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## **Collaborative Research: Chamorro Project Summary**

Chamorro is an Austronesian language spoken by 45,000 people in the unincorporated U.S. territory of Guam and in the U.S. Commonwealth of the Northern Mariana Islands. Although a living language today, it is clearly endangered. It is also at a critical moment in its history, when improved documentation and heightened community awareness of language endangerment could make a real difference to its survival as a living language. With NSF-NEH funding, Sandra Chung, a linguist from the University of California, Santa Cruz, and Dr. Elizabeth D. Rechebei, a retired Chamorro educator, will work with the Chamorro community in the Mariana Islands to significantly upgrade the documentation of the Chamorro language.

Chung, who has done linguistic research on Chamorro since 1976, will write a new comprehensive reference grammar of Chamorro, intended for linguists, Chamorro speakers, and language learners. This grammar will present the structure of the language's sentences, words, and sounds clearly, accessibly, and in depth. It will offer many illustrative examples drawn from Chung's field notes, from oral and written Chamorro narratives, and other sources.

A working group of fluent Chamorro speakers, headed by Dr. Rita H. Inos, a Chamorro educator and bilingual teacher, will revise and expand the *Chamorro-English Dictionary*, which was originally published in 1975 and contains some 10,000 entries. Existing entries will be revised to include the word's part of speech and its pronunciation, to document each meaning carefully, and to illustrate each meaning with a Chamorro sentence. New entries will be added, particularly for words of cultural significance.

Dr. Rechebei will supervise the videotaping and editing of the oral histories of 15 fluent speakers of Chamorro whose cultural knowledge is unusually detailed. The edited videotapes will provide a valuable record of Chamorro connected discourse, which is severely under-documented, and capture aspects of nonverbal communication that are not recorded in print.

Manuel F. Borja, a retired educator and Chamorro author, will interview Chamorro elders about their adolescence and early adulthood and prepare a bilingual book in Chamorro and English based on their reminiscences.

Finally, Dr. Rechebei and Dr. Inos will run workshops for the community on language endangerment and Chamorro's status as an endangered language, on bilingualism, and on the documentation of Chamorro.

### **Intellectual Merit**

The grammar, revised *Dictionary*, and oral histories in video and print formats will provide an extremely detailed, accessible record of the Chamorro language for future generations. They will significantly expand the Chamorro data available to theoretical linguists interested in language universals, and to historical linguists interested in reconstructing the Austronesian proto-language. Because Chamorro is a language that has borrowed massively from Spanish, but has retained its Austronesian structure, this new documentation will also contribute to the understanding of how languages in contact can influence one another.

### **Broader Impacts**

The grammar, revised *Dictionary*, and oral histories will serve as a valuable reference for the development of the next generation of Chamorro bilingual education materials, thereby contributing to the teaching and learning of the Chamorro language. Involvement in the project's activities will broaden the participation of the Chamorro people in documenting and preserving their own language. Members of the *Dictionary* working group will receive training in descriptive linguistics; community members who attend the workshops will learn of the issues surrounding language endangerment and language maintenance. In the best case, this project and the materials created by it will have a positive impact on the survival of the Chamorro language.

## **Collaborative Research: Chamorro Project Description (including Results from Prior NSF Support)**

PI (University of California, Santa Cruz): Sandra Chung  
PI (NMI Council for the Humanities): Elizabeth D. Rechebei

### **1. Introduction**

This collaborative project seeks to contribute significantly to the documentation of Chamorro, an Austronesian language spoken by some 45,000 people in the unincorporated U.S. territory of Guam and in the U.S. Commonwealth of the Northern Mariana Islands (CNMI). Although Chamorro is a living language today, it is—equally clearly—endangered. It is also at a critical moment in its history, when improved documentation and heightened community awareness of language endangerment could make a real difference to its survival as a living language. The proposed project will bring together a linguist and members of the Chamorro community in the Mariana Islands to prepare materials that will contribute to making this difference.

Research will be conducted by PI Chung at the University of California, Santa Cruz, and by a working group of Chamorro speakers supervised by PI Rechebei in the CNMI, on four interconnected activities. These are: (i) to prepare a new comprehensive reference grammar of Chamorro, intended for linguists, Chamorro speakers, and language learners; (ii) to expand and update Topping, Ogo, and Dungca's (1975) *Chamorro-English Dictionary*; (iii) to continue the collection and videotaping of Chamorro oral histories begun by PI Rechebei under the auspices of the Children of Our Homeland Project, at the CNMI Public Library, in 2004; and (iv) to run workshops in the CNMI to train Chamorro speakers in descriptive linguistics and to inform the community about language endangerment and the status of Chamorro as an endangered language.

The grammar, dictionary, and oral histories in video and print formats prepared by this project will provide an extremely detailed, accessible record of the Chamorro language for future generations. They will significantly expand the Chamorro data available to theoretical linguists who wish to test claims about language universals, and to historical linguists interested in reconstructing the Austronesian proto-language. The documentation will serve as a valuable reference for the development of the next generation of Chamorro bilingual education materials, thereby contributing to the teaching and learning of the Chamorro language. Involvement in the project's activities will broaden the participation of the Chamorro people in documenting and preserving their own language. Finally, in the best case, this project and the materials created by it will have a positive impact on the language's survival.

### **2. The Chamorro Language in Historical Context**

The current situation of the Chamorro language is best understood against the background of the political and cultural history of the Mariana Islands.

The Chamorro people were, in all likelihood, the only inhabitants of the Mariana Islands when Magellan landed there briefly in 1521. The islands were claimed by Spain in 1565. In 1668, Spain's colonization efforts intensified; by 1710, the combination of Christianization, warfare, disease, and societal dislocation had reduced the Chamorro population from an estimated 40,000 to less than 4,000 (Spoehr 1954; Farrell 1991). The colonial government then relocated the inhabitants of the islands north of Rota to the much larger island of Guam. There, Chamorros intermarried with soldiers and workers from Mexico, Spain, and the Philippines (Russell 1995). Extensive contact with the Spanish language during the next 200 years brought extraordinarily many Spanish words and phrases into the Chamorro language. Nonetheless, Chamorro is not a creole, but rather a language with an Austronesian structure in which the Hispanicization is superficial (see Stolz 2003). The language survived, but many Chamorro customs, practices, and elements of material culture were replaced by Hispanic colonial culture (Spoehr 1954).

The colonial government began to allow resettlement of the Northern Mariana Islands (NMI) during the nineteenth century. By the end of the Spanish-American War, there were Chamorros living there as well as in Guam (Farrell 1991). At that point, the political history of the islands diverged. In 1898, Spain ceded Guam to the U.S., which immediately placed it under the control of the U.S. Navy. Guam was declared an unincorporated U.S. territory in 1901 and, except for several years during World War II, has remained so ever since; its naval government was replaced by limited self-government in 1950 (Rogers 1995). In 1899, Spain sold the NMI to Germany. The NMI remained under German control until World War I, when it came under Japanese control, as part of a League of Nations mandate. At the end of World War II, the NMI came under U.S. control, as part of the U.N. Trust Territory of the Pacific Islands, and in 1976, it became a U.S. Commonwealth (Farrell 1991).

By 1975, Chamorro and English had been languages in contact for roughly 75 years in Guam, but for just 40 years in the NMI. In the introduction to the *Chamorro-English Dictionary* (1975), Donald M. Topping observed that there were “approximately 52,000 native speakers of the language in the Marianas, 40,000 of whom live on Guam.” He also observed that according to surveys taken in the early 1970’s, “most Chamorro parents on Guam speak English at home to their young children...If this trend continues, there is a very great possibility that Chamorro will cease to be spoken by Guamanians within another generation.” (1975: ix-x).

Although Topping did not note this explicitly, language maintenance was more robust in the NMI. In 1975, Chamorro was still the principal household language of most Chamorro families in the NMI, and most children in the NMI spoke fluent Chamorro when they entered primary school. In both Guam and the NMI, the public school system was, and continues to be, an American system in which English is the language of instruction. But bilingual education classes had been mandated, and Chamorro educators—many of them trained at the University of Hawaii as part of the Pacific Languages Development Project (1970-74) and the Bilingual Education Program for Micronesia (1974-83) (Rehg 2004)—mounted a sustained effort to produce bilingual education materials

Today, some thirty years later, it is much clearer that Chamorro is endangered (Nettle and Romaine 2000: 9; Topping 2003). When Topping’s 1975 figures are compared with data from the 2000 U.S. Census, it becomes evident that the number of speakers of Chamorro has declined, particularly in Guam. Although the Chamorro population in the Mariana Islands was 72,127 in 2000 (57,373 in Guam and 14,754 in the CNMI), the number of speakers of Chamorro was just 44,907 (30,708 in Guam and 14,199 in the CNMI). The decline is steeper for younger generations. Although the Chamorro population aged 5 to 17 years was 20,730 in 2000 (16,079 in Guam and 4,651 in the CNMI), the number of speakers of Chamorro in this age range was just 8,903 (4,326 in Guam and 4,577 in the CNMI). (Chamorro is also spoken by many Carolinians in the Mariana Islands, a fact presumably recorded in, but not obvious from, these data.)

Although the census data do not point to erosion in the use of Chamorro in the CNMI, they also fail to reveal to what extent those identified as speakers of Chamorro are fluent in the language. In fact, informal observations by educators and others suggest that the vast majority of Chamorro children now enrolled in primary and secondary schools in the CNMI do not speak fluent Chamorro. Many do not speak Chamorro at all. It is distinctly possible that the language maintenance situation in the CNMI today resembles the situation in Guam in 1975. In any event, in both Guam and the CNMI, the vast majority of fluent speakers of Chamorro are now 60 to 80 years old.

What factors have contributed to this decline? During the Spanish colonial period, the practice of oral histories was discouraged. Under U.S. administration, English was initially the only official language and the use of the Chamorro language was forbidden in the schools; in response, parents began to speak English to their children. In addition, the economic prosperity of the 1980s and early 1990s might well have played a role. During those years, many Chamorro families hired foreign domestic workers to provide childcare and perform other household tasks. Because the only language that these workers shared with their employers was English, English became a household language, and a first language for many Chamorro children.

During roughly the same period, there was significant immigration to the Mariana Islands from Asia, South-East Asia, and elsewhere. As a result, Chamorros ceased to form a majority of the population, in Guam by 1980 (Rogers 1995: 273) and in the CNMI by 1990. In both Guam and the CNMI, the schools have become a multilingual, multicultural environment in which Chamorro bilingual education classes, originally designed for students who are already speakers of the language, have been increasingly difficult to sustain.

Today, throughout the Mariana Islands, there is a growing awareness among educators and others that the Chamorro language, and much of the distinctiveness of Chamorro culture, could soon be lost. There is also a growing fear that the time left for slowing or halting this demise is very limited. This sense of urgency informs the present proposal.

### **3. Existing Documentation of Chamorro**

Most of the grammars and dictionaries of Chamorro written before 1960 were authored by Catholic priests or colonial administrators (e.g. San Vitores 1668, Safford 1903-05, Fritz 1908, Callistus 1910, Preissig 1918). Perhaps the most informative works from this period are the grammatical sketch by Safford (1903-05) and the far more detailed grammar by Costenoble (1940), the child of German homesteaders, who had learned to speak Chamorro as a child. The pre-1960 Chamorro dictionaries are phonologically inaccurate and far less useful.

In the 1960s and 1970s, the documentation of Chamorro was taken to the next level by the late Donald M. Topping. Topping was the PI of the Pacific Languages Development Project (1970-74), a project jointly funded by the Trust Territory of the Pacific Islands and the University of Hawaii to produce reference grammars and dictionaries for many of the Trust Territory's languages, including Chamorro (Rehg 2004). The project led to Topping's *Chamorro Reference Grammar* (1973), an accessible comprehensive grammar intended for speakers of the language, and to his *Chamorro-English Dictionary* (1975), co-authored with the late Pedro M. Ogo and with Bernadita C. Dungca, which contains some 10,000 entries, plus an English-Chamorro finder list.

Topping was also involved in the project's efforts to develop a standard orthography for Chamorro. These efforts led to the official Chamorro orthography adopted in the NMI in 1971. The official orthography adopted in Guam in 1983 is slightly different, but also draws on Topping's insights. (Outside of official contexts, nonstandard orthographies dating from the Spanish colonial period are also widely used.)

Since 1975, further advances in the documentation of Chamorro have come mainly as a side effect of fieldwork done by theoretical linguists who have sought to use Chamorro evidence to test claims about linguistic theory. This fieldwork has led to technical publications that describe in detail the intricacies of Chamorro phonology (e.g. Chung 1983, Crosswhite 1998), morphology (e.g. Chung 2003, Klein 2000), syntax (e.g. Campana 1992; Chung 1981, 1982, 1987, 1994, 1998; Gibson 1980; Gibson and Raposo 1987), semantics (e.g. Chung and Ladusaw 2004, 2006), and discourse (e.g. Cooreman 1987). Unfortunately, the technical format in which this information is presented has made it largely inaccessible to nonlinguists.

In pre-contact times, the Chamorro people had a rich tradition of oral histories and legends. That tradition was lost during the Spanish colonial period (Russell 1998: 159, 318). Aside from bilingual education materials, the Bible (a new translation of the Bible into Chamorro is currently being prepared by the Catholic diocese in Saipan), religious newsletters, and occasional newspaper articles and government pamphlets, there is very little published in the language. Notable exceptions are the (few) books translated into Chamorro, children's books in Chamorro (some funded by the Trust Territory and U.S. federal grants during the 1970s, others written more recently by Carmen Taimanao and Dolores Ichihara), and a book published with funding from the Children of Our Homeland Project (Borja, Borja, and Chung 2006). Materials in Chamorro are close to non-existent for adults, and inadequate for children.

Overall, then, Chamorro is moderately well-documented—better described than many Austronesian languages of Melanesia, but under-documented in comparison to Maori or Hawaiian (two severely endangered Austronesian languages of Polynesia). Given this, what are the reasons for the current proposal to upgrade the documentation further?

Three answers suggest themselves, one general and the other two specific to Chamorro.

First and most generally, there is never a point at which the documentation of a language can be said to be 'good enough'. The continuing work to improve the description of English (e.g. Huddleston and Pullum 2002) makes this clear. To settle for lower standards for languages that happen to be endangered or not associated with economic power is scientifically unjustifiable.

Second, as far as Chamorro is concerned, endangerment has created a situation in which some of the existing documentation is less usable than it was in the past. Two examples: (i) Because the *Chamorro Reference Grammar* is intended for fluent speakers of the language, it devotes only ten pages to morphophonemics (1975: 48-57). But Chamorro morphophonemics are complex and not represented consistently in the standard orthographies. A detailed, explicit description would enable them to be mastered more efficiently by non-fluent speakers and language learners. (ii) Because the *Chamorro-English Dictionary* employs the NMI orthography (the only standard Chamorro orthography at the time), it does not distinguish between the low front vowel and the low back vowel in the spelling of words. However, as the number of fluent speakers has declined, Chamorros have found it increasingly useful to represent this contrast in the spelling, as is done in the Guam orthography (which uses *a* for the low front vowel and *á* for the low back vowel). The 1998 version of the CNMI orthography conforms to this practice; an updated *Dictionary* should do so, as well.

Third and finally, preparatory work for most of the proposed activities has already been done, so the planned goals, though ambitious, are well within reach. To delay now would risk falling into a situation in which information might be lost before it could be documented.

The next sections describe the four proposed activities in greater detail.

#### **4. Preparation of a New Reference Grammar**

The new reference grammar will be prepared by PI Chung, a linguist who has devoted some thirty years to the study of the Chamorro language. This section first gives an overview of the grammar's methodology and organization, including the planned table of contents, and then describes the sources of the data to be used.

##### **4.1 Methodology and Organization**

Reference grammars are typically organized by 'level', with smaller linguistic units presented before larger linguistic units. On this model, the phonology of the language is described first, then the morphology, and finally the syntax. Both Costenoble's (1940) grammar of Chamorro and Topping's (1973) grammar are arranged this way. Interestingly, both devote the bulk of the exposition to morphology. The chapters that explicitly describe the structure of sentences come relatively late and are relatively brief.

Reference grammars can also be organized by syntactic construction, with simpler constructions presented before more elaborate ones. On this model, the most minimal simple sentences are described first, along with their characteristic morphology. Later chapters describe other simple sentence types, then complex sentences, and then discourse structure, with the exposition presenting the syntactic form of each in tandem with its characteristic morphology. The derivational morphology and the phonology are presented at the end. For some highly successful examples, see Bauer's (1997) grammar of Maori (which does not deal with phonology) and Huddleston and Pullum's (2002) grammar of English.

This second style of organization has two advantages for readers who are not linguists, but rather speakers or learners of the language. First, the reader is introduced right away to the smallest linguistic units used independently in discourse—namely, sentences. Second, the discussion of sounds, arguably the most abstract linguistic units, comes relatively late.

In an attempt to reach an audience that includes speakers and learners as well as linguists, the grammar of Chamorro proposed here will have the second style of organization.

The most minimal clauses in Chamorro are one-word sentences consisting of just the predicate, which is a verb or adjective. This predicate is inflected for aspect (progressive vs. non- progressive) and agrees with the subject. Clauses of this type are the focus of Chapter 2..

The predicate of the clause can also be a noun (phrase) or a prepositional phrase. (Chamorro has no copula.) Such predicates are inflected for aspect, but do not always agree with the subject. Clauses of this type are the focus of Chapter 3.

Chapter 4 describes the other ingredients of basic clauses—e.g. tense-mood markers, auxiliaries, subject and direct object noun phrases—and their word order.

Chapter 5 describes some clause types that (apparently) deviate from this basic template, including existential sentences, sentences of possession, commands, and exclamations.

Chapters 6-8 are devoted to noun phrases. The case marking of noun phrases and the argument-adjunct distinction are described in Chapter 6. The internal structure of noun phrases is presented in Chapter 7; among the topics covered are the word order and morphological form of determiners, adjective modifiers, other modifiers, possessors, and (the external distribution of) relative clauses. The forms of Chamorro pronouns and their distribution are described in Chapter 8.

Chapters 9-11 are devoted to clause types that alter the syntactic realization of the verb's argument structure. Passive and antipassive clauses are covered in Chapter 9; applicatives and causatives in Chapter 10; and reflexive clauses and reciprocal clauses in Chapter 11. (Although reflexive clauses do not alter the realization of the verb's argument structure, they are discussed alongside reciprocal clauses for convenience.)

The distribution of clause types formed from transitive verbs, including passives and antipassives, is determined largely by a person-animacy hierarchy. This and other aspects of information packaging inside the clause, including clause-internal topics and the treatment of quantified subjects, are described in Chapter 12.

Chapter 13 is devoted to sentential negation in Chamorro, negative polarity items, and negative concord.

Chapter 14 describes various classes of adverbs and their word order.

Chapter 15 describes the details of phrasal and sentential coordination.

Chapters 16-17 are devoted to subordination. Finite subordinate clauses are covered in Chapter 16. Infinitives are covered in Chapter 17: these always have missing subjects identified with the next higher subject, and they only optionally form an independent clause on their own.

Chapters 18-20 are devoted to unbounded dependencies. In Chamorro, these filler-gap constructions are distinguished by the fact that verbs and predicate adjectives register the grammatical relation of the gap (so-called 'wh-agreement'). Questions and focus constructions are described in Chapter 18; the internal structure of relative clauses is described in Chapter 19; degrees and comparison are described in Chapter 20.

Chapter 21 describes information packaging in discourse, including discourse topics and the use of null arguments.

The derivational morphology of Chamorro is presented in Chapter 22. Various types of derived nouns are covered, including deverbal nouns, denominal verbs and adjectives, and various other types of derived verbs.

Chapters 23 and 24 are devoted to phonology. Sounds, syllable structure, stress, and intonation are covered in Chapter 23. This chapter also describes the standard orthographies adopted by Guam and by the CNMI. Phonological alternations and their relation to the orthography are described in Chapter 24.

The organization of the chapters is 'flat', so that readers can access many topics directly from the table of contents, rather than having to resort to the index. Each topic will begin with an overview paragraph that briefly summarizes the material to be covered.

The exposition will focus on presenting the descriptive generalizations governing the structure of the language clearly, precisely, and accessibly. The terminology used will be standard and mostly familiar from traditional reference grammars. In syntax, this includes e.g. noun, direct object, aspect, mood, argument, prepositional phrase, relative clause, infinitive; in

morphology, e.g. prefix, stem, reduplication; in phonology, e.g. stress, closed syllable, mid vowel. Each generalization described will be illustrated with multiple examples which are cited in standard orthography and given a morpheme-by-morpheme gloss and a free translation. These illustrative examples will be taken from several sources (see the next subsection). But throughout, the emphasis will be on examples from naturally occurring data.

It is, of course, impossible to describe a language coherently without having a theory of how language works. Generative linguistic theory has clearly shaped Chung's understanding of the Chamorro language, her view of the linguistic generalizations to be described, and the organization of the planned grammar. Nonetheless, in order to contribute to readability, the theoretical apparatus employed in the exposition will be kept to a minimum.

The planned table of contents is recapitulated below.

#### TABLE OF CONTENTS

1. Introduction
2. Predicates: Verbs and adjectives (including aspect, subject-verb agreement)
3. Predicates: Nouns and prepositions (including aspect)
4. Basic clauses (including tense-mood, subjects, direct objects, word order)
5. Other clauses (including existential sentences, commands, exclamations)
6. Outside noun phrases (including arguments vs. adjuncts, case marking)
7. Inside noun phrases (including possessors, modifiers, relative clauses)
8. Pronouns
9. Passives and antipassives
10. Applicatives and causatives
11. Reflexives and reciprocals
12. Information packaging in the clause (including the person-animacy hierarchy)
13. Negation (including negative polarity items, negative concord)
14. Adverbs
15. Coordination
16. Subordination
17. Infinitives
18. Questions and answers (including special verb forms, focus)
19. Relative clauses
20. Degrees and comparison
21. Discourse structure (including discourse topics, null arguments)
22. Derived words
23. Sounds and spelling (including stress and intonation)
24. Sound alternations

#### 4.2 Sources of the Data

The planned grammar will be based on linguistic data from multiple sources, including elicited sentences, spoken discourse, written discourse, and previous descriptions of the language.

The single largest source of data is Chung's fieldwork on Chamorro, which began in 1976 and is still ongoing. This fieldwork has been conducted both in the Mariana Islands and in the continental U.S. Chung has worked regularly for multi-year periods with 2 speakers from Guam (in California) and 4 speakers from Saipan (in the CNMI and elsewhere); she has also worked more briefly with 7 speakers from Guam (in California), 1 speaker from Rota (in California), and over 20 speakers from Saipan (mostly in the CNMI). This fieldwork has resulted in over 3,800 pages of handwritten fieldnotes on Chamorro, consisting of elicited sentences, words, or phrases, plus speakers' grammaticality judgments, comments, and observations. Most of Chung's field data are also stored in searchable electronic text files.

Another rich source of data are oral and written narratives. The oral narratives notably include two sets of Chamorro legends, stories, and personal histories collected by Ann Cooreman in the course of her dissertation research in 1982-83. One set of narratives was



provided by a speaker from Guam living in Oregon; the other set was provided by some 15 speakers, including many elders, who Cooreman interviewed and tape-recorded in Saipan. Cooreman has generously given Chung copies of the transcribed narratives (in typescript) as well as copies of the Saipan tape recordings; the tape recordings have recently been digitized. These materials constitute an extraordinarily valuable record of Chamorro spoken discourse. Two valuable sources of written narratives are Onedera (1994) and Borja, Borja, and Chung (2006).

A third, more variable source of data are other Chamorro written materials that Chung has collected over the years. These include bilingual education materials, other instructional materials, newspaper articles, government pamphlets, official announcements, religious newsletters, political advertisements, written correspondence, and electronic postings. These written materials are not extensive, and can be hard to use when the orthography employed is nonstandard. Nonetheless, they can provide useful examples of various styles of discourse.

Occasionally, data from these sources will be supplemented by data from previous descriptions (see section 3).

It is anticipated that Chung will have to do limited fieldwork during the preparation of the grammar in order to check details. After a draft is completed, it will be read and checked for accuracy by one or more Chamorro speakers associated with the project.

## **5. Revision and Updating of the Dictionary**

The *Chamorro-English Dictionary* will be revised and updated by a working group of 9-10 fluent speakers of Chamorro headed by Dr. Rita H. Inos; the entire group will work under the supervision of PI Rechebei. This group will include educators and other specialists in Chamorro language and culture, some of whom were trained at the University of Hawaii under the programs mentioned in section 2. At the start of the project, PI Chung will run a linguistics workshop for the group; she will also serve as the consultant linguist on an ongoing basis. The dictionary activities will proceed with input from, and the cooperation of, the Chamorro and Carolinian Language Policy Commission.

The Chamorro/Carolinian Language Policy Commission was established to prescribe, and provide guidance in, the development of dictionaries, grammars, and orthographies and to recommend policies governing the usage of the Chamorro and Carolinian languages in the government and public sectors. The Language Commission was a significant partner agency in PI Rechebei's ANA project, which led to videos, books in Chamorro, translations into Chamorro, and TV programming. The activities of this project, including the *Dictionary* revision, will continue that partnership.

The following subsections describe several planned revisions of the original *Dictionary*. The section then concludes with some sample revised lexical entries.

### **5.1 Parts of Speech**

Although the original *Dictionary's* entries include information about a word's part of speech, the terms employed are not standard. Four word classes are recognized—1, 2, 3, and 'unclassified'; these are defined by what affixes a word can combine with. The Class 1 words are, essentially, the transitive verbs. The Class 2 words are all other words that can stand alone and serve as predicates. The Class 3 words (represented rarely, if at all, in the actual entries) are 'defective verbs'. All other words are 'unclassified'.

Topping's *Reference Grammar* (1973: 76-82) briefly lays out some reasons for rejecting a more traditional classification. Verbs, nouns, and adjectives in Chamorro can all serve as predicates of clauses; further, adjectives can appear to serve as nouns (as in *i dúngkolo* 'the big (one)'). These observations led Topping to conclude that there were no operational definitions for noun, verb, adjective, and preposition in Chamorro, and so the traditional system of parts of speech was simply irrelevant for this language.

However, closer investigation reveals that Chamorro does, in fact, provide evidence for classifying words as nouns, verbs, adjectives, and prepositions. For instance, (predicate) nouns

are distinguished from verbs and adjectives by the fact that they do not show subject-verb agreement in the irrealis mood. Verbs are distinguished from adjectives by their inability to occur with certain degree modifiers. Prepositions are distinguished from verbs and adjectives by their inability to show subject-verb agreement; they are distinguished from nouns by the fact that they must have a direct object. (Nouns never have a direct object.) And so on.

We believe that the entries in the revised *Dictionary* should classify words according to the traditional parts of speech. This revision, which is supported by Chamorro-internal evidence, will clearly facilitate cross-linguistic comparison. It should be easy to implement, using tests like those just described. One of the results will be that numerous previously ‘unclassified’ words (including pronouns, prepositions, prosodically defective verbs) will have their part of speech identified.

## 5.2 Spelling Issues

### 5.2.1 Two Orthographies

As mentioned earlier, Chamorro has not one but two standard orthographies: the CNMI orthography (whose latest version dates from 1998) and the Guam orthography (whose latest version dates from 1997). Fortunately, the two orthographies are alike in most respects—most prominently, in ranking the uniform representation of a word over the principle ‘one phoneme, one grapheme’ (see Klima 1972 on the theory of orthographies; Rehg 2004 on standard orthographies in Micronesia; Chung 1998: 375-376; and 5.2.3 below). The main differences between the two orthographies are these: (i) the two orthographies sometimes choose different representations for nonlow vowels that are unstressed in all forms of the word; (ii) the orthographies differ in whether certain stressed prefixes may (in Guam) or must (in the CNMI) be written as separate words; (iii) the orthographies differ in their spelling of some culturally potent words (e.g. the word meaning ‘Chamorro’ is spelled *Chamorro* in the CNMI, but *Chamoru* in Guam; the word meaning ‘God’ is spelled *Yu’us* in the CNMI, but *Yu’os* in Guam).

Both orthographies are now culturally and politically well-entrenched, so the revised *Dictionary* must employ one or both of them. We plan for the revision to use the latest (1998) version of the CNMI orthography, which has adopted the Guam orthography’s conventions for differentiating between the two low vowels. When the Guam orthography’s spelling of a word differs substantially from the CNMI spelling, this will be noted in the revised entry.

Both orthographies give an imperfect phonemic representation of geminate consonants and non-low vowels. (This is arguably what makes them hard for speakers to use.) We next discuss these areas, the issues they raise, and how the revised *Dictionary* will deal with them.

### 5.2.2 Geminate Consonants

Geminate consonants contrast with nongeminate consonants in most dialects of Chamorro. (The Rota dialect has lost the distinction.) The original *Dictionary* records this contrast reliably for stops and nasals, less reliably for the voiceless alveolar fricative *s*, and almost never for the voiceless and voiced alveolar affricates (which are represented in both orthographies as *ch* and *y*). For instance, *lachai* ‘dispose of, consume’ and *lachi* ‘wrong, incorrect’ are both spelled with medial *ch*, despite the fact that this consonant is geminated in *lachai* but not in *lachi*; *ayu* (the distal demonstrative) and *hăyu* ‘stick, wood’ are both spelled with medial *y*, despite the fact that this consonant is geminated in *ayu* but not in *hăyu*.

Because the difference between geminates and nongeminates is contrastive and affects the realization of vowels, entries in the revised *Dictionary* should represent it. This could be done either in the spelling of the word itself or—if spelling changes prove politically unfeasible—in a ‘pronunciation’, representing the word’s surface phonemes, stress, and syllabification, which is cited after its spelling. Determining the form that the ‘pronunciation’ should take (e.g. should it be in IPA?) and implementing these revisions will be time-intensive.

### 5.2.3 Mid and High Vowels

In pre-contact times, Chamorro mid vowels and high vowels were probably in complementary distribution, with mid vowels occurring in stressed closed syllables and high vowels occurring elsewhere. With the introduction of many Spanish loanwords, mid vowels came to contrast with high vowels in stressed syllables; compare /hóNgi/ ‘believe’ and /húNgan/ ‘yes’, /asút/ ‘blue’ and /bapót/ ‘ship’. (Here and below, we use /N/ for the velar nasal, /ts/ for the voiceless alveolar affricate, and the acute accent to indicate stress). In indigenous words, nonlow vowels in unstressed syllables are high (but see Chung 1983).

The original complementary distribution of mid and high vowels survives as a phonological alternation conditioned by stress. In brief: In Chamorro, primary stress can fall on any of the last three syllables of a noncomplex word, but always falls on the next-to-last syllable of words formed by suffixation. When suffixation causes the stress to fall on a closed syllable containing a nonlow vowel, that vowel is realized as mid; compare /pátgun/ ‘child’ and /patgón-ña/ ‘his/her child’. The same alternation can also be seen in words which, in their noncomplex form, have primary stress on a closed syllable and happen to end in an open syllable. When these words have a –CV suffix attached to them, the consonant of the suffix is geminated, so that the next-to-last syllable (the syllable on which the stress falls) becomes closed; compare /kánta/ ‘song’ and /kantá-mmu/ ‘your (sg) song’. And when this stressed, closed syllable contains a nonlow vowel, that vowel is realized as mid. Compare /matsétti/ ‘machete’ with /matsetté-nña/ ‘his/her machete’; also /dáNkulu/ ‘big’ with /daNkuló-nña/ ‘bigger’. Topping (1968) analyzed this last alternation as a kind of vowel harmony. It is perhaps better treated as a result of the closed syllable harmony enforced by gemination (Chung 1983).

The standard orthographies acknowledge these alternations by representing a nonlow vowel uniformly as mid if there is any form of the word in which it is realized as mid. Thus, /pátgun/ is spelled *pátgon*, /matsétti/ is spelled *machette*, etc. The orthographies also generally represent a nonlow vowel as mid if it precedes any nonlow vowel within the word that is (ever) realized as mid. (This is Topping’s ‘vowel harmony’.) Thus, /dáNkulu/ is spelled *dãngkol*: even though the next-to-last vowel is always realized as high, it is spelled *o*, because it precedes a nonlow vowel that is realized as mid under suffixation.

Our point: the gemination found in –CV suffixes is not fully regular. In a very few words, it is unexpectedly absent (e.g. *anti* ‘spirit’) or unexpectedly present (e.g. the direction word *hãya*). Therefore, information about it should be included in the revised *Dictionary*. This could be done by augmenting the entries of vowel-final words to include a form derived by suffixation of the 1st sg. possessor –*hu*, whose geminated form is –*ku* (phonemically, /-kku/).

Further, the pronunciation of nonlow vowels that never bear stress is unpredictable in borrowed words. This information should also be included in the revised *Dictionary*. The least intrusive place to do this, it seems to us, is not in the word’s spelling but rather in its ‘pronunciation’. Implementing these revisions will be time-intensive, but the results will be informative for any *Dictionary* user who is not already a fluent speaker of Chamorro.

### 5.3 New and Expanded Entries

Although the original *Dictionary* is a valuable resource, there are—unsurprisingly—many Chamorro words that are not included. In the course of collecting oral histories and written narratives, the PI’s and their associates have uncovered numerous words that have no *Dictionary* entry, including some very common words (e.g. *kãddo* ‘soup’, *piót* ‘specially’). There are also many words whose entry does not list all the relevant meanings and variant pronunciations. The preparation of new and expanded entries, especially for words of cultural significance, will be a major focus of the planned revision.

### 5.4 Sample Revised Lexical Entries

Below, we give some sample lexical entries that illustrate the planned revisions. These entries use standard abbreviations for parts of speech; in addition, *tns.* is used for tense, *poss.* for possessor, and *rel.* for relative (our current term for ‘wh-agreement’ forms of the verb). In the

'pronunciation' (the phonemic representation), due to the limitations of our fonts, we use /ä/ for the stressed low front vowel, /ʔ/ for glottal stop, /ts/ and /dz/ for the alveolar affricates, and periods to represent syllable boundaries. Each entry contains one or more illustrative examples. The unusually detailed entry for *po'lo* is based on work by Manuel F. Borja.

**ginen** /gí.nin/ *prep.* from. *Ginen San Roque yo' na songsong.* I'm from San Roque village; \_\_\_ *tns.* used to (imperfect). *Ginen ma'estrâ-ku si Julia.* Julia used to be my teacher.

**hâyi** /há.dzi/ *pro.* **1.** who? (interrogative pronoun). *Hâyi gue'?* Who is he?, **2.** what?, which? (referring to humans). *Hâyi na'ân-mu?* What's your name? *hâyi na taotao?* which person?; **3.** any(one) (polarity item). *Ti ya-ña na u mali'e' ni hâyi.* He didn't like to be seen by anyone, *Kao un kombida maseha hâyi na amigu-ña siha?* Did you invite any of his friends?, *yanggen hâyi ti gumuaiya i patgon-hu.* if anyone doesn't love my child; **ni hâyi pro.** **1.** no one. *Kana' ni hâyiyi muli'e' i aksidente.* Almost no one saw the accident; **2.** (negative concord item). any(one). *Ti manbisita yo' ni hâyiyi.* I didn't visit anyone.

**pacha** /pät.tsa/, **pinacha-ku** (*1sg.rel.*) *v.t.* touch, be in contact with. *Sen malago' na u pacha i kanârio.* He really wanted to touch the canary.

**po'lo** /pó?.lu/, **pine'lo-ku** (*1sg.rel.*) *v.t.* **1.** place, put, establish. *Ha po'lo i guihan gi halom bätde.* He put the fish in the bucket; **2.** put it aside, leave it up to (me). *Po'lo ya guâhu bai hu cho'gue ennao.* Let me be the one to do that; **3.** leave, abandon. *Ha po'lo ha' i famagu'on gi kanton tasi.* She just left the children at the beach.; **4.** assume, presume, think, believe. *i pine'lo-ku.* my opinion; **4.** invest, save. *Guaha pine'lolo-ku.* I have savings; **5.** let it be. *Po'lo ha'.* That's okay.

**saina** /säj.na/, **saina-hu** (*1sg.poss.*) *n.* **1.** parent. *Este na pätgon malalälätde ni saina-ña.* This child was scolded by his parent(s); **mañaina** *n.pl.* parents. *Esta manmamaigo' i mañe'lon Rosa yan i mañaina-ña.* Rosa's sisters and brothers and her parents were already asleep. **mamaisen saina** *v.i.* formally ask a girl's parents for her hand in marriage. **2.** someone more senior than the speaker. **3.** Lord, master, supreme being.

## 6. Collection and Videotaping of Chamorro Oral Histories

Any upgrade in the documentation of Chamorro should include connected discourse, since that aspect of the language is minimally represented in the materials currently available (see sections 3 and 4.2). Our primary approach to collecting connected discourse will be for PI Rechebei to continue the videotaping of oral histories that she began under her Children of Our Homeland Project, which was funded by the Administration for Native Americans (ANA) for a three-year period ending in August 2007.

During the three years of the ANA project, PI Rechebei supervised the videotaping of 15 elders from the CNMI who were fluent speakers of Chamorro or Carolinian, and who provided their oral histories in response to questions from trained interviewers who are fluent speakers of Chamorro or Carolinian. The oral histories were videotaped by a cinematographer from the Chamorro and Carolinian Language Policy Commission and then professionally edited. The originals will be archived in the Pacific-Asia Room of the Joeten-Kiyu Public Library (Saipan), and in the CNMI Archive of Northern Marianas College; the edited versions will be available in both locations as well as in the CNMI Museum of History and Culture, in the public school libraries, and at the office of the Chamorro and Carolinian Language Commission. These videotapes provide an invaluable record of Chamorro connected discourse and detailed information about Chamorro cultural practices.

We plan to continue the videotaping of Chamorro oral histories for several reasons. First, videotapes can capture aspects of nonverbal communication which are part of 'speaking Chamorro', but cannot be captured by print or by audiotape. Second, videotapes have an immediacy not found in print media, so they have great potential for engaging a diverse community—that is, appealing to an audience of all ages that includes both fluent and non-fluent speakers of Chamorro, as well as language learners. Third, the videotapes can provide the basis for educational materials in multiple formats (e.g. print, audio, and video; bilingual

and monolingual). Finally, the local infrastructure for the creation, editing, and production of the videotapes is already in place.

We plan to collect around 15 oral and audio histories in Chamorro during the course of the project. These oral histories will be provided by fluent speakers of the language whose cultural knowledge is unusually rich and detailed. The interviews will involve the same Chamorro interviewer (Ms. Anicia Tomokane) and the same cinematographers who were involved in the videotaping done under PI Rechebei's ANA project.

Although the videotapes will be our primary vehicle for the collection of connected discourse, we would also like to support the creation of written Chamorro literature, since so little of it exists outside the contexts of church and school. Manuel F. Borja, a Chamorro author, has expressed an interest in writing a bilingual book (in Chamorro, with English translation) based on Chamorro elders' reminiscences of adolescence and early adulthood. Funding is included for his preparation of this book manuscript.

### **7. Workshops on Descriptive Linguistics and Language Endangerment**

As mentioned earlier, the working group that will revise the *Dictionary* will include educators and other specialists in Chamorro language and culture. We plan to begin with a working group of 9 to 10 members varying in expertise, with the expectation that not all of them will continue for the entire length of the project and membership will vary depending on the work involved. We will have a pool of individuals to replace members if necessary. Most likely all members of the group will be from the CNMI, though educators from Guam will also be invited to participate. Some members of the working group will be familiar with the standard orthographies and with the task of constructing dictionary entries; others will have had little prior experience in these areas. To ensure that everyone is on the same page, PI Chung will run a three-day workshop on descriptive linguistics for the group during the first month of the project. The workshop will cover: (i) Chamorro phonetics and phonology, the standard orthographies, and sound-to-spelling correspondences, (ii) Chamorro parts of speech and how to identify them; (iii) how to construct a lexical entry. The workshop will be followed by two days of tutorial sessions on how to use the Toolbox software for constructing lexical entries. Chung will offer at least two further workshops in descriptive linguistics for the group, one in Year 2 and the other in Year 3.

As observed earlier, the Chamorro language is at a critical point in its history, with very little time left to halt or reverse the decline in the number of Chamorro people, especially children, who speak it fluently. Although the proposed project has language *documentation* as its primary purpose, we believe that the larger goal of language maintenance will be best served if we can also heighten the community's awareness of language endangerment and Chamorro's status as an endangered language. Accordingly, PI Rechebei and Dr. Inos will run workshops in the CNMI to inform the community about these issues and spark discussion about what can be done to maintain the Chamorro language. We plan to run three community workshops, one in each year, with the cooperation and support of the Chamorro and Carolinian Language Policy Commission. The first workshop will draw on e.g. Crystal's (2000) and Nettle and Romaine's (2000) discussions of language endangerment and its relation to the endangerment of cultural knowledge. The second will be devoted to bilingualism and its potential benefits for the maintenance of the Chamorro language. The third will be devoted to language documentation and its relation to language maintenance; at this final workshop, we will present and discuss some of the project's results.

### **8. Technology and Archiving**

The original *Chamorro-English Dictionary* was typeset electronically at the University of Hawaii. Current and retired faculty colleagues of Topping's at the University of Hawaii have been very generous in helping us to locate copies of the electronic files, which they plan to send to us in CD format. These files, which we understand are plain text files, will save us a significant amount of time.

We plan to revise and extend these text files using SIL's Toolbox software, which is easy to use and multi-platform. This is particularly important since PI Chung is a Linux and Mac (OSX) user, while PI Rechebei and most others in the CNMI are Windows users. We understand that from Karen Buseman of SIL that SIL is working on a Mac version of Toolbox and hopes to have a limited-features version available by the end of 2007. Meanwhile, the default will be for us to run Toolbox on Windows (or, for PI Chung, on Linux using the Wine emulator).

Toolbox has the great advantage that we can typeset the revised *Dictionary* using the Multi-Dictionary Formatter.

Ms. Anicia Tomokane, the Chamorro interviewer from PI Rechebei's ANA grant, will conduct videotaped oral interviews of elders and cultural experts in the three inhabited islands of the CNMI (Rota, Saipan, and Tinian). Videos in DVD format will be produced using a Sony VCX2100 camera, a JVC Digital Video Camera GR-DV3000, Final Cut Studio, Adobe software (Audition and Premier Pro), PC and Mac computers with at least 2 gigabytes of ram and 500 gigabytes of memory. A Language Policy Commission videographer will assist at no cost to the project except for airfare, per diem, and ground transportation.

Raw footage of the interviews will be archived in DVDs. Edited interviews on DVDs will be duplicated and made accessible to the public at the Public Library, the CNMI Archive, the NMI Council for the Humanities, and school libraries. A professional video editing firm will edit the videos under the direction of PI Rechebei and Ms. Tomokane. Most, if not all, of the oral interviews will also be shown at least twice on local television. Written permission will be obtained for the videos to be shown on television and distributed to the school libraries. Recorded narrations of stores, all in Chamorro, will also be produced and played on the local radio stations.

Our plans concerning archiving are driven by two concerns. First, material such as the text files of the revised *Dictionary* and the unedited videotapes of the oral histories should be archived locally; and second, this material should be archived in a location from which it is widely available. To address these concerns, we propose to archive the text files of the revised *Dictionary*, the unedited videotapes, and similar materials in two locations, one in the CNMI and the other a password-protected digital archive. In the CNMI, two appropriate archives are the Pacific-Asia Room of the Joeten-Kiyu Public Library and the CNMI Archive at Northern Marianas College (both on Saipan). As far as digital archives go, the natural choice is the Pacific and Regional Archive for Digital Sources in Endangered Cultures (PARADISEC).

## **9. Intellectual Merit and Broader Impact**

The intellectual merit of this project is enhanced by the fact that Chamorro is an unusual language in several respects. First, it is an isolate within the Austronesian family whose exact classification has been controversial. According to some, Chamorro belongs to the Malayo-Polynesian branch of Austronesian, and is most closely related to the Philippine languages; according to others, it is most closely related to the Formosan branch of Austronesian, which is widely held to be the most conservative branch of the family. Improved documentation could help to settle this issue. At the same time, it might well shed light on the earliest (reconstructed) historical stages of Austronesian.

Second, Chamorro is an unusually clear example of a language that has undergone massive borrowing, yet retained its original linguistic structure. Stolz (2003) and others have begun to investigate its implications for the theory of language contact. The documentation proposed here will contribute to those investigations.

The broader impact of this project is considerable. The planned activities involve—and depend on—the active participation of community members, who will revise the *Dictionary*, review the grammar for accuracy, and participate (as interviewers or interviewees) in the videotaping of oral histories. The grammar, the revised *Dictionary*, and the videotapes will be valuable as resource materials for the next generation of Chamorro bilingual education materials. The planned workshops will raise community awareness about language endangerment and the importance of maintaining the Chamorro language. In the best case, the

ultimate result of these efforts will be not only be the documentation of Chamorro, but also its preservation as a living language.

#### **10. The PI's and Other Investigators**

PI **Sandra Chung** was trained in generative syntactic theory and descriptive linguistics at Harvard, where as an undergraduate she began fieldwork on Austronesian languages. Her early research focused on Indonesian syntax and the syntax of the Austronesian languages of Polynesia. Since 1976, the primary focus of her research has been the syntax of Chamorro. Her fieldwork on Chamorro has led to several books and numerous articles that bring Chamorro evidence to bear on issues in syntactic theory. She has also written about Chamorro phonology, morphology (clitics), and semantics.

PI **Elizabeth D. Rechebei**, an educator, was born in Saipan. She holds a B.A. in Psychology from the University of Guam, a M.Ed. in Educational Psychology from the University of Hawaii, Manoa, and an Ed.D. from the University of San Diego in California. She served as the director of education during the Trust Territory administration, as Commissioner of Education for the CNMI, and now works as a consultant in education. Her most recent project is the ANA-funded Children of Our Homeland, serving indigenous peoples of the CNMI. She is currently president of the Commission on Education in Micronesia, whose mission is to advocate for the integration of indigenous knowledge in education and to promote the use of the indigenous languages throughout the region. Previous projects directed include the development of the comprehensive plan for the CNMI Museum of History and Culture; she was also instrumental in planning and development of the CNMI Public Library.

**Manuel F. Borja**, an educator and translator, was born in Saipan. He holds a B.A. in Philosophy from St. John's University, an M.A. in TEFL and Philosophy from Ball State University, and became a Ph.D. candidate in Philosophy at DePaul University in 1985. His career as an educator includes six years as an English teacher and administrator in secondary schools in Saipan and Tinian and nine years at Northern Marianas College (Saipan), where he was Associate Professor of Philosophy and Dean of Student Affairs. Now retired, he lives in Chicago. A Chamorro author, he is actively engaged in translating books and articles from English into Chamorro. He will prepare a bilingual book based on elders' reminiscences of their adolescence and early adulthood, and will contribute to the revision of the *Dictionary*.

**Rita H. Inos**, an educator, was born in Rota. She holds a B.A. in Liberal Arts (Bilingual Education) from the University of Hawaii, an M.A. in School Administration and Supervision from San Jose State University, and an Ed.D. from the University of Southern California. After sixteen years as a bilingual teacher and school administrator in Rota, she became Director of Programs and Services, and then Deputy Director, of the Pacific Region Educational Laboratory (PREL), in Honolulu. From 1998 to 2006 she was Commissioner of Education for the CNMI's Public School System. She is now Chair of the Board of Regents of Northern Marianas College. She will serve as head of the working group to revise the *Dictionary*.

#### **11. Project Plan**

We plan to begin preparations for the project well in advance of the start date. PI Chung has sabbatical in Fall 2007 and will be released from teaching one course in Winter 2008. She will begin work on the grammar during this time; her hope is to draft the first four chapters in 2007-08. She and PI Rechebei will begin reformatting the electronic files of the original *Dictionary*, if necessary, so they can be easily revised using Toolbox. Finally, PI Rechebei, in consultation with PI Chung and Dr. Rita H. Inos, the leader of the *Dictionary* working group, will begin to assemble a list of potential members of the working group.

The beginning of Year 1 will be devoted primarily to the revision of the *Dictionary*. In the CNMI, the working group will be established. PI Chung will run a workshop on descriptive linguistics for the group, followed by tutorial sessions on the Toolbox software. By the middle of Year 1, the working group will be meeting monthly to formulate new entries and revise existing entries. Because of the expense involved in bringing all members of the group together

on one island, the group will meet sometimes as a whole (on Saipan), and other times in subgroups on the members' respective islands. The budget includes funds for Dr. Inos to travel twice a year to Tinian and Rota to attend subgroup meetings there. This will be much cheaper than bringing the members from these islands to Saipan for every meeting.

At the working group meetings, a technical support person will be present to assist with computer entry and other issues; PI Chung will be available to consult with the group by email and phone. The quality and uniformity of the entries will be monitored by both PIs and Dr. Inos. Meanwhile, at UCSC, PI Chung will continue to work on drafting the grammar. Sometime during Year 1, Manuel Borja will travel to Saipan to begin interviewing elders for his book project; during this trip, he will also contribute to monitoring the quality and uniformity of the *Dictionary* entries. Finally, PI Rechebei and Dr. Inos will run a workshop on language endangerment for the community, probably in Saipan.

By the beginning of Year 2, the revisions on the *Dictionary* should have advanced far enough that our attention can turn to the oral histories. In the CNMI, PI Rechebei will assemble the team that will do the interviewing and videotaping. She will identify the elders to be interviewed and supervise all other aspects of the interview process. Seven to 8 elders will be interviewed and videotaped during Year 2. PI Chung will spend a month in the CNMI with the *Dictionary* group, collaborating with them on the revised entries and addressing any larger linguistic issues or spelling issues that might arise. She will also run the second linguistics workshop for the group. Sometime during Year 2, Manuel Borja will travel to Saipan to complete his interviews with elders; during this second trip, he will again contribute to monitoring the quality and uniformity of the *Dictionary* entries. PI Rechebei and Dr. Inos will run a community workshop on bilingualism and language maintenance. While at UCSC, PI Chung will continue to work on drafting the grammar.

At the beginning of Year 3, PI Chung will spend a month in the CNMI with the *Dictionary* group; she will run another linguistics workshop and collaborate on the entries.

By the middle of Year 3, most of the revisions on the *Dictionary* should be complete. Both PIs and Dr. Inos will continue to check the entries for quality and uniformity. They will also begin checking formatted versions of the manuscript for errors. The 7 to 8 oral histories collected in Year 2 should be edited and complete, and interviews for 6 to 7 additional oral histories should be ongoing. The draft of the grammar should be largely complete. Manuel Borja's book manuscript should be complete and ready for computer typesetting; he will spend most of Year 3 working on quality control for the revised *Dictionary*.

The PIs will spend the second half of Year 3 preparing the revised *Dictionary*, the grammar, the oral histories, and Manuel Borja's book for publication. We are hopeful that the University of Hawaii Press, which published the original *Dictionary* and has kept it in print, will be interested in publishing the revised *Dictionary*. We will seek a contract with them before exploring other publishers or means of publication. The NMI Council for the Humanities will publish Borja's book as part of its Micronesian Authors Project, funded by the We the People Project under NEH. Finally, during the second half of Year 3, both PIs and Dr. Inos will run a community workshop on language documentation and language maintenance, during which they will present and discuss the results of the project.

## **12. Results from Prior NSF Support (BCS-0131767)**

*Award number:* BCS-0131767, *Amount:* \$75,118, *Period of Support:* Mar 1, 2002-Feb. 28, 2005

*Title of the project:* Existentials at the Interface

PI Chung and James McCloskey were the PIs on this 36-month project to investigate the syntax and semantics of existential constructions. The project focused on a small number of genetically and typologically distinct languages—Basque, Cantonese, Chamorro, English, Irish, and Nuu-chah-nulth (Nootka). The major results concerned Chamorro, English, and Irish. Specifically:

We showed that Irish is not, after all, a counterexample to the universality of the DE in existential constructions. In this VSO language, it is not always transparent whether the pivot is



syntactically low (in an existential construction) or high (in the locative construction). When the pivot is shown to be low through other diagnostics, the DE emerges. This result implicitly supports the claim that (impersonal) existentials *always* exhibit the DE, as well as theories in which existential and locative sentences arise from a common syntactic structure (Freeze 1992).

We showed that in Chamorro, the DE on the internal argument of a verb of possession is determined by lexical selection, not syntax or compositional semantics. Because verbs of possession are related to existential verbs in Chamorro, the result supports McNally's (1998) theory of existentials, in which the DE results from selection by the existential verb.

However, we also showed that English constructions formed from the verb *exist* argue against the specifics of McNally's theory. McNally claimed that the existential verb selects an argument of type  $\langle e, t \rangle$ . Using naturally occurring data, we showed that the English verb *exist* is an individual-level verb and selects an argument of type  $e$ , but that impersonal sentences formed from it have the same syntax, and the same DE, as ordinary existential sentences. The results cast doubt on the idea that existential verbs always select an argument of type  $\langle e, t \rangle$ . At the same time, they are compatible with the claim that existential verbs always require their argument to be composed via Chung and Ladusaw's (2004) composition operation Restrict.

Finally, together with Kyle Rawlins, we explored the role of possessors in definiteness effects, demonstrating that they play active but quite different roles in English and Chamorro.

### 12.1 Publications Resulting from the Award

- Chung, Sandra. in press. Possessors and definiteness effects in two Austronesian languages. In: *Quantification and Linguistic Variation*, ed. Lisa Matthewson. Elsevier, Amsterdam.
- Chung, Sandra and William A. Ladusaw. 2004. *Restriction and saturation*. Linguistic Inquiry Monograph 42, MIT Press, Cambridge, Mass. xiv + 173 pages.
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## Collaborative Research: Chamorro

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