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Models of Successful Collaboration

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This chapter uses case studies to develop a model of productive collaborative research. In contrast to the privileged position academician-researchers may accord themselves, true collaborations recognize full agency in *all* key participants and attempt to align their disparate aims. More than in the business world, collaborations in language documentation and revitalization require active bridging the motivations of multiple actors to establish and maintain a community of practice. Ingredients for successful collaborations are closely tied to emerging models of research ethics, and include establishing working relationships based on inclusiveness; fully consultative planning; clear goal-setting; mutual training; a smooth workflow; flexibility; and the empowerment of indigenous capacities beyond the scope of the original project.

1. The different kinds of collaboration¹

A collaborative endeavor entails working together with a common vision towards common goals. In language documentation, collaboration with multiple partners has proved to be the most effective methodology, and one with fewer ethical concerns than solo linguistics research.

We focus here primarily on collaborations with communities, though other types of collaborations (e.g. academic collaboration between scholars and universities) are touched on. This chapter represents an attempt both to cite specific examples of successful collaboration, and to derive general principles of collaboration from them.

¹ My thanks to the following individuals for discussions on these topics: JoAnne Grandstaff (U Ks./Kickapoo Tribe in Kansas), Dafydd Gibbon (U Bielefeld) & Firmin Ahoua (U Abijan), Dr. Xianzhen Wang, Dr. Limusishiden, Ma Wei, and other members of the Salar-Monguor team (Amdo, China), Akira Yamamoto (U Kansas), and members of the DoBeS group. Note that *collaboration* in the political sense ('working with an outside power *against* one's own country') is not meant here.

We can distinguish between superficial and true collaborations. SUPERFICIAL COLLABORATIONS, which until recently have been the norm in linguistic research, entail linguists working essentially alone, restricting their interactions with speakers to data collection interviews. Even though such research may be conducted in an otherwise ethical manner, the involved parties are not working together towards the same goals.² In contrast, TRUE COLLABORATIONS entail two or more stakeholders (who may be community members or other researchers), who work together on the planning and execution of a research project.

Many different models of successful collaboration exist, since local circumstances vary widely. Some commonalities of productive collaborative research include fully consultative planning, clear goal-setting, sufficient training, a smooth workflow, and developing autonomous indigenous capacities. This chapter provides several illustrative examples of collaborative research.

In working together, participants create a small community of practice (Wenger 1998) in which a research team is formed and work routines and expectations coalesce around a shared goal. We can identify discrete DOMAINS OF COLLABORATION (in the left-hand column of Figure 1 below) typically associated with language documentation and revitalization: the language community, academe, and financing bodies. PARTICIPANTS within these domains develop and play a number of ROLES within the community of practice that may or may not be formalized as a research team. One participant may potentially fill multiple roles; for example, a native speaker of a language may serve both as Mentor and as a Technologist, and as a Mentor, s/he may share knowledge with schoolchildren as well as an outside linguist. Ideally, most or all participants are involved in some aspect of Design, Training, and Prioritization of project work. These actors carry out a number of day-to-day OPERATIONS of the project, which eventually result in PRODUCTS (some examples of which are given in Figure 1).

Aspects of collaboration in the day-to-day operations of documentation projects include:

- *Design:* What is the scope and time frame of the project? What are its primary goals — to produce an academic paper on a specific subject such as ritual singing, or to produce a comprehensive documentation available to community members? What are the ground rules of communication between members?
- *Training:* All team members ideally train each other: community members train outside linguists in the local social and linguistic contexts (e.g. appropriate research situations and speech genres, respectively). In turn, linguists train community members in recording, linguistic analysis, and archiving techniques. Ideally, the reciprocal training results in a multiplier effect, with linguists incorporating acquired knowledge in university courses and mentoring, and with the community members involved becoming local

² While such linguists conduct their research alone, they are *de facto* in collaboration with the goals and requirements of the agency or agencies that fund them. Many observers today consider non-consultative research to be not completely ethical; see the section on ethics below and Dwyer (2006).

trainers, passing on their knowledge and skill sets in a variety of realms beyond the scope of the current project.

Domains	Participants		Roles	Operations	Possible Products
community	speakers, language workers	Research Team		Design	textbook radio broadcast TV show newsletter
	all		Mentor	Training	grammar film
	leaders, community members			Prioritization	dictionary
			Administrator (coordinates and organizes all admin tasks)	Management (personnel)	database
			Technologist (maintains hardware and software)	Management (equipment)	
aca- deme	outside and/or indigenous linguist		Archivist (ensures resource persistence)	Management (data)	
finance	funding agency		Native knowledge expert + Linguist	Analysis	writing system, grammar, pedog. materials
				Evaluation	
			Sponsor (provides financing)	Distribution	
			Ambassador (networks)	Outreach	conference papers, visits to funders, visits to government officials

Figure 1. *Collaboration Infrastructure* (adapted from the Tuck School of Business 2006)

Further aspects of documentation project collaborations include:

- *Prioritization*: Which project goals must be accomplished first? How are priorities balanced between all of the stakeholders, including speakers, community leaders, funders, and academic institutions? Flexibility is key, and community input is critical to an ethical and comprehensive outcome.
- *Interpersonal relationships and personnel management*: This includes relationship building, and motivating for productivity through mutual learning. Such projects are by definition intercultural and multilingual, and they demand the development of management techniques in context. Personal initiative is balanced with the need to accomplish prioritized goals.
- *Equipment management*: Primary Investigators (PIs) need to acquire durable equipment of the highest possible affordable quality (keeping up with the often rapid developments in recording technology) and maintain the equipment (including regular and emergency maintenance), and team members need to be versed in its use. Potential conflict over shared equipment can be avoided by having a clear allocation plan during the project and after its close.
- *Analysis*: The creation of annotations of primary data and written or multimedia products all constitute data analysis. Generally, the majority of team members are involved in one or more stages of analysis: information collection during research, primary transcription and translation of a recording, followed by constituent analysis and the addition of other levels of analysis (e.g. other levels of annotation or translations into other languages). These materials then form the basis for a second, more overtly interpretive level of analysis. The latter is often computer-assisted and may entail evaluating multiple hypotheses with regard to the data; comparison of ethnographic and linguistic data; and/or comparison with previous studies on related topics or languages. In turn, these materials often form the basis for teaching materials.
- *Data management*: Multi-person documentation projects proliferate bundles of analyzed data (transcriptions, translations, recording information, and other metadata) about primary data (a recording session). Such projects thus require a *tracking system* for multiple versions of these associated data, uniform *data labeling*, and a *systematic storage and backup system*.
- *Evaluation*: At least once during the course of a project, as well as at its close, project members (ideally together with an outside evaluator) should assess the roles and operations of the project – including the efficiency of the chosen methodology – in light of its goals and modify priorities accordingly. As desirable as this is, funding agencies typically do not include such requirements and seldom provide additional funding for it.

- *Distribution and outreach:* The analytical products of collaborative documentation projects generally balance results produced for the funder and the academy (e.g. grammars, articles analyzing specific phenomena) with those produced primarily for community members (e.g. pedagogical materials, dictionaries). Distribution and outreach within a community may entail consultatively establishing a practical orthography for the language and laying the foundation for further materials development. Dissemination within both academe and a wider public increasingly entails web-based distribution and the infrastructure to support it and depends on the wishes and needs of the community.

Clearly, the collaborative process of a language documentation or revitalization project requires much more on-the-fly thinking and *ad hoc* solutions than a collaboration between peers within a business or academic institution. While there are clear commonalities with business or academic collaborations (as outlined in Figure 1 above), language projects differ in that (1) participants may have highly divergent aims; (2) perceived and actual power differentials often exist between participants (e.g. between inside vs. outside linguists, speakers or community members, and between any of these and the funder), which can complicate cooperative decision-making; and (3) language projects are by nature intercultural and multilingual, which means that off-the-shelf corporate management models, for example, may well clash with the cultural practices of the participants. In this light, it may be equally important to be attuned to the cultural practices of academe and funding institutions as it is to be attuned to those of the community and its various participants.

As suggested by the term ‘community of practice,’ the collaborative process of language work itself creates new networks between participants, networks which involve not only the transfer of knowledge but also that of control to resources. In this way, a language documentation or revitalization project can create new or reshape existing interpersonal power structures, as the control of resources is one key element of power. When community language activists (with or without outside linguists) introduce or modify a writing system in a community previously without an orthography, for example, it can have unanticipated social effects: “tak[ing] on power by virtue of those who control the resources and set the participant structure; the content of texts is thus inseparable from the contexts of their production” (Schieffelin 2000: 321). Issues of access, control, and “authentic” language emerge from the creation of products such as texts, radio shows, or classroom lessons.

Given the highly intercultural and co-emergent nature of language documentation and revitalization, collaborative work emerges as the most ethical and productive approach. We use case studies to explore some of the issues in cooperation, to create better collaborative research infrastructures and better research outcomes.

2. The case for collaborative research

2.1 *Lone ranger linguistics versus collaborative work*

Empirical linguistics has until the last decade, with few exceptions, been conducted by sole researchers, who have planned alone, gone in, “gotten the data,” and gotten out. All too commonly, such researchers eventually publish some fraction of the data, allowing the rest to languish in the back of a closet or file cabinet. Such methods recall the *Urwächter* of pop culture, the Lone Ranger, who rode through “hostile Indian territory” guided by his native sidekick Tonto, committing “heroic deeds” in the eyes of the dominant white colonists, but who was ultimately an icon of racism and colonialism. The linguistic Lone Ranger similarly carries the expectations of the dominant academic culture and views the speaker community as an exotic other. S/he perhaps means well but is subject to the some of the same conceptual colonialism and assumed cultural superiority as the fictional Lone Ranger.

Aside from the marginal ethicality of such an approach to research, lone-ranger linguistics has a number of disadvantages: the steep learning curve in an unfamiliar context for a restricted time limits the amount of data that can be collected; the results typically reflect the biases, errors, and theoretical interests of the researcher; communities tend not to see results nor reap benefits from such research; and no groundwork has been laid for future research. If time is short or the researcher has little access to speakers, s/he might resort to working with a single speaker yet later claim that such data is representative of the entire language variety. As one heritage learner wryly notes of her first experience at an academic conference on her language family, “I learned that the scholars use only one source for their language studies. It would seem that a sampling would be more appropriate, unless you would call the language studied the ‘Henry’ or the ‘Aunt Betty’ style or dialect of the language” (Grandstaff 2005: 48).

Nonetheless, most linguists working today, including the author, have at some time conducted research in this fashion. Though lone ranger linguistics as described above is clearly not recommended, *consultative* small-group projects can still be viable options. There are still certain contexts in which a sole linguist may work together with only a few community members on a short-term linguistic project of modest goals, as long as it is conducted consultatively. Such contexts include student research, for which limited time and funding may be available. Additionally, small partnerships may well be the best choice for projects on special topics, such as the investigation of a particular type of syntactic structure or articulatory phenomenon. Even limited projects, however, benefit from a prior relationship between individuals in a speech community and the academician.

2.2 Maximizing scarce resources

With thousands of endangered languages, a shortage of language teachers and documentary linguists, and limited funding, human and technological resources must be maximized. The most important solution lies in the multiplier effect resulting from training: the training of academic linguists, students, community members, and language activists in some or the full range of community priorities and documentary techniques. Two external options currently exist: intensive workshops (or field schools) and university programs. For students, established degree-granting programs—generally within linguistics departments—are at present few in number, not well-distributed in the world, and generally entail a multi-year commitment, depending on the degree sought.³ Many potential language documenters, however, seek more intensive, shorter, and more focused programs, preferably in their region. For these, there are occasional academic courses and field schools,⁴ and then regional and topical institutes, which are often more oriented towards pedagogy.⁵

Building a community of practice in the local context, however, is a necessity. There is no substitute for the specificity and immediacy of mutual capacity building on-site of (1) outside linguists by community members in local linguistic, social, and other knowledge; and (2) native speaker-researchers as language materials preparers and teachers. Ideally, local capacity building has as its ultimate goal the training of people to later share their knowledge, thus multiplying the number of language activists, whether inside or outside of the community.

³ Established programs in language documentation include the Hans Rausing Endangered Language Programme at the School of Oriental and African Studies, as well as the linguistics departments of the University of California at Santa Barbara, University of Oregon, University of Hawai'i, and Monash University's Studies in Language Endangerment program.

⁴ Summer courses and field schools include e.g. the LSA summer institute field methods courses, SOAS Endangered Language Documentation Programme grantee courses, the 2004 DoBeS summer school, InField Institute on Field Linguistics and Language Documentation (held in 2008 at the University of California at Santa Barbara, <http://www.linguistics.ucsb.edu/faculty/infield/index.html>) and in 2010 at the University of Oregon), and the University of Montana's Strengthening Indigenous Languages and Cultures (<http://www.nsilc.org/>).

⁵ More applied regional and topical institutes include workshops (e.g. the 2005 Breath of Life workshop at the University of Washington, <http://depts.washington.edu/lingweb/events/bol.html>), the Navajo Language Academy (<http://www.swarthmore.edu/SocSci/ternal1/nla/nla.htm>), the American Indian Language Development Institute (AILDI, <http://www.u.arizona.edu/~aildi/>), the Indigenous Language Institute (<http://www.ilinative.org/>), as well as monolingual immersion programs such as the Piegan Institute (in the Blackfoot language <http://www.pieganinstitute.org/pieganindex.html>), Pūnana Leo (language nests, e.g. <http://www.ahapunanaleo.org/>) in Hawai'i.

To illustrate the advantages of collaborative research as well as present examples of successful collaborations in specific contexts, we take three small-scale research projects as case studies.

3. Case studies

These examples detail project goals and outcomes, collaborative aspects, and the benefits and challenges of collaboration. Each case highlights a particular aspect, though many of these projects (Kickapoo, Ega, and Monguor/Wutun) had common challenges and conclusions with regard to collaborative research. The last study is more detailed, since the project stems from the author's personal experience.

3.1 *Kickapoo language reacquisition (Grandstaff 2005)*

Kickapoo (ISO 639-3: kic) is an Algonquian language with at most five hundred remaining speakers in the United States (Kansas, Oklahoma, southern Texas, and Arizona) and northern Mexico. The language revitalization aims of the Kickapoo Tribe in Kansas are modest: to "offer at least one half hour of immersion language instruction a week to all interested elementary school students in an after-school program" in the tribally-directed Kickapoo Nation School, which has a twenty-year history (Grandstaff 2005:79). The program's director Howard Allen, together with the teacher Grace Seetot "team-teach language to the entire elementary school student body, about fifty students." (Grandstaff 2005:26).

This program was evaluated in the broader local and academic contexts by a Kickapoo researcher who interned at the school for several months. Her goals were to assess how teaching outcomes for children could be improved and to explore expanding the program to adults, as well as to study revitalization methodology. Besides the instructors, the intern, and fifteen pupils, other indirectly-involved participants included the tribal council and elementary school administration. Grandstaff's main conclusion was that adult community member support of revitalization is critical, but that schoolchildren should be the focus of language teaching. She found the immersion method to be successful as far as it went but noted that it fell short of the two existing fluent speakers' hopes for their students becoming fully fluent in the language. "Speakers do not concern themselves with dissecting the language so much as they are concerned about having someone to talk *to* in the language, not someone to talk to *about* the language using English" (Grandstaff 2005: 49, emphasis added). Maintaining continuity from year to year in preschool and after-school language programs has been a challenge in many Native communities, for it rests largely on the motivation of dedicated individuals,

as well as on continued community support. Even if continuity is achieved, creating a bridge to fluency remains a daunting task: it requires accompanying children through middle and high school in their heritage language and expanding the domains within the community in which the language is used (for example, by creating videos or radio shows as has been done for Maori, Hawai'ian, and even Arapaho).

For many groups such as the Kickapoos, the severe shortage of speakers, funds, and consistent adult support may render goals of full reacquisition unrealistic. Grandstaff details some of the social forces which shape the direction and intensity of language revitalization. She concludes that it is indigenous groups and not outsiders who decide for themselves what language endangerment means in their context, based on an informed community consensus. "It does not matter whether or not program funding exists. What does matter is that the people directly affected understand:

1. that their leaders make decisions regarding language,
2. that the loss or shift of language impacts more than themselves, and
3. that taking no action is a decisive action" (Grandstaff 2005: 45).

Grandstaff's assessments are important, because their focus is resolutely on the social and administrative levels within the indigenous community itself. Utilizing her unique insider-outsider perspective, she looks beyond the basics of language teaching and even of tribal administration towards revitalization methodology. Grandstaff suggests that indigenous leadership entails consideration of fundamental questions of language and identity, and integration of language planning into regular tribal administration:

Informed decision makers need to ask themselves several thought-provoking questions in order to take the best action: [...] In the case of the Kickapoo in Kansas, does loss mean that the language is never again used on the planet? On the reservation? Among its members? That it is never recorded? Since speakers live in other areas, can the language really ever be lost? How much can the Kansas Kickapoo do with regard to the language?

What does revitalization mean? Does it mean that all Kickapoo people use the language in their daily lives? That all government operations are conducted in the language? That all classes in the school are taught in the language? That the inability to use the language will result in virtual ostracism? These and other questions need to be answered by the community, not by linguists or leaders or teachers or those unable to live up to the implications of the responses.

Tribal planning needs to include language planning. Any language planning program must address the issues brought forth above in order to achieve intended results. Goals need to be set and efforts assessed at each step in the process (Grandstaff 2005: 45).

In addition to being addressed to local leadership, such recommendations indirectly urge community members and language activists to consider their role in shaping such decisions and working with leadership. In turn, they suggest that the role of local administrators in the cooperative process is not to be underestimated. The initial spark for the Kickapoo reacquisition project was the tribal council itself, and we can hope that Grandstaff's analysis of the dynamics between children, family members, teachers, and leadership provides an additional stimulus to further promote language reacquisition.

3.2 *The Ega documentation project*

Ega (ISO 639-3: *ega*) is an endangered language spoken in the Ivory Coast. In the case of the Ega documentation project,⁶ research would not have been possible without multifaceted collaboration; furthermore, this collaboration made the work much more efficient than it otherwise would have been. The eight-year project was the result of longer-term cooperation between the Université de Cocody in Abidjan, the University of Uyo in Nigeria, and the University of Bielefeld in Germany with investigators Firmin Ahoua, Dafydd Gibbon, and Bruce Connell. The types of collaboration that the project coordinators highlighted were:

- Cooperative project design

Local needs were addressed in the planning stage together with university authorities and staff: the documentation of local languages was prioritized, and masters and doctoral candidates involved in language documentation were supervised.

- Local mediation in logistics

As is the case in most research projects, governmental permissions to conduct the research were first needed. In the Ivory Coast, the local university department presented the project to the Ministry of Education. For projects in other countries, regional and/or local permissions may be needed in addition to permissions from national-level bodies. In other locales, none of these permissions may be specified by law, yet local permission may be customary and therefore critical. Such is the case with the Kickapoo project above, where the investigator, herself a tribal member, negotiated permission where a mediator would normally be necessary.

⁶ The Ega project was funded by the Volkswagen Foundation and the German Academic Exchange Service (DAAD). Courtesy citation of the sponsoring agencies underscores their role in shaping research.

- Local mediation and participation in research

In the Ega project, negotiations at the prefectural and village levels were generally carried out with the help of a local graduate student as an “emissary.” As many aspects of this work as possible, including interviewing and equipment operation, were conducted in male-female pairs to maximize access to male and female sub-communities. In the Ivorian context, as in many other contexts, access to particular people or to specific language domains might be denied to a lone researcher of a particular gender (Gibbon 2006, personal communication).

- Computer-aided linguistic analysis

The Ega group found that joint software development and its deployment and evaluation were only possible when done in a team. For example, the input of several researchers allowed development of a hand-held electronic metadata collection system, allowing immediate input of the circumstances of recording into a highly portable and long-lasting device with batteries. They also used computational linguistic teamwork to create multilingual databases and text and lexicon output. The team worked together to semi-automate the processing of annotations in order to save time and reduce errors.

- The multiplier effect of training

Before, during, and after the research, local seminars were held in the Ivory Coast and Nigeria, and later in Germany, with visiting scholars from these countries. As is today common practice in economic development NGOs, training in the Ega project was also intended to prepare field trainers for future research projects. The work has thus been methodologically oriented to create multiplier effects for local documenters.

In sum, for the Ega project personnel, a range of collaborations proved more efficient at all stages of documentation. Project members emphasized that collaboration with other scholars at other universities was particularly crucial in the planning and design phase, that collaboration with the community was essential to plan and carry out the actual research, but that it was collaboration between documenters—preferably a male-female pair—that was essential for optimal results. Working in a team, both in software development and creating linguistic analyses, can enhance technological efficiency.

3.3 *Monguor and Wutun: two languages of northern Tibet*

Monguor (ISO 639-3: mjj) is a Mongolic language with a rapidly diminishing population of approximately 100,000 speakers; Wutun (wuh) is a

small (population approximately 2000) language that is part of the greater North Tibetan Sprachbund; both communities are fortunate to have highly motivated and talented people eager to document their language varieties.⁷

In terms of collaboration, what was unusual about this project was that it was fully collaborative in design, on-site research, and analysis.

- Consultative project design

Local language activists (who came to be project managers) and a resident foreign teacher collaboratively determined the feasibility of the logistics, the basic scope of the project, and, crucially, the plan for remuneration of speaker-researchers and local lead researchers.⁸ Only the timetable and linguistic analysis included the most input from the outsider-linguist PI. The leadership of local researchers in the payment scheme was critical to minimizing conflict over money matters later on.

- Creating a community of practice: mutual training of local and foreign researchers

In order to investigate three language areas, three teams of native-speaker researchers were established. Each area's team was outfitted with audiovisual recording equipment and several computers.⁹ Foreign researchers learned local genres, communication strategies, and ethnographic knowledge; local researchers learned audio-visual recording techniques, basic transcription techniques, and data delivery procedures; those with a particular interest in transcription learned some of the International Phonetic Alphabet. Partly as a result of this experience, one foreign researcher is now living full-time in China; one local researcher is in a top linguistics graduate program in the U.S.; another local researcher is a project manager for a major non-governmental organization in northern Tibet; a third is working on a lexicon. A series of student research assistants in Germany and the U.S. regularized these annotated data and added English translations and part-of-speech glosses.

- Native speaker centered research

Since each area had local researchers, this arrangement effectively neutralized the "observer's paradox": researchers themselves were local, so their presence at

⁷The Monguor/Wutun project was funded by the Volkswagen and the National Science Foundations.

⁸Community members in each locale—themselves project researchers—determined which genres were essential to a holistic documentation. Lead researchers first aimed to collect two high-quality examples of each genre. The genres include love songs, conversation, wedding, and summer harvest festival.

⁹Having workstations in villages is not feasible in many field situations; this arrangement here functioned remarkably well, despite the potential inequities associated with sharing a workstation and A/V equipment.

events was minimally disruptive. Native speaker-researchers made nearly ninety percent of the recordings themselves. These original recordings were then brought to a project manager in the capital city, who captured these onto CD or DVD, archived a copy, and gave a copy back to the researcher. These researchers would then make orthographic transcriptions on the village workstations and translations into one of two regional languages. Later in the project, they also created a very preliminary part-of-speech annotation. Regularization of these annotations and further grammatical analysis was done in Kansas by me and a number of students (both “insider” and “outsider”) over the years.

- Collaborative analysis

Linguistic judgments and annotations by speakers can reveal a great deal about linguistic structure and salience. While the outside linguist may well not understand why a speaker-researcher has made a particular annotation, referring to these annotations after further study of the language often reveals new facts about the language.¹⁰

Some experimental collaborative annotation techniques shed light on the salience of certain morphemes for native speakers. After my linguistics students and I had developed a list of common metatags, we asked interested native speaker-researchers to themselves do part-of-speech annotation in the final year and a half of the project. Every time they encountered a morpheme not on the list, they were to write a functional explanation, as verbosely as necessary. Some speakers were also asked to segment morphemes on a separate tier. This segmentation, together with spacing decisions on the orthographic tier, allowed insight into native-speaker perceptions of morpheme status.

- Evaluation

While this model has much to recommend it, it also has intrinsic challenges. Chief among these were personnel management and data regularization issues. Such a multi-sited project with data collectors and analysts who had previously had no experience in linguistics required regular management intervention in order to motivate participants, clarify and emphasize priorities, and facilitate the exchange and revision of raw and annotated data. One inherent tension in primarily academic projects like this one is that in order to fulfill the requirements of the funding agency and of academia, the priorities of these (namely, multimedia digital resource of a holistic, theoretically-grounded documentation) dominated over

¹⁰ For example, I might be inclined to use the same notation for all clitics (e.g. written together with the preceding word). Yet generally my Monguor colleagues distinguish copular clitics orthographically from all other clitics: the former are written separately, whereas the latter are written together with the preceding word. This suggestion of less-boundedness offered a new avenue of research.

the stated interests of the native speaker/researchers.¹¹ Even with local part-time managers working year-round and full-time intensive cooperation during summers, personnel issues, which were often interpersonally sensitive within the local context, were often left to the foreign PI, who was absent many months of each year. Large projects of this nature would do well to anticipate and address such community-of-practice issues early in a project. A local management staff is a given; but if a project involves distant or foreign key personnel, they should ideally plan for academic leave to spend at least four continuous months locally, working together with project personnel early in the project, to solidify work routines and address personnel and technical issues continuously and without delay.

The second challenge, data regularization, entails standardizing and regularizing inconsistencies in annotated transcriptions and translations, as well as media labeling. While inconsistencies in, for example, part of speech tagging are common problems in any investigation, if the project involves a number of annotators with minimal training, extensive manual annotation, and/or an annotation checker who is not continuously present, the irregularities in the annotations will be significant. A substantial amount of time must be budgeted to regularize these data, and ideally these processes should be at least semi-automated to reduce these sorts of errors. Without a programmer as part of the documentation team, however, such automation awaits the creation of new software.

In software, there is no one-size-fits-all solution for collaborative language documentation. From the point of view of native-speaker elders or even part-time student researchers, currently-available software for creating time-linked annotations or lexicons often are too specialized, require too much learning time, or have inadequate import and export formats. Collaborative projects therefore often balance the use of specialized software with the adaptation of common commercial software for structured linguistic purposes.¹²

The advantages of the Monguor-Wutun project's collaboration model clearly outweighed the challenges. In particular, the project created large quantities of annotated spontaneous spoken data from a wide range of genres. The training accomplished our aim to develop local capacity to allow local native-speaker

¹¹Most young researchers were more taken with making videos than audio recordings, and with recording visually spectacular annual high points such as festivals rather than mundane quotidian conversation, even though a balance of all of these was ultimately recorded. Several local colleagues felt that the most useful product would be a film documentation or even semi-fictional filmic account of disappearing practices such as a wedding.

¹²Recommendations are dependent on what (if any) operating system and software local researchers are already familiar with. All software should be thoroughly vetted before a plan is implemented; some general-purpose and specialist software does not work with certain localized versions of some operating systems (e.g. Chinese Windows).

researchers to record, process, and archive data entirely independently once this research project is completed. The community receives clear and substantial benefits from the work. In sum, joint, cooperative research is not only ethical, it makes for far better research.

3.4 *Conclusions from case studies: The benefits of cooperation*

From these three case studies, we can draw the following conclusions. First, the Kickapoo Reacquisition Project has clearly shown that the involvement of all generations of the community results in the largest commitment from the community, and that project personnel who are both part of and apart from the local community (“insider-outsiders”) are often in the best position to participate and make recommendations. Second, the Ega documentation project showed that, in some circumstances, little can be done without personal and technological collaborations. Personal relationships with local colleagues opened the doors to obtaining necessary government permissions, and local graduate students were essential to the investigation. Technology both facilitated cooperation (for data exchange), and, at the same time, collaborative testing of new technologies *enabled* the employment of these technologies in the first place. Finally, the Monguor and Wutun documentation project showed that having community members at the center of research at all stages of the project results in significant linguistic insights not easily available to an outsider researcher, as well as resulting in a larger volume of high-quality data than would have been available from a single-researcher project.

Nonetheless, if done ethically and in consultation with local communities, small-group work, with a sole linguist and a few language consultants, is an acceptable alternative. Such work is common because it allows projects to be smaller and more topically focused. Without training sessions and graduate students, small-scope research is very much less costly and time-consuming. Most beginning researchers start with such work before joining larger multi-person teams. As large teams become more common, however, it is likely that the first experience beginning researchers will have will be one of a mutually consultative, interdisciplinary team of community members and linguists.

Some documentation software is available for the small-scope researcher, but it is the result of prior intensive teamwork. For example, SIL tools (e.g. Shoebox /Toolbox) or the Ega team’s PDA-based metadata interface grew out of intensive interactions between researchers and programmers.

Finally, if research is conducted within and with a highly sex-segregated society and there is just one main researcher, that person should, preferably, be a woman. In such contexts, female researchers are often included in more neutral male activities as an “honorary man,” whereas a man would not be included as an

honorary woman in women's activities. The Ega team's experiences showed that male-female research teams accomplish more than single-sex teams could. A male linguist can at least temporarily employ, for example, a local female university student to work with women in the local setting, or vice-versa. Thus, collaborations can be accomplished even in small-scale research.

4. Issues in ethics and responsibility

Several groups have adopted some basic principles for ethical research (see e.g. the Belmont Report 1978/79, AITSIS 2000, American Anthropological Association 1998, African Studies Association 2005; see also Dwyer 2006 and Penfield et al. 2008). They include: do no harm (including unintentional harm); do at least some good (within the community as well as for science); work with reciprocity and equality; obtain informed consent; and archive and disseminate your research. These also require an honest assessment of one's own motives: what are *all* the reasons for which we are doing this documentation and revitalization? Interpersonal relations are particularly critical; "the research relationship must be *consultative, continuously negotiated, and respectful*" (Dwyer 2006).

Research ethics are more prominent in public discourse than in the past, yet several academics sense that ethical standards for research are declining (e.g. Langlais 2006). Except for institutional review boards, the topic is only now being preliminarily addressed in the core curriculum of relevant academic programs (anthropology, linguistics, information technology).¹³ Difficult questions have not yet been addressed in an active and particularistic way: "Higher education has a critical responsibility to focus on educating our graduate students about ethical obligations and professional standards. We cannot rely solely on professional associations or regulatory watchdogs to fulfill this critical need" (Langlais 2006). We will take a closer look at these ethical issues from the point of view of academics collaborating among themselves, of academic linguists collaborating with speaker communities, and of teams collaborating via technology.

Collaborations between academics

Many universities tout the value of interdisciplinary research and teaching, activities which both require collaboration. Nonetheless, would-be collaborators often face a number of obstacles.

On the academicians' side, the humanities and to a lesser extent the social sciences lag behind the natural sciences in collaborative work. History and

¹³ The Linguistic Society of America's 2009 Ethics Statement is now available at http://www.lsadc.org/info/pdf_files/Ethics_Statement.pdf

literature, for example, have been assumed to be conducive to analysis by a single mind. Within linguistics, collaborations occupy a range from very individualistic (both theoretical and empirical) research to collaborative (e.g. sociolinguistics). Documentary linguistics and language revitalization, as we have seen above, require collaboration, and its benefits are beginning to push other subfields of linguistics towards more empirically-based, collaborative work.

On the university administration side, powerful counterincentives exist against interdisciplinary collaboration. When evaluating scholarly output, such as in merit or promotion and tenure decisions in these fields, administrations and their committees tend to rank sole principal investigatorship and sole authorship higher than multiple authorship. Single-authored, seminal works are expected to be the backbone of a scholar's output. The extra effort and added depth of multiple-authored works is generally not recognized; instead, a scholar's contribution to a multiple-author work is simply considered to be a lower effort-percentage than a single-authored work. Team teaching is also too often considered an expensive and inefficient use of faculty hours. Sharing of grant resources outside of one's home university is frowned upon, and even going across department boundaries within the university may cause administrative difficulties in allocating support and other resources.

Yet in language documentation and especially language revitalization, multiply authored works are increasingly the norm; teaching is generally done in a team; and the interdisciplinary nature of these projects often requires the input of multiple units and funding sources. What, then, would be some incentives for academic collaborations? First, seed money for collaborative interdisciplinary research and team teaching could be provided; this in turn requires attracting external funding for the university. Second, promotion and tenure requirements could be changed to favor at least one or two collaborative research products or sponsored research projects (for those departments in which it is feasible to work cooperatively, such as anthropology and linguistics).

Collaborations between speaker communities and outside academics

Sometimes, ethical collaborative decisions may seem to go against the interests of linguistic science and the academy. For example, a speaker community may not want its language committed to written form, or, may want to maintain a particular orthography out of convention despite redundancies or missing contrasts. Self-determination sometimes trumps the desire for scientific findings. And the Kickapoo school example shows that collaboration between different domains *within* a community can be as important as collaboration between a community and outsiders. True collaboration entails a sharing of control, which may cause initial discomfort for research partners.

The role of technology in collaboration

In the last twenty years, collaborative possibilities have expanded with the internet, first with listservs and email, and later with file-sharing and social networking sites. The latter technologies have been adapted or used for collaboration in linguistic documentation projects. These include collaboratively-edited websites such as wikis, file-sharing sites such as Flickr, and endangered-language chat rooms, and even downloadable podcasts.¹⁴ Collaborative sites potentially allow partners in multiple locations to contribute to the project.

The very interconnectedness of the modern world, while largely responsible for the endangerment of languages, also provides a means of documenting and maintaining these languages. Technology, by allowing the relatively inexpensive storage and sharing of linguistic material via the internet, makes it possible for groups with internet connections to tap into whatever resources there may be for their language and create and manage new resources. Although internet access is far from universal among indigenous communities, access increases every year. The ability to avoid the largest publication costs, along with the ability to continuously improve and search resources, makes access to linguistic resources far easier than with many print resources.

To create, maintain, exchange, and query such electronic resources crucially requires an infrastructure-level agreement of formats, encodings, and data architectures so that resources interoperate. Possible advances in linguistics are greater with collaborative use of the internet (Whalen 2004). As standardization in formats and ontologies increases, it is increasingly possible to study phenomena across many languages and language families in a way that was impossible before. As more material is shared, it can be expected that the native speaker insights found for single languages will be explored by community-based researchers as they see the interconnections of their language with related ones. At present, the primary tasks of collaborative documentations generally are more basic: consensus-building, recording, analyzing, and creating some products (e.g. teaching materials or a linguistic description). The next steps will likely include comparing one set of resources to others, within the bounds of community norms. The latter concern for community norms—i.e. one of access rights—falls within the domain of ethics.

Ethics is thus a continuous thread that wends through various types of collaborations. Academia has become more interdisciplinary and collaborative despite disincentives. Communities may find themselves, directly or through

¹⁴ The endangered-language chat room was a feature, now unfortunately defunct, of the Rosetta Project (<http://www.rosettaproject.org>); for podcasts, see e.g. those done in Mohegan by linguist Stephanie Fielding (<http://www.moheganlanguage.com/>).

academic linguists, educating Institutional Review Boards on ethical issues. The interoperation of language resources concerns not only computational standards, but also mutually-negotiated and agreed-upon practices.

Ethical issues clearly emerge when the community members of the team, in consultation with the community at large, decide to make some or all language materials public; careful planning during the project design phase is useful. Ethical considerations and collaborations are two sides of the same coin.

5 General principles of collaboration

In light of the current state of collaborations in language documentation projects, we can outline the four following guiding principles:

1. *Assessing needs of all players*

True collaborations require that all members of the collaboration attain as many of their goals as possible. The needs of the academy and the community are usually quite different. An ideal project fully addresses and integrates both needs. It would be desirable for funding agencies to recognize that there should be more than academic outcomes from a grant.

If, given funding priorities, such a balance is unattainable, a primarily academic project should ensure the active participation of community members in the early stages of project planning; a primarily community-based project could consider the participation of an outside linguist.

2. *Clarity (goals, methodologies, communications, and payments)*

Expectations for the collaboration (including leadership, obtaining permissions, decision-making processes, expected outcomes, compensation and recognition, and conflict resolution) need to be made explicit before beginning work. Otherwise, assumptions that seem perfectly obvious to one participant will seem to be incomprehensible to another. Deliberating and agreeing on expectations, especially when money is involved, can be the difference between success and failure.

3. *Flexibility*

As a response to changing circumstances, the research team needs to recognize the importance of flexibility. If the work plan cannot change in response to new circumstances, there is little chance that it will succeed. Some of the most difficult challenges, both to the outside and the native linguist, are changes in direction of the community based on political decisions. Such changes often have a motive unrelated to the language work *per se* and are thus relatively immune

to attempts by the linguist(s) to change them. Teams should expect change, and be ready to meet it with an already well-established communication channel and mutual trust.

4. *Empowerment*

Collaborative empirical work is implicitly activist. Team members work together towards the same or overlapping aims (such as recording cultural and linguistic heritage). The process - which includes mutual training, consultation, and frequent reassessment - is as activist as the products (teaching materials, grammar, article, and ethnography).

In contrast to fifty or even ten years ago, linguistic work now foregrounds collaboration. The priorities of language communities are integral to research design, and a consultative implementation results in the creation of an ethical and efficient community of practice. The use of technology in recording, post-processing, and dissemination should yield the best material and analysis. Collaborative research is the baseline from which linguistic projects can be expected to be evaluated.

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