

WORKING PAPERS
IN
LINGUISTICS

The notes and articles in this series are progress reports on work being carried on by students and faculty in the Department. Because these papers are not finished products, readers are asked not to cite from them without noting their preliminary nature. The authors welcome any comments and suggestions that readers might offer.

Volume 38(4)

2007
(June)

DEPARTMENT OF LINGUISTICS
UNIVERSITY OF HAWAI'I AT MÂNOA
HONOLULU 96822

An Equal Opportunity/Affirmative Action Institution

DEPARTMENT OF LINGUISTICS FACULTY

2007

Victoria B. Anderson
Byron W. Bender (Emeritus)
Benjamin Bergen
Derek Bickerton (Emeritus)
Robert A. Blust (Chair)
Robert L. Cheng (Adjunct)
Kenneth W. Cook (Adjunct)
Kamil Deen (Co-Graduate Chair)
Patricia J. Donegan
Emanuel J. Drechsel (Adjunct)
Michael L. Forman
George W. Grace (Emeritus)
John H. Haig (Adjunct)
Roderick A. Jacobs (Emeritus)
Paul Lassetre
P. Gregory Lee
Patricia A. Lee
Howard P. McKaughan (Emeritus)
William O'Grady
Yuko Otsuka
Ann Marie Peters (Emeritus, Co-Graduate Chair)
Kenneth L. Rehg
Lawrence A. Reid (Emeritus)
Amy J. Schafer
Albert J. Schütz, (Emeritus, Editor)
Ho Min Sohn (Adjunct)
David L. Stampe
Laurence C. Thompson (Emeritus)
Andrew Wong

LANGUAGE BENDING IN MICRONESIA¹

S. JAMES ELLIS

In the Central Caroline Islands of Micronesia today there is a string of closely related dialects, all born of a protolanguage called Proto Trukic (or Chuukic). In it are outlier members of the family, spoken in the Northern Marianas Islands and in the remote Southwest District of Palau. These closely related language varieties make up a dialect chain. Apart from the outlier groups, the language varieties of any two adjacent islands are inherently intelligible to the other. However, take a further jump of two or three islands in any direction, and they quickly become unintelligible. Nonetheless, even such gaps in inherent intelligibility can be bridged, not just by bilingual ability, but by an ability on the part of island speakers to alter their own speech to accommodate linguistic features of the hearer's language. This accommodation is made possible by the learned skill of "language bending," which allows oral communication to succeed, even over linguistic distances where inherent intelligibility would certainly fail. This paper describes what language bending is and what its features are, and gives probable reasons why it developed historically.

1. INTRODUCTION. "Language bending" is the fool's gold of mutual intelligibility in Micronesia. Islanders coming together from distant language communities can somehow communicate with each other, often with relative ease, and this is assumed to be because of mutual intelligibility. Although there is, in fact, considerable comprehension taking place, it in no way means that their languages are mutually intelligible.² It is more often than not the result of a phenomenon that I call "language bending." Language bending allows communication between two people, even though they have not learned each other's language (i.e., bilingualism), and even though the relationship between the languages is too distant to allow adequate intelligibility (i.e., the ability to comprehend a closely related language variety³ due to extensive linguistic similarities).

Speakers of English living for some time in other countries where a distinctly different variety of English is spoken often find themselves "bending" their speech to accommodate the style of English of the host country. The English speaker must use some of the intonation, stress, phonology, and lexical selections from the host-country English speaker in order to communicate at an acceptable level. Meanwhile, the host-country English speaker may be doing some "bending" of his own to insure that he also is being understood. This is different from "Foreigner-talk," where a person has a consistent habit of reducing his normal speech to accommodate other speakers regardless of their place of origin. Language bending happens only between closely related language varieties.

Language bending is distinct from other language phenomena. I have been using the word "accommodation" in its common sense. There is, however, a field of study called "communication accommoda-

¹ For assistance in making this paper stronger, and much more readable, I want to thank Kenneth Rehg, Albert J. Schütz, William O'Grady, and Yuko Otsuka for their comments.

² The well-known term "mutual intelligibility" is a misnomer. In common usage it suggests that intelligibility between two different languages is either all or nothing. In actuality, intelligibility is a continuum of degree based on a wide range of linguistic factors, such as phonological, syntactic, prosodic, and social. The "threshold of intelligibility," then, is a pragmatic phenomenon based on ethnographic needs. Linguists and language workers often prescribe an intelligibility threshold for descriptive and social development purposes. Typically, these threshold percentages range from 80–90% of native-speaker intelligibility. It must also be noted that intelligibility between two closely related language varieties is rarely mutual. The degree of intelligibility from one language to another is usually greater in one direction than in the reverse. So from this point forward, whenever I use the phrase "mutual intelligibility," I will be referring to a lopsided ability between speakers of different language varieties to comprehend each other at any given pragmatic level. See Simons 1979:2–3.

³ Trying to establish "language" or "dialect" boundaries in an overlapping dialect chain such as the Trukic continuum is a futile exercise. Therefore, I have defaulted here to the term "language variety" but will continue to use the terms "language" and "dialect" as appropriate. See Simons 1979:3 for an excellent discussion of this issue.

tion theory” that is concerned with the alteration of speech between communicators, either through convergence or divergence, motivated by sociolinguistic circumstances (Giles, Coupland, and Coupland 1991:6, 7). Language bending can be considered a form of “communication accommodation” minus, however, the social component. The purpose of language bending is merely to bridge a gap in inherent intelligibility that would otherwise prohibit successful transmission of a message.

The reader should note that my characterization of language bending is still at a beginning stage, for it is not a fully described phenomenon. I will not claim to understand all aspects of what its nature might be. Nonetheless, there is some very interesting evidence suggesting that it does exist and is at work in the Caroline Islands chain.

2. WHAT IS LANGUAGE BENDING? Language bending involves linguistically related language varieties—A and B. While languages A and B must be linguistically similar, they are nonetheless not similar enough for an A speaker to understand conversations between two B speakers (unless, of course, speaker A has had extensive exposure to language B). In spite of that limitation, language bending allows speaker A and speaker B to converse with each other on a casual level, even though either may have had scant exposure to the other’s language. To accomplish this, one or both speakers alter the way they speak their own language by incorporating features of the hearer’s language. Section 4 describes an example of language bending in detail.

3. LOCATION OF STUDY. The arena in which this paper is cast lies primarily among the Caroline Islands of the Federated States of Micronesia (FSM), and in particular, the two states that make up the western half of the FSM—Yap State and Chuuk State. The languages of concern in this region are spoken on the string of islands stretching from Ulithi through the Woleai group to Satawal, in Yap State, and from Puluwat through Namonuito, Pááfang, and Lagoon Chuukese to the Mortlocks in Chuuk State (see Figure 1). Each of the islands, apart from those in Chuuk Lagoon, are atolls capable of supporting only small populations anywhere from about 200 to 1200 people. Chuuk Lagoon, on the other hand, has several islands a few hundred feet in elevation, as well as a total population of some 40,000 residents (Government of the FSM 2000).

There are two other island areas where languages closely related to the above are found. One is the outer islands of Palau (see Figure 2), and the other is the Northern Mariana Islands (see Figure 3).

Because the languages of these islands are so closely related to each other, they make up a dialect chain or dialect continuum. This string of dialects is often referred to in the literature as the Trukic chain (Quakenbush 1968), and the group as a whole is referred to as the Trukic group, or just Trukic. The particular language spoken in the large central lagoon in Chuuk State has also been referred to in the past as Trukese. Today the language is called Chuukese, or more specifically, Lagoon Chuukese. It is at the easternmost end of the continuum, linguistically speaking (but not geographically speaking). The double use of the word Chuukese and the great distance of Lagoon Chuukese from the continuum center are two reasons I prefer the term Carolinian as a label for the whole dialect continuum.⁴ A further reason for this terminology is included below.

⁴ During the Spanish administration the people from the Caroline Islands who arrived on Guam and Saipan in their sailing canoes were referred to as the Carolinians (Driver and Brunal-Perry 1995).

S. James Ellis: Language Bending in Micronesia

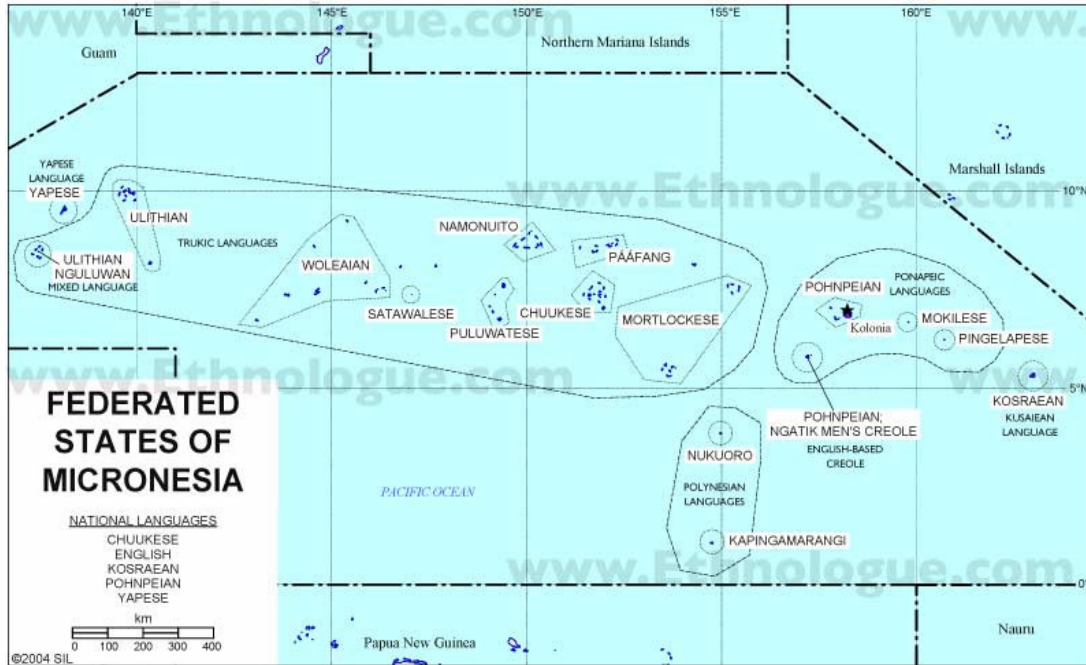


FIGURE 1. Carolinian languages—from Ulithian to Mortlockese (2005 Ethnologue).

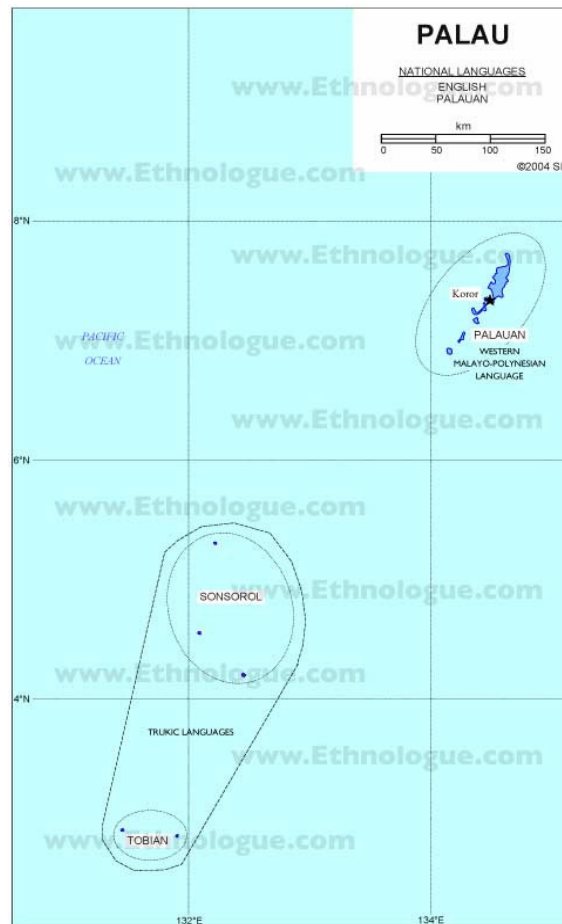


FIGURE 2. Carolinian languages in Palau (far western end of the continuum) (2005 Ethnologue).

The far western end of the Carolinian chain of dialects is located outside of the FSM, far to the south of Ulithi. The languages there are Sonsorolese, Tobian, and a language spoken between the two—Pulo Anna. These islands (Sonsorol, Pulo Ana, and Tobi) make up a separate district in the Republic of Palau called the Southwest Islands. Speakers of these languages tell me that there are only small linguistic differences between them.

The two members of the continuum that have come into being most recently (within the last 200 years) are also outside the FSM. Saipan Carolinian is spoken by some 4,000 people on the island of Saipan and on various northern islands—subject to volcanic activity—in the Commonwealth of the Northern Mariana Islands (CNMI). There is another Carolinian language spoken on Saipan in the village of Tanapag. This language, with just a few remaining fluent speakers, is called either Talaabog or Northern Saipan Carolinian. The islands from which both of these groups primarily migrated are those located in the center of the Carolinian continuum: Woleai, Satawal, Puluwat (Pollawat), and Namonuito (Namwon Weite).

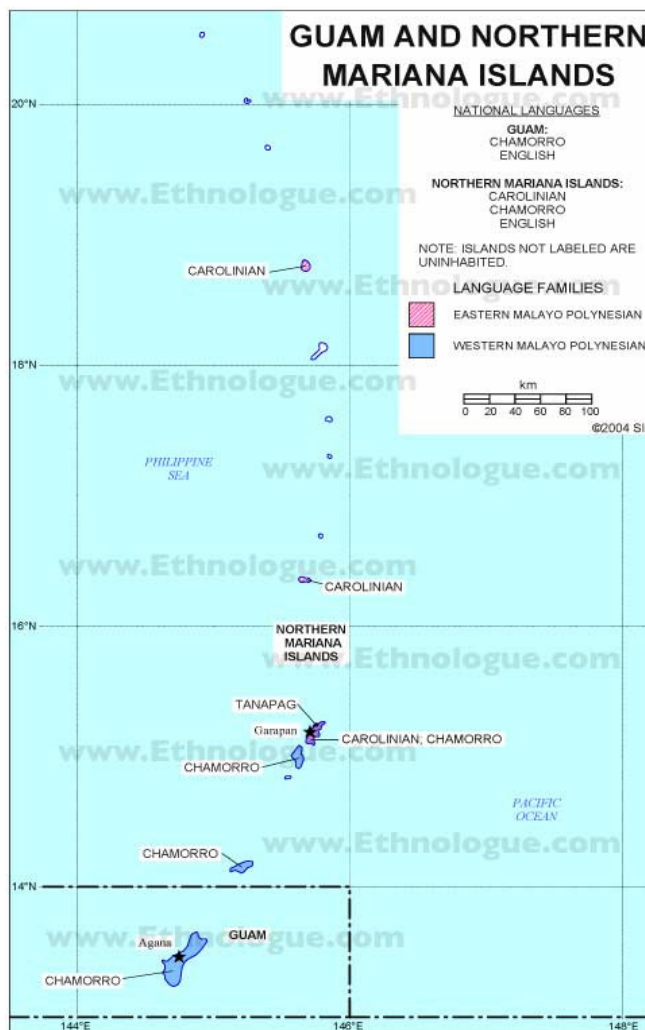


FIGURE 3. Carolinian languages in the NMI (Saipan Carolinian and Talaabog) (2005 Ethnologue).

The center of gravity of this continuum of languages, then, is near the middle of the Caroline Islands—another reason why I prefer the label “Carolinian dialect continuum.” Those familiar with the lit-

erature on these languages and who are more comfortable with the “Trukic dialect chain” label should feel free to substitute that term every time they encounter “Carolinian dialect chain/continuum.”

4. AN EXERCISE IN LANGUAGE BENDING. The Carolinian dialect continuum was one of the areas in Micronesia where I carried out intelligibility studies intermittently from 1987 to 1993. My original goal was to discover exactly how many languages were spoken there and exactly where their borders lay. The term “continuum,” however, suggests a progressive variation of change from one point to another—a situation borne out by my intelligibility testing—and I was forced to change my goals to fit in with that reality there. My revised goal was to discover the degree to which speakers from any island in the continuum could comprehend a speaker from any other island in the continuum. And the results of that study (Ellis 1992) will turn out to be useful as we proceed through this paper.

While on Guam in May 1991 I found a young Satawalese male with whom I was able to discuss the concept of language bending. He claimed that there is indeed such a phenomenon, and he went on to explain that even if Satawalese speakers had never visited Ulithi or Chuuk, they would be able to “bend” adequately to carry on a conversation. He said that in his case he had learned how to do good language bending for both Trukese speakers and Ulithian speakers after having spent only a week in Chuuk at age ten, and a week in Ulithi at age fourteen. Whatever he did learn on those occasions certainly could not be enough to qualify as a bilingual ability. It is unlikely that anyone could become bilingual in a different language in one week. Consider an experience Quackenbush (1968:98–99) recorded regarding a Pullap⁵ speaker.

A speaker of Pullap once told me that his language and Trukese are mutually intelligible, but on another occasion he said that when he first went to Truk as an intermediate school student it took him over a year to learn to understand Trukese well and even longer to learn to speak it.

Finally, I asked the Satawalese speaker to provide me with an example of his language bending skills. I selected a portion of casual Satawalese speech that I had recorded and transcribed earlier. I asked the speaker to write down both the Trukese and the Ulithian bent forms of the Satawalese, just as if he were talking to either a Trukese or Ulithian speaker. He did so, using his own ideas of a correct orthography to reflect what he would say to them.

4.1 A SATAWALESE LANGUAGE-BENDING EXAMPLE. We will start by considering in detail the first sentence of the text, which is “Right now I’m going to tell what’s going on (with us).” We will consider the adaptations it goes through in lines (1–5). We will then, in section 4.2, consider the remainder of the example text.

If speaking to an islander from Ulithi (located over 200 miles to the west of Satawal), the Satawal speaker claimed that he would change the Satawalese text (1) as follows in order to help the Ulithian speaker understand what he was saying—line (2). (The differences between lines (1) and (2), and then again between lines (2) and (3), are noted by underlined type.) Since lines (1–3) are intended to be equal in meaning, line (3) is a translation of line (1) as a native Ulithian might say it.

(1) Satawalese text:

Ikina ina ipwene aepaesa meta a wen ngaeni kemam.
 now Foc⁶ 1s.Fut tell what 3s.Perf happen Dir 1p(excl)

(2) Satawalese-bent-to-Ulithian speech:

Ikila ngo ipuele kapetameta esa weol ngani gemam.

⁵ Pullap, also spelled Pollap, is located between Puluwat (Pollowat) and Namonuito (Namwon Weite); thus it is as close to Chuuk as it is to Satawal.

⁶ The abbreviations I will use for glosses are as follows: Foc (Focus), Fut (Future), Asp (Aspect), Perf (Perfective), Dir (Directional), and excl (exclusive).

(3) **Text translated into Ulithian:**

Igöla ngo ibuele kapta metha esa wel _ _ .
 now Foc 1s.Fut tell what 3s.Perf happen

‘Right now I’m going to tell what’s going on (with us).’

If, on the other hand, it were an islander from Chuuk Lagoon whom the Satawalese speaker was addressing, he thought he would change the original Satawalese—line (1)—to the following, line (4). Although the speaker has made several changes in line (1) to produce his bent-to-Chuukese line (4), it is still quite some distance from line (5). Line (5) is also a translation of line (1) according to how a native Lagoon Chuukese might say it.

(1) **Satawalese text:**

Ikina ina ipwene aepaesa meta a wen ngaeni kemam.
 now Foc 1s.Fut tell what 3s.Perf happen Dir 1p(excl)

(4) **Satawalese-bent-to-Chuukese speech:**

Ikina _ ipwene aepaesa meta a fis ngeni kemaemam.

(5) **Text translated into Chuukese:**

Ike _ wúpwene ereni-kemi met sipue föri ikenááy.
 here 1s.FutAsp tell-2p what 1p.Asp do today

‘Right now I’m going to tell you what’s going on (with us).’

Already this short portion of the text reveals that the Satawalese speaker’s bending takes place at several linguistic levels. First, he did some bending at a phonological level, as demonstrated by his adaptation from Satawalese *ikina* (in line 1) to bent-to-Ulithian *ikila* (in line 2), and from Satawalese *ipwene* (1) to bent-to-Ulithian *ipuwele* (2). He also adapted his Satawalese *wen* (1) to bent-to-Ulithian *weol* (2). These changes demonstrate his knowledge of the /n : l/ sound correspondence. At the same time, however, he failed to catch the /n : l/ correspondence for the directional morpheme *ngani* : *ngali* (1, 2). (Although the phrase ‘with us’ is not included in the Ulithian translated text (3) the phrase in Ulithi would nonetheless be *ngali gemam*.)

Second, there is bending at a morphological level. In Satawalese, the subject agreement marker /e/ and the perfective aspect /-a/ undergo fusion to surface as [a], as it appears in (1). To communicate with a Ulithian speaker, however, he knows that he cannot reduce /e + a/ to [a], but must maintain the Ulithian /-sa/ as the perfective aspect, thus producing [esa] (2).

Third, at the syntactic level, the Satawalese “bender” knows that while the focus marker *ngo* (2) is needed for Ulithian, as it is in Satawalese, it is not used by Chuukese speakers (4). And he appropriately left it out.

Finally, notice in the word for ‘happen’ that the speaker made a lexical substitution when he replaced his Satawalese *wen* (1) for his bent-to-Chuukese *fis* (4).

Obviously, the speech bending that the Satawalese speaker would choose to use with Ulithians is not perfect Ulithian, but in his experience it is adequate. And the Satawalese-to-Chuukese bent form of speech does not appear to match very well what a native Chuukese speaker would say. But, of course, the Satawalese language bender is not pretending to know proper Chuukese. He is just trying to get an idea across. And he figures that his bent-to-Chuukese form of Satawalese is good enough to accomplish this.

What is missing in this example and those to follow (since the texts were provided in written form only) is any indication of bending at the prosodic level. The only hint the speaker gave of prosodic variation was his comment that he alters his “accent” considerably, but not his “intonation” when language bending. There do seem to be, however, significant intonational differences among the Central Carolinian languages. Saipan Carolinian respondents have informed me, for example, that it is well known for Sa-

tawalese utterances to take a “sharp dip” near utterance-final, while Saipan Carolinian utterances build to a “high plateau” before falling utterance-final.

4.2 REMAINDER OF SATAWALESE LANGUAGE-BENDING EXAMPLE. Having introduced above the pattern I am using for displaying the progression from Satawalese to Ulithian and then again from Satawalese to Chuukese, via their respective “bent” intermediaries, I will present the remainder of the bending exercise below (6–20). For easier comparison, I have grouped the three sets of progressions (6–10, 11–15, 16–20) as follows: 1. Text translated into Ulithian. 2. Speaker’s effort at bending from Satawalese to Ulithian. 3. Original Satawalese text. 4. Speaker’s effort at bending from Satawalese to Chuukese. 5. Text translated into Chuukese. 6. English free translation of the set.

The English free-translation of the text was provided by a Satawalese speaker who produced the original Satawalese text, which I recorded on audio cassette.

(6) Text translated into Ulithian:

Igöla sa buthog bwarko we wach ngo sa chap yamam
 Today Perf come ship the arrive Conj Perf start our

(7) Satawalese-bent-to-Ulithian speech:

Ikila ia butog barko we ach ie sa chaptag amam

(8) Satawalese:

Ikila ie eitto wafaniuw we warh ie aia rhaptae aemam
 today Asp 3s.come ship the arrive Conj 1p.Perf start our

(9) Satawalese-bent-to-Chuukese speech:

Ikinai afeito ship we wach ie aia poputa aemam

(10) Text translated into Chuukese:

Ikenááy ewe ship a war iwe sipue poputa ne
 Today the ship 3s.Perf arrive then 1p.Asp start at

‘Today our ship arrived and we started ...’

(11) Text translated into Ulithian:

engang irel miliwe seg kolok esa hasi hasi e-la bong.
 work from Dem ten clock 3s.Perf on-and-on 1s-Compl dark

(12) Satawalese-bent-to-Ulithian speech:

engang keen miniwe seik konok isa hasi hasi e bong log.

(13) Satawalese:

engang reen miniwe seik konok a pwiki pwiki e pwong noa.
 work from Dem tenclock 3s.Perf on-and-on 3s dark Compl

(14) Satawalese-bent-to-Chuukese speech:

engang kunok engon a fetan fata tori an pinnoa.

(15) **Text translated into Chuukese:**

angang seni kunok engon toori aan a tupwu-tiw ewe akar.
 work from clock ten come.to 3sGen 3s.Perf stepping-down the sun
 ‘... working from 10 o’clock until shortly before dark.’

(16) **Text translated into Ulithian:**

Choka re engang ikila yathol grade seg mo ruou.
 only 3p work now belong.of grade ten and two

(17) **Satawalese-bent-to-Ulithian speech:**

Choka re engang ikila ngo oauton seik me ruou rak.

(18) **Satawalese:**

Rhoaka re engang ikina ie oauton seik me ruou rhak.
 Only 3p work now Conj belong.of ten and two grade

(19) **Satawalese-bent-to-Chuukese speech:**

Choka repue angang ikina ie oauton engon me ruou chak.

(20) **Text translated into Chuukese:**

Ekewe chek ra nnom nóón engon me ruuuuw mwmwúch repue angang.
 The only 3p.Perf in.1pGn in.of ten and two end 3p.Asp work
 ‘Only the seniors (in high school) were working.’

This larger sample provides more examples of changes at each level addressed earlier: phonological, morphological, syntactic, and lexical.

4.3 PHONOLOGICAL ALTERATIONS. Choices used for the word ‘only’—*Choka* : *Rhoaka* : *Choka* (17, 18, 19)—show that the Satawalese speaker was aware of the retroflexed /rh : ch/ sound correspondence. We see the same choices for the word ‘arrive’, *ach* : *warh* : *wach* (7, 8, 9). These are all good guesses, since they are consistent with the /rh : ch/ correspondence. But he happened to be a little off in his choice of bent-to-Chuukese *wach* (9), since the equivalent word in Chuukese is *war*. The same is the case regarding his guess of bent-to-Chuukese *chak* for ‘grade’ (19), where the Chuukese equivalent is instead *mich* (20). Nonetheless, the Satawalese speaker’s guesses should be good enough to breach the Chuukese intelligibility threshold. And that’s all that matters.

Also, his bent-to-Ulithian misses the phonemic distinction between *t* and *th*, a distinction that is unique to Ulithian (Jackson 1986:202), e.g., *butog* in bent-to-Ulithian but *buthog* as translated into Ulithian.

4.4 MORPHOPHONEMIC ALTERATIONS. Lines (16–18) show that the Satawalese speaker correctly assumed that Ulithian is like Satawalese, in that the 3p subject agreement morpheme *re* needs no perfective aspect suffix in this context, *re engang* ‘they work’ (16–18). Similarly, in the bent-to-Chuukese equivalent in line (19), he selected an aspect suffix *-pue* to use with the subject agreement morpheme *re*, as in *repue angang*—just as it is used in the translated Chuukese text at the end of line (20), *repue angang*.

Interestingly, earlier in the text, lines (1–5), he did not use *-pue* as an affix to the subject marker, even though the environment is very similar to that in lines (16–20). The Satawalese line (1) and the bent-to-Chuukese line (4) both lack the *-pue* affix on the subject agreement marker *a*, as in *meta a* ‘what it.Perf’. But we see in line (5) that the *-pue* affix is needed in the translated Chuukese text, *met sipue* ‘what we.Asp’.

4.5 SYNTACTIC ALTERATIONS. In line (7) his choice of position for the determiner *we* ‘the’ is correct for Ulithian, in that the article follows the head noun, *bwarko we* ‘the ship’. But his choice for position of the corresponding *we* in bent-to-Chuukese *ship we* ‘the ship’ is wrong, in that the corresponding particle in Chuukese, *ewe*, precedes the head noun, *ewe ship* ‘the ship’.

In lines (11–15) the syntactic phrase order for ‘ten o’clock’, which is essentially the same in both Satawalese and Ulithian, *miniwe seik konok* ‘that (which I refer to) ten-o-clock’, is correctly altered for his bent-to-Chuukese attempt by leaving out the demonstrative and switching the order of ‘ten-o-clock’ from *engon konok* ‘ten clock’ to *kunok engon* ‘clock ten’, as it is in Chuukese.

4.6 LEXICAL ADAPTATIONS. Lines (6–10) show that the Satawalese speaker is aware of the term used by his neighbors for ‘ship’: Ulithian *bwarko* and Chuukese *ship*. (The ship, in this case, refers to the government ships that make their rounds through the islands to deliver supplies and drop off passengers.) But we also see that the Satawalese speaker fails in his attempts to guess what his neighbors use for the word ‘grade’ in lines (16–20): Ulithian *grade* not *rak*, and Chuukese *mich* not *chak*.

In spite of his bending “mistakes” at each of the four linguistic levels described above, the Satawalese speaker should easily succeed in communicating well to a Ulithian. And while his mistakes are more severe when it comes to the bent-to-Chuukese attempt, it is also likely that he will succeed in getting across all he intends to communicate.

Finally, as already mentioned above for lines (1–5), the Satawalese speaker would most likely make prosodic alterations that consist of at least intonational differences at the sentence level.

With this running commentary I have illustrated that at each of these levels of speech, the Satawalese speaker demonstrates an awareness of differences between his language and other languages in the Chuukic continuum. And by a clever use of this knowledge, he is apparently able to go beyond the normal limits of language intelligibility and succeed in having a conversation with another islander—whose language he is incapable of understanding when it is spoken normally (i.e., without language bending).

A question to contemplate is why does this learned skill of language bending exist in the Carolinian dialect chain? What is it about the continuum that has either required or allowed language bending to emerge? One factor would likely be the setting among the islands over time that kept speech communities on distant atolls from being totally isolated from each other—as the following section brings out.

5. A HISTORICAL SETTING RIPE FOR LANGUAGE BENDING. The geographic and ethnographic setting shared for centuries by Carolinian language varieties presented fertile soil for the birth of language-bending.

First, from at least a thousand years ago until recent times, a system was in place that required islanders from nearly all of the Central Caroline Islands to make periodic voyages to the island of Yap. This was achieved by building and traveling on ocean-going sailing canoes. The system is referred to as the Yapese empire (Lessa 1966) or, the *sawei*.⁷ The Woleaian-English dictionary (Sohn and Tawerilmang 1976:128) lists *sawei* as meaning both ‘a tribute system ...’ and ‘Yapese chief, conqueror, tyrant.’ In short, the *sawei* involved an exchange of goods between those outer islands required to participate in the system and certain clans on Yap. Most researchers have described it as a mandatory voyage which allowed the lower-cast outer islanders to pay tribute to the higher-cast Yapese.

One study on the *sawei* tribute system is that by Hunter-Anderson and Zan (1996), who concur with previous writers that islanders within the *sawei* system would congregate on the main island of Yap every three years or so for a tribute-gift exchange. The outer islanders would provide physical gifts to certain Yapese clans in exchange for their spiritual protection over them. In return, the Yapese would also provide physical gifts to the outer islanders in addition to the spiritual ones. The whole event would begin from the eastern edge of the *sawei* system when islanders from Namwon Weite, Pollowat, and all those

⁷ Out of pure speculation, I presume the meaning of *sawei* comes from *sawa*, which, as per Goodenough and Sugita 1980:142, means ‘to look after’ or perhaps ‘watch over’, and the 1st person possessive affix is -y (p. 399). When -y is combined together with *sawa*, the meaning would be ‘my (subject) to watch over’. This fits with the following description of *sawei*.

between the two would launch their sailing canoes. This group of many canoes would start the long voyage to Yap Island. Along the way it would increase in size, adding canoes from each of the other islands as the every-expanding flotilla made its way west.

This system, of course, resulted in periodic linguistic contact among members of almost all of what I am calling the Carolinian continuum. Adding to the linguistic impact of the *sawei*, whenever a natural disaster occurred within the continuum, those island populations severely affected would congregate on islands less affected for a time of physical restoration.

In view of the information above, we can assume that there was a need historically for islanders from distant locations in the continuum to meet and communicate from time to time. Other occasions for interaction have also been described.

Marck (1986) revealed that except for the stretched-out Ulithi-Woleai and Satawal-Puluwat links, no two adjacent islands in the continuum are separated by more than 100 miles. This, of course, does not include the Sonsorol-Tobi group’s more distant link to the continuum, nor does it include the link to the Carolinian varieties spoken on Saipan. Marck also points out, from Gladwin 1970 and Lewis 1972, that a 100-mile distance makes a relatively easy overnight voyage that can be carried out by intermediate and even junior navigators. Those junior and intermediate navigators would regularly make spontaneous overnight voyages safely carrying a canoe full of passengers. One may also infer that these island-hopping voyages would bring travelers not just to island speakers with whom they shared inherent intelligibility,⁸ but also to other island neighbors beyond the reach of inherent intelligibility.

In even more recent years, ever since Western occupation of the Carolinian (Trukic) islands, from the late 1800s (Quackenbush 1968:7) to the present, there have been many opportunities for Carolinian speakers to visit distant islands in the atolls. Examples would be the “establishment of public services such as hospitals and centrally located schools, which bring together people of diverse dialects, and the vastly increased mobility of the population made possible by the steamship ...” (Quackenbush 1968:8). This suggests that there has been the need, perhaps ever since the proto Carolinian language diverged into a continuum, for speakers from different islands in the continuum to bridge the intelligibility gap in some way.

6. HINTS OF LANGUAGE BENDING IN QUACKENBUSH'S RESEARCH. Quackenbush provided us with many anecdotes that most clearly suggest that the phenomenon of language bending exists. For one thing, he revealed that conversations between speakers of distant languages need not be dependant upon “mutual intelligibility” to succeed in communication (1968:97, 98):

But the mere fact that two people are able to carry on a dialogue does not establish that their languages are mutually intelligible in any useful sense of the term ... In parts of the Caroline Islands, communication on a regular basis takes place among speakers of mutually unintelligible languages. ... Thus we may formulate the principle that direct observation of speech behavior can give reliable negative evidence as to mutual intelligibility, but affirmative evidence thus derived is apt to be misleading.

Quackenbush gave illustrations of “mutual intelligibility” being stretched to the limit, which he described as “semi-bilingualism”⁹ (pp. 95, 103):

For example, nearly every speaker of Ulithi is receptively bilingual with Woleai and vice-versa, and therefore to native speakers the two languages function as one. Nevertheless, for certain practical purposes such as the preparation of educational materials (whether for the island schools or for teaching the island

⁸ I am using the phrase “inherent intelligibility” (borrowed from Simons 1979:3) to emphasize that by virtue of the islander knowing his own language he would also understand the languages of nearby islands, due to their linguistic similarity to his own language.

⁹ The term “semi-bilingualism” was used by Hockett (1958) to describe similar situations in which one or both parties quickly became accustomed (perhaps after one day, perhaps after one week) to just enough features unique to the other’s language to enable intelligibility to occur. This is different from “language bending,” in which the speaker must actually alter his own speech for comprehension to take place—not just get used to differences in the other’s speech.

languages to foreigners) it must be taken into account that these two languages are not really closely mutually intelligible.

... the similarity between Ulithi and Woleai is close enough that conversation is possible, but it is dependent upon both parties being semi-bilingual. The differences, especially at the phonetic level are so great that it is very difficult for a speaker of Ulithi to generate original sentences in Woleai, and vice-versa.

Of even greater interest are Quackenbush's descriptions of conversations that he was aware of that bridged a gap greater than what "semi-bilingualism" would allow (pp. 101, 102):

Ulithi is barely mutually intelligible with Tobi but probably not with Sonsorol, while Woleai is not mutually intelligible with either. When asked to characterize his ability to understand Sonsorol, one speaker of Ulithi who has worked for many years aboard the ship which makes the field-trips to Sonsorol replied that he could understand "about 60%" of a conversation between two speakers of that language. Another Ulithian, who had heard Tobi spoken only a few times, told me that aside from being able to recognize a few words, he was essentially unable to understand any of a conversation between two speakers of Tobi. However, one incident illustrates that in case of necessity it is possible for a speaker of Tobi and Ulithi to communicate even though neither has had previous experience with the other's language. A Ulithian who happened to be on Guam was recently called upon to interpret for an old man from Tobi who was in the hospital and could not communicate at all in English. It proved to be difficult and tedious, but not impossible.

It is while describing a similar attempt of two islanders from distant points on the continuum to converse that Quackenbush revealed an indigenous term that he claimed describes conversations that are beyond the reach of "semi-bilingualism" (p. 105):

I once heard a speaker of Pullap and a speaker of Woleai, who were both competent speakers of English, trying to carry on a conversation. The Woleai speaker had had no previous experience with languages east of Satawal, and what success they had at communicating was mainly to be attributed to the efforts of the Pullap speaker to alter his own speech by using pronunciations and vocabulary that he knew, or thought, to be Woleai forms. With obvious difficulty and painful slowness, they talked for perhaps four or five minutes before they gave up and switched back to English. The Carolinians have a term for this kind of speech—*gasel mataw* (to use the Woleai form) 'language-of the ocean'—although if it is a language, then it is one that truly has no fixed grammar, phonology, or lexicon. What *gasel mataw* means ultimately is that if a canoe goes adrift from the Truk District and washes up on, say Ulithi, the survivors (if there are any) can somehow manage to communicate with the Ulithians. The term *gasel mataw* (or its equivalent) was not known to any of the informants outside the languages from [Ulithi to Namonuito].

What Quackenbush described as *gasel mataw* sounds very close to what I have been describing as language bending. One difference that I have pointed to is that language bending requires at least a small measure of learned technique, whereas *gasel mataw* seems to be the kind of communication that is allowed purely by virtue of similarities between closely related languages. Either way, what I am describing as language bending seems to subsume 'gasel mataw' and perhaps Quackenbush's "semi-bilingualism."

Language bending also seems to have an indigenous term. The Satawalese speaker who provided the earlier examples, lines (1–20), claims that there is indeed a label for the language-bending phenomenon. The term is *sore fetale kapas* which he translated as 'turn language'. I asked him about Quackenbush's term *gasel mataw*, and he explained that that meant 'the "one" language of the outer islands' (Ellis field notes, May 1991). I am guessing, then, that *gasel mataw* was a term used for all the outer islands east of Yap that were members of the historical *sawei*. It was just those islands, incidentally, and only those islands, where the term *gasel mataw* was known (see Quackenbush 1968:105, above).

7. LANGUAGE BENDING AND THE DEVELOPMENT OF LANGUAGE MATERIALS: A SPECIFIC CASE. The idea of language bending is more than an interesting linguistic phenomenon. It can have significant ramifications for language development in a region. It can be a factor in determining which speech community should have written material produced in its own language and which speech community should just as well use materials produced for a neighboring speech community. The following episode occurred while I was carrying out my intelligibility testing among the two Polynesian groups in Pohnpei. I had been do-

ing this kind of research across Micronesia since November 1988, but this was my first introduction to the concept of language bending.

In March of 1989, an American administrator who had been working many years in Micronesia assured me that the Nukuoro and Kapingamarangi languages were adequately intelligible with each other; therefore, any language material produced for Nukuoro speakers would serve Kapingamarangi as well. His evidence was based on the fact that he had often witnessed them on the island of Pohnpei “speaking freely with each other in their own languages.” This seemed quite perplexing to me, since I had noticed in the 1988 *Ethnologue* that their languages were reported as only 55% cognate with each other—26% below the functional intelligibility level suggested in Quackenbush (1968:108). So I was eager to carry on with my intelligibility testing to see more objective findings. And sure enough, my intelligibility testing revealed that Nukuoro speakers have no more than 63% intelligibility with Kapingamarangi, and Kapingamarangi have no more than 59% intelligibility with Nukuoro (Ellis 1992).

The administrator just mentioned, therefore, had to be mistaken. Perhaps he had in fact been observing either Kapingamarangi or Nukuoro speakers who had gained a true bilingual ability with the other language. Or perhaps those speakers were using Pohnpeian instead of their indigenous Polynesian languages. Nonetheless, to the administrator it looked like there was effortless communication between the two groups, each using their own languages. Therefore he decided there was no need for the language materials produced for the Nukuoro group also to be produced for the Kapingamarangi group. This decision was made in spite of repeated requests from the Kapingamarangi to have their own material developed. Since there were no linguistic grounds, the administrator reasoned, for the Kapingamarangi request, the desire for such must have been motivated by social reasons alone. Thus, the administrator decided that such reasons were inadequate to justify the long and arduous task of developing separate language materials.

I drew a different conclusion from my observations. I was told that it is not at all uncommon for the two Polynesian groups to switch to Pohnpeian when there is important business to conduct. The untrained ear may not be aware of the switch. On the other hand, I learned that for informal social events it was Polynesian speech forms, not Pohnpeian, that were typically used between those very same Kapingamarangi and Nukuoro speakers who had to switch to Pohnpeian in order to communicate clearly on business matters. So I was left wondering if during the course of everyday conversation the two groups were intentionally altering their respective speech forms to approximate the others' as best they could.

Pohnpei was not the only place where there was a mismatch between intelligibility results and occasions of social interaction. I had experienced that it was also prevalent in Yap and Chuuk States.

I was still unclear about the language-bending idea when I returned to Micronesia two years later to continue my intelligibility testing. This time I was testing Carolinians from Saipan on their intelligibility levels with their ancestral island languages, such as Satawalese, Woleaian, and Puluwatese. One young adult female respondent from Saipan assured me that she would do very well on the test, since she had had opportunities many times to speak with people from Satawal—they in their language and she in her language of Southern Saipan Carolinian. Typical of other adults on Saipan, however, she scored around 50% intelligibility—and was very surprised. She was apparently not aware of the accommodations she had been making to assist the comprehension of the Satawalese speaker. Nor, most likely, was she aware of the considerable accommodation that the Satawalese speaker was performing to imitate Saipan Carolinian speech, thus allowing her to comprehend his speech easily. After several experiences like this, I was convinced that language bending was going on and I set out to document it.

8. GROUND RULES FOR IDENTIFYING LANGUAGE BENDING. Language bending was briefly described in section 2 as the ability of two speakers to have a conversation when neither adequately understands the other's language. What makes this ability significant or not depends on what we mean by the word “understand.” What degree of understanding are we talking about? Any two people are likely to have different criteria for what constitutes “understanding.” This being the case, an exploration of language bending is contingent upon having an objective scale against which to determine the presence or absence of understanding.

A first step that a researcher can take to predict how well speaker A will understand speaker B's language is to examine the percentage of cognates that exist between the two languages. Jackson (1986:148) refers to Swadesh's (1954:326) recommendation that if two language varieties are at least 81% cognate with each other, they belong to the same language. A study of cognate percentages, however, is a study of lexical similarity—not language intelligibility. Two languages that are as much as 95% cognate with each other can still be mutually *unintelligible* if there are significant sound differences between the two (see Ellis 1992). Even a rigorous study of the lexical, phonological, and syntactic systems of two similar languages cannot be considered a language intelligibility study—that is a study of linguistic similarity. Granted, such a study may predict better than cognate percentage studies how well speakers of language A understand day-to-day conversations among language B speakers. An intelligibility study, by contrast, is designed to measure the level of language comprehension that a speaker of language A has when listening to the natural speech of language B, which he has not previously had exposure to.

The most detailed and comprehensive test procedure used for discovering levels of intelligibility is that laid out by Casad (and others) in his 1974 work. Unfortunately, the presentation of material in his book can often be perplexing, but it nonetheless gives enough guidance and covers enough breadth to yield remarkable results when the methodology is followed closely.

The procedure laid out in Casad 1974 requires the recording of a short narrative (perhaps five to ten minutes' worth) in language A and one in language B (plus a short narrative from any other languages that may be included in the study).

Speakers of language B must attempt to answer comprehension questions (at least ten) based on the narrative from language A—questions that have been previously translated into the natural speech of language B. With headphones on, a respondent from language B will hear a short portion of narrative A followed by a dubbed-in question about that portion in his language B. Then, a second short portion of narrative A will be heard on speaker B's headphones followed by another question in his own language ... and so on through the whole A narrative. After the test, the results are tabulated and a score is provided that is intended to reflect how much of narrative A respondent #1 of language B understood. Then, respondent #2 of language B will be given the same language A test ... and so on through at least ten respondents from language B. Finally, the complete test results from all ten respondents are combined and averaged, thus yielding a figure that corresponds to the level of intelligibility that language B speakers are presumed to have with language A. In turn, the level of intelligibility that language A is presumed to have with language B is determined in a corresponding manner. Typically, several other speech communities in the neighborhoods of languages A and B will be included in the intelligibility research—language C, language D, and so on. Each community is tested in a corresponding manner to that just described. In this way a network of intelligibility percentages between all languages involved can be mapped out.

My description here of Casad's overall intelligibility testing model (1974) is extremely abbreviated. But, for the purposes of this paper, it is enough for the reader to understand that the aim of the study is a standard of objective measurement, not opinions, nor feelings, nor political consensus, nor results that represent what respondents *suppose* the test administrator would like to hear, nor what conclusions a community *prefers* the test administrator to come to. Unfortunately, such matters are often what get measured during the course of "objective" testing.

Over time, I have found through my intelligibility testing that when a speaker of language A acquires an intelligibility score of around 85% or higher, he also demonstrates that he correctly interprets speech events carried out between language B speakers. This is usually demonstrated by the exhibited confidence of speaker A in interpreting the situation and by any feedback provided by the language B speakers involved.

I shall now apply to my 1992 Satawalese test results this intelligibility threshold of 85% to reveal what it implies.

Satawalese speakers achieved no more than a 59% level of intelligibility with Lagoon Chuukese (a figure that is certainly skewed towards higher percentages due to the significant exposure to Chuukese on the part of the Satawal islanders), and Lagoon Chuukese achieved only an 11% intelligibility level with Satawalese. In the opposite direction, the Satawalese (again, highly skewed due to an abundance of con-

tact) scored an 82% level of intelligibility with Ulithian, while Ulithians achieved a 57% intelligibility level with Satawalese. So there is little question that the inherent¹⁰ linguistic distance between Satawalese and both Ulithian and Chuukese is too great to allow intelligible communication when people are using their own languages. The obvious conclusion then, apart from occasions where one party or the other has become adequately bilingual in the other's language, is that speakers in the Carolinian continuum are language bending when they use their indigenous languages to converse with each other—at least when the intelligibility threshold is somewhere below 85%.

9. A LANGUAGE-BENDING MODEL. As stated earlier, more data are needed to further clarify the nature of language bending. Particularly needed are audio recordings of two islanders talking together with the help of language bending. In spite of these obvious needs, the information I have gathered so far does suggest some basic proposals on how language bending works. The following model contains the elements necessary for language bending to succeed. Keep in mind that this model assumes that speakers of A and B have negligible bilingual ability with the languages they are bending towards.

- a. The setting for language bending is that the language of speaker A is unintelligible to speaker B and vice versa.
- b. Though the speakers of languages A and B cannot understand each other, their languages are nonetheless very similar linguistically. Of course, languages A and B must not be so closely related that language bending is unnecessary (the languages of Puluwat, Pullap, and Namonuito are within a 95% intelligibility level with each other and it has been reported to me by Pullapese speakers that people from these languages talk to each other using their own speech forms).
- c. In successful language-bending, speaker A alters his normal speech to take on elements, or perceived elements, of language B. By using regular sound changes derived from their common ancestral language, by exploiting the high percentage of lexical cognates (75% in the Satawalese—Chuukese case), by using similar morphological and syntactic structures shared by the languages in question, and most likely, by taking on prosodic features of language B, the result is an “A-bent-towards-B” form of speech.
- d. While language A is unintelligible to speaker B, speaker B can nonetheless understand enough of the A speaker's A-bent-towards-B speech to comprehend what speaker A is saying. The success that speaker B has in comprehending speaker A's speech is due to the inherent ability of speaker B to comprehend the speech of A-bent-towards-B. B has done nothing to try to learn the A language, and yet his intelligibility of the A-bent-towards-B language is adequate. This is possible because the A-bent-towards-B speech is significantly closer to his B language, linguistically speaking, than is the normal A language.
- e. Language bending is usually not the product of A doing all the bending. Speaker B may also be producing his own B-bent-towards-A type of speech. Thus, speaker A, in turn, succeeds in comprehending B-bent-towards-A by virtue of it being linguistically closer to his A language than is the unintelligible B language. The extent of A's and B's bending need not be equal. Carolinians whom I've discussed this with indicate that in a language-bending event involving a Satawalese speaker and a Chuukese, for example, or a Ulithian or Carolinian

¹⁰ In using the term “inherent” I refer to levels of intelligibility that would exist without previous exposure by Satawalese islanders to the languages of other islanders—which in this day of radio broadcasting and shipping is rather unlikely. Large differences in standard deviation tell the intelligibility researcher that he is dealing with a large “infiltration” of bilingual exposure in the respondent's experience. Small differences in standard deviation indicate a small amount of bilingual exposure, if any. While the standard deviation among nearly all language pairs in this study was very low, that representing the Satawalese was relatively high. This is so because it is rare to find a Satawalese who has not had significant exposure to Ulithian and Lagoon Chuukese, and to every language spoken between the two. It is for this reason that I claim that the Satawalese percentages are inflated.

speaker, it is the Satawalese speaker who does the lion’s share of the bending. But each speaker need only bend far enough to breach the threshold of the other speaker’s comprehension limits (see Figure 4).

- f. Speaker A or speaker B also has, or can quickly develop, the ability to produce bent speech that is aimed at other languages; C, D, E, etc. Again, C, D, and E must be closely related to A or B and speaker A or speaker B must be aware of enough elements of C, D, or E to succeed in their bending attempts.

To illustrate language bending in terms of the languages discussed in this paper, in the above model Satawalese could play the role of language A, Ulithian the role of language B, Chuukese the role of language C, and Saipan Carolinian the role of language D. And a Satawalese speaker could certainly bend his speech in the direction of several other language varieties in the Carolinian dialect continuum, as well. Again, he need only bend far enough to breach the threshold of the other speaker’s comprehension limits.

This interaction between two given languages is graphically illustrated here in Figure 4.

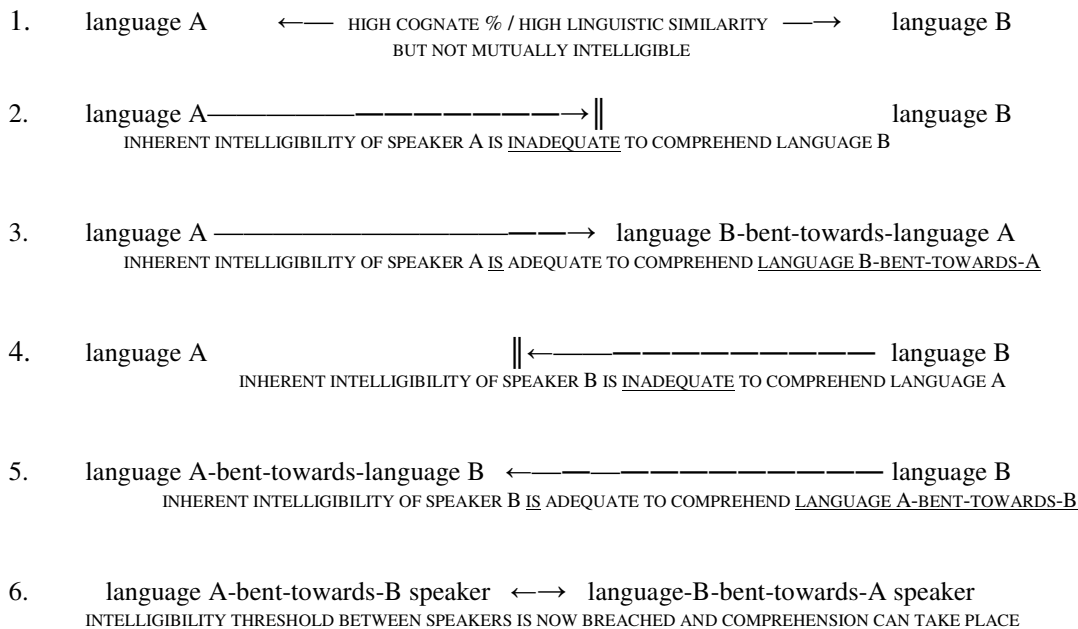


FIGURE 4.

Line 1 represents that while there is some linguistic distance between language A and language B, the two languages are nonetheless closely related.

Line 2 represents that, in spite of the high cognate percentage and the high linguistic similarity between languages A and B, speakers of language A fall significantly short in their ability to comprehend language B as it is used among speakers of language B.

Line 3 shows that if the language B speaker alters his normal B speech so that features of language A are incorporated into his utterances (as described in example sentences (1–20) in detail), the intelligibility gap is bridged—enough, at least, for speaker A to catch the salient concepts that speaker B intends to communicate.

Line 4 represents that speakers of language B also fall short in their ability to comprehend language A as it is used among speakers of language A.

However, as line 5 represents, when speaker A alters his normal A speech to incorporate known linguistic features of language B, the gap in intelligibility that speaker B would normally experience is bridged—the language B speaker finds that he succeeds in comprehending the altered “language-A-bent-

toward-B” language (even though he may not even be aware that speaker A is altering his normal speech to accommodate the comprehension of speaker B).

Finally, line 6 shows that when both speakers alter their normal speech by incorporating linguistic features of the hearer's language, the normal intelligibility barrier between the two languages is breached, thus allowing speakers A and B to converse together.

10. CONCLUSION. I have used the data in this paper to introduce a phenomenon, active in the Carolinian continuum, which I have called “language bending.” This phenomenon cannot be considered bilingualism, nor can it be considered inherent intelligibility. Neither bilingual experience nor the capacity of inherent intelligibility, nor even both working in tandem, can account for the language-bending feats of Carolinian Islanders. It is a unique phenomenon.

I have also attempted to go beyond an introduction to describe, from my experience, the nature of language bending, its rules of engagement, and the environment in which it thrives.

REFERENCES

- CASAD, EUGENE H. 1974. *Dialect intelligibility testing*. University of Oklahoma, Norman: SIL.
- DRIVER, MARGORIE G., and OMAIRA BRUNAL-PERRY, eds. 1995. *Carolinians in the Mariana Islands in the 1800s*. Edited by T. B. McGrath. Vol. 20, MARC Educational Series. University of Guam, and Division of Historic Preservation: Commonwealth of the Northern Mariana Islands.
- DYEN, ISIDORE. 1965a. *A sketch of Trukese grammar*. Essay 4. New Haven: American Oriental Society.
- ELLIS, S. JAMES. 1992. Language intelligibility across Micronesia. Computer file.
- GILES, HOWARD, JUSTINE COUPLAND, and NIKOLAS COUPLAND, eds. 1991. *Contexts of accommodation: Developments in applied sociolinguistics*. Cambridge: Cambridge University Press.
- GOODENOUGH, WARD H., and HIROSHI SUGITA. 1980. *Trukese-English dictionary*. Philadelphia: American Philosophical Society.
- GORDON, RAYMOND G., JR., ed. 2005. *Ethnologue: Languages of the world* (15th ed.). Dallas: SIL International.
- GOVERNMENT OF THE FEDERATED STATES OF MICRONESIA. 2000. FSM National Census Report: 2000 Census of Population and Housing. Palikir, Pohnpei, FSM. <http://www.fsmgov.org/info/people.html>
- GRIMES, BARBARA F., ed. 1988. *Ethnologue: Languages of the world*. Dallas: SIL.
- GRIMES, JOSEPH. 1995. *Language survey reference guide*. Dallas: SIL.
- HOCKETT, CHARLES F. 1958. *A course in modern linguistics*. New York: Macmillan.
- HUNTER-ANDERSON, ROSALIND, and YIGAL ZAN. 1996. Demystifying the *Sawei*, a traditional interisland exchange system. *ISLA, A Journal of Micronesian Studies* 4(1):1–45. University of Guam.
- JACKSON, FREDERICK. 1983. The internal and external relationships of the Trukic languages of Micronesia. University of Hawai‘i PhD dissertation.
- . 1986. On determining the external relationships of the Micronesian languages. In *FOCAL II: Papers from the Fourth International Conference on Austronesian Linguistics*, ed. by Paul Geraghty, Lois Carrington, and S. A. Wurm. Pacific Linguistics C-94:201–38. Canberra: Australian National University.
- LESSA, WILLIAM A. 1966. *Ulithi: A Micronesian design for living*. New York: Holt, Rinehart and Winston.
- MARCK, JEFFREY. 1986. Micronesian dialects and the overnight voyage. *Journal of the Polynesian Society* 95(2):253–58.

S. James Ellis: Language Bending in Micronesia

- QUACKENBUSH, EDWARD. 1968. From Sonsorol to Truk: A dialect chain. University of Michigan PhD dissertation.
- SIMONS, GARY F. 1979. *Language variation and limits to comprehension*. Dallas: Summer Institute of Linguistics
- SOHN, HO-MIN, and ANTHONY F. TAWERILMANG. 1976. *Woleaian-English dictionary*, edited by D. M. Topping. Honolulu: University of Hawai'i Press.
- SWADESH, MORRIS. 1954. Perspectives and problems of Amerindian Comparative Linguistics. *Word* 10:306–22.

jellis@hawaii.edu