from language documentation projects have bifurcated into:

- Published grammars, (bilingual) dictionaries and (glossed) texts – 'revival' of familiar genres linguists have been comfortable with for 100+ years
- Archive deposits hundreds or thousands of files, professionally curated by archivists, but often poorly organised or structured, with little if any contextualisation

Corpus accessibility – I found it, what now?



Corpus accessibility – I can't even find it



What is missing?

- Meta-documentation the documentation of documentation projects, goals, methods, IP contributions, outcomes
- New (unfamiliar) genres that link and contextualise analytical outputs and the archival corpus:
 - ethnographies of documentation project designs
 - accounts of data collection (cf. archaeology 'field report')
 - finding-aids to corpus collections
 - 'exhibitions' or 'guided tours' of archival deposits
- Evaluation measures that enable properly-based peer assessment of documentations, equivalent to the way traditional outputs are judged

Language Documentation – future?

Diversity

of goals, contexts, people, data, corpora, outcomes

- move away from Noah's Arc(hive) to more focused documentation, with increqsed participant observation, eg. ELDP 2012 grant list: bark cloth making, libation rituals, fishing practices, child language, interactive speech, and ethnobotany
- diverse inputs field interviews, experiments and observations (traditionally the bread and butter of documentation and description) but also Youtube uploads, Twitter feeds, Facebook, blogs, email, chat, Skype, local pedagogy in revitalisation
- diverse outputs books, papers and archive deposits (the bread and butter of 1990's documentation) but also Youtube uploads, Twitter posts, Facebook, blogs, email, chat, Skype, local pedagogy in revitalisation, mobile apps, Kindle readers

New genres

 Woodbury (2015) 'Archives and audiences: Toward making endangered language documentations people can read, use, understand, and admire':

"I urge documenters to take **authorial control** of their work, as they would if each archived collection were a book of language materials

- make a guide to your own documentary corpus
- include meta-documentation: describe the design of activities or projects from which the corpus arose, offer a theorization of the corpus (or several, from different perspectives), and describe the appraisal process used to select and assemble the corpus
- write narratives, logs, and journals
- think of your corpus as belonging to a genre.

To some extent, all this means documenters taking on some of the work traditionally done by archivists."

Transdisciplinarity

- Is language documentation a new sub-field of linguistics?
 (as per Himmelmann, Austin) or
- Is it a new transdisciplinary approach that: "must draw on concepts and techniques from linguistics, ethnography, psychology, computer science, recording arts and more" (Woodbury 2011), where "more" includes history, archiving, museum studies, project management, creative writing, social media, ornithology, biology (cf. PAW project at SOAS), political science, development studies?

Transdisciplinarity

 Siebert (2016) 'Documentary linguistics: a language philology of the 20th century':

"documentary linguistics' focus on 'direct representation of discourse' requires a broader conceptualization of the field that moves **beyond purely linguistic concerns**. This article recasts documentary linguistics as a philology, broadly understood as the inquiry into 'the multifaceted study of texts, languages, and the phenomenon of language itself' ... The reconceptualization of documentary linguistics described in this article opens documentary linguistics to non-core linguistic types of language documentation efforts and situates the documentary activities more broadly in the humanistic enterprise of communicating, discussing, studying, and understanding human achievements of other times and places."

Conclusions

- Some researchers have presented language documentation as a return to the Boasian past while others see it as a new approach to the study of human language that pays better attention to data collection and analysis, and to communities, contexts and roles
- it appeared to be an opportunity to shift the socio-political academic balance between "fieldworkers" and "armchair linguists" (typologists, theoreticians) by providing a foundation (theory, best practices) for documentation, in contrast to language description
- Over the past 20 years, and especially the last 10 years, we have seen shifts in the goals, methods, foci and contexts of Language Documentation to make it more pluralistic, open, and socially networked and responsive
- However challenges remain, including encouraging new genres that bridge the output gap, more reflexivity, and better engagement with transdisciplinarity and the ethnography of our research and its contexts

Thank you!

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