Linguists, Literacy, and the Law of Unintended Consequences
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Linguists, Literacy, and the Law of Unintended Consequences

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In 1970, the Pacific and Asian Linguistics Institute of the University of Hawai'i launched a fourteen-year effort designed to document and support the languages of Micronesia. The first goal of this undertaking was to prepare grammars and dictionaries of these languages, the second was to train Micronesian educators in the principles and practices of bilingual education, and the third was to develop vernacular materials for use in Micronesian schools. This paper assesses the consequences of those endeavors, both intended and unintended. In particular, it focuses upon the concept of "standard orthography" and how that notion, in Micronesia and elsewhere, has sometimes impeded the development of vernacular language literacy. More contentiously, it considers the possibility that the conventional goals of vernacular literacy programs might, in some circumstances, be counter-productive; that is, rather than enhancing linguistic vitality, they might, in fact, diminish it.

1. THE ROLE OF THE UNIVERSITY OF HAWAI'I IN SUPPORTING THE LANGUAGES OF MICRONESIA.[1] In a paper presented in 1994 at the Seventh International Conference on Austronesian Linguistics, Donald Topping (2003:524) wrote: "In the early 1970s a group of us at the University of Hawaii felt, perhaps arrogantly, that linguists had not only a role, but a responsibility to help preserve the languages of Micronesia. Emboldened with this messianic complex, and a substantial source of funding, we launched a major project to ensure their survival."

1.1 PROJECTS SPONSORED BY THE PACIFIC AND ASIAN LINGUISTICS INSTITUTE. The "major project" referred to by Topping consisted, in fact, of three separate undertakings that, to varying degrees, involved nearly all of the languages of geographic Micronesia. These efforts were carried out over a period of fourteen years, at a cost of several million dollars.[2] The goals and results of

these three projects, all of which were conducted on the Mānoa campus of the University of Hawai'i, are briefly summarized below.

1.1.1 The Pacific Languages Development Project (PLDP) 1970–74.

The PLDP project, also known as the PALI project,[3] was jointly funded by the Trust Territory of the Pacific Islands (TTPI),[4] the University of Hawai'i, and the East-West Center. It targeted all of the major and several of the minor languages of the TTPI, in addition to Nauruan. Its goals were: (1) to develop standard orthographies, (2) to produce reference grammars, (3) to compile bilingual dictionaries, and (4) to train Micronesian linguists. This project resulted in (1) the development of standard orthographies for all of the major languages of the TTPI, (2) the publication of seven reference grammars, and (3) twelve dictionaries,[5] and (4) the training of sixteen Micronesian educators in linguistics, nine of whom received BA or MA degrees in Linguistics or English as a Second Language.[6]

1.1.2 The Bilingual Education Program for Micronesia (BEPM) 1974–83.

The BEPM was designed to provide TTPI educators with training in the principles and practices of bilingual education and to enable them to utilize the standard orthographies and literacy documents that were produced in association with the PLDP project. During the nine-year course of this program, more than 100 Micronesians attended the University of Hawai'i for one or more years. Approximately fifty received undergraduate or graduate degrees in disciplines related to bilingual education.

1.1.3 The Pacific Area Language Materials Development Project (PALM) 1975–83.

The primary goal of the PALM project was to develop vernacular language materials in a variety of content areas for the languages of Micronesia, as well as for some of the languages spoken by immigrant populations in Hawai'i. It also provided on-the-job training for materials development specialists from Micronesia and Hawai'i. When this project ended, it had produced approximately 140 titles each for ten of the languages of Micronesia (Robert Gibson, pers. comm.).[7]

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2. Donald Topping was the Principal Investigator for all three projects. Robert Gibson was the first Project Coordinator of the Bilingual Education Program for Micronesia (1974–75). I was a participant in the Pacific Languages Development Project (1970–74) and then took over Gibson's position (1975–83) when he became Project Coordinator for the Pacific Area Language Materials Development Project (1975–83).

3. PALI is an acronym for the "Pacific and Asian Linguistics Institute", later subsumed under the Social Sciences Research Institute at the University of Hawai'i at Mānoa.

4. The former Trust Territory of the Pacific Islands (TTPI), mandated by the United Nations and administered by the United States, consisted of all the islands of geographic Micronesia except Guam, Nauru, and Kiribati. My focus in this paper is primarily on the languages of the TTPI region.

5. Reference grammars and dictionaries were produced for Chamorro, Kosraean, Mokilese, Palauan, Pohnpeian, Woleaian, and Yapese. Dictionaries for Carolinian, Chuukese, Kapingamarangi, Marshallese, and Nukuoro were also compiled as direct or associated products of this project. In addition, a substantial number of doctoral dissertations (14 so far at the University of Hawai'i) as well as many papers were and continue to be produced as a result of the work done during this period.

6. Two educators from Fiji were also supported in part by the PLDP.

1.2 AN ASSESSMENT OF THE UNIVERSITY OF HAWAI'I'S EFFORTS.

It should be evident that these projects were envisioned and structured with three overarching goals in mind—(1) to document the languages of Micronesia, (2) to provide training for Micronesian educators, and (3) to promote vernacular language literacy. Given that the results of these efforts have now been in place for more than two decades, it seems fair to attempt an assessment of the extent to which they succeeded. A very brief attempt at such an evaluation follows.

The first goal, that of documenting the major languages of Micronesia, was largely achieved. In 1970, when the PLDP began, the languages of Micronesia were among the most poorly documented in the Pacific. Today, they rank among the best. Further, these efforts put Micronesian languages on the linguistic map. It is now quite common to encounter references to them in the linguistic literature, perhaps especially in works on phonological theory.

The second goal, that of training Micronesian educators, was also realized. The Micronesians who were trained at the University of Hawai'i in the 1970s and the 1980s now hold prominent positions in the education departments of their home states. Some of the alumni of these projects have gone on to become leaders in both education and government. For example, on Pohnpei, the site of the capital of the Federated States of Micronesia, the Assistant Secretary of Education for the national government is currently Weldis Welley, the Director of the State Department of Education is Casiano Shoniber, and the Director of the National Language and Culture Institute at the College of Micronesia is Damian Sohl. All three of these men were participants in these projects.

The third goal, however, that of promoting vernacular language literacy, was not fully reached. Based upon conversations with educators from Micronesia, it seems safe to say that the gains in vernacular language education that have been achieved over the past 30 years have been modest at best, especially considering the very substantial investments in time and money that were made in promoting this endeavor. Although all the departments of education in the various political entities that were once part of the TTPI include vernacular language literacy among their educational objectives, none has developed the kind of robust curriculum in support of this goal that was originally envisioned by staff of the PLDP, BEPM, and PALM projects. Their hope was that by the new millennium, education in the vernacular would be a vital component of at least the first eight grades, a substantial number of vernacular reading materials would be available in all content areas, and teachers would be capable of using these materials in a confident and effective manner. While there are certainly widespread differences among the various language groups in terms of what they have accomplished in this regard, it is generally true that vernacular language education is of low priority compared to English, that in most places the PALM materials have fallen

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7.   The ten languages were Carolinian, Chamorro, Chuukese, Kosraean, Marshallese, Palauan, Pohnpeian,
     Ulithian, Woleaian, and Yapese. A small number of materials were also developed for Satawalese. See
     Gibson 1979–80 for additional information about the PLDP, BEPM, and PALM projects.

into disuse,[8] and that many teachers now lack the necessary training to teach Micronesian school children to read and write in their native languages.[9]

The obvious question that must now be asked is "why?" Standard orthographies were devised, literacy documents in the form of grammars and dictionaries were produced, Micronesian teachers were trained, and vernacular language reading materials were developed. Why then did these very substantial and expensive efforts not result in robust programs of vernacular language education?

No fully satisfactory answer to this question exists. However, as a linguist who was involved to some extent in all of these programs, it now seems obvious that our accomplishments were consistent with our training. We knew how to document languages, we knew how to teach linguistics, but we did not at that time adequately understand what was involved in the design and implementation of a vernacular literacy program—an undertaking that typically lies outside of the range of expertise of most linguists working in American academia. Still, this observation fails to tell much of the story. A complete answer as to why vernacular language education programs have not been more successful in Micronesia may never be forthcoming, but I am confident that such an explanation would be complex and multi-faceted, and would, to some extent, be different for each of the languages. It is clear, though, that while some of the reasons for these shortcomings can be attributed to the inaction of Micronesian educators, others must be ascribed to the counsel of non-Micronesian linguists. I will restrict my comments here for the most part to the latter group and consider what I believe we as linguists might have done better in our efforts to promote vernacular language literacy.

1.3 THE NEW ORTHOGRAPHIES. My initial focus in this paper will be on the problems that arose throughout Micronesia as a consequence of the "new standard orthographies" that were recommended for these languages. I treat this as an issue of fundamental importance because I have come to the conclusion that, in our efforts to advance vernacular language literacy in Micronesia, we stumbled coming out of the gate. That is, I believe we made some mistakes in carrying out the task that stands at the very core of vernacular literacy—the development and promotion of viable spelling systems. Topping saw it this way, too. He noted (2003:525): "Surprisingly, a major obstacle to the success of the Micronesian linguistics project is one that was unanticipated, and may be fairly assigned to the linguists themselves. That is the problems presented by the 'new' orthographies."

In 1989, in response to such problems, the University of Guam organized a "Vernacular Language Symposium on New and Developing Orthographies in Micronesia." In the introduction to the proceedings of this symposium, Mary Spencer (1990:5) observed: "The process of transforming the oral languages of Micronesia into written forms and producing literature in them was a process that of necessity

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8. A CD containing many of these materials is now available from Pacific Resources for Education and Learning (PREL) at <www.prel.org>.
9. Palau has probably made the most substantial progress in incorporating vernacular language education into the school curriculum. The PALM materials are in use there, and Palauan is part of the curriculum from grades one through twelve.

began without a completed blueprint. ... Had the original forces behind the early
stages of this process been able to see ... events in advance, surely some things
would have been done differently. Perhaps the oldest, most pervasive and continuing
obstacle in the process has been community controversy over the proposals to aban-
don the old spelling systems for the new ones designed by the academic linguists
and their indigenous linguist counterparts."[10] One of the goals of this symposium
was to obtain reports from Micronesian educators on the current status of the
orthographies of their languages. Sample comments from these reports follow.

   Concerning Chuukese orthography, Kimiuo (1990:30) wrote: "Most of the peo-
ple had some kind of disagreement with the new spelling system that had been intro-
duced by the linguists." He noted that, in response to this system, a number of
educators from Chuuk convened to propose changes "based on the feelings of the
people." Tolenoa (1990:28–29) commented about Kosraean: "The old spelling sys-
tem is still used in the government and by the older Kosraeans. The Kosraean Bible
and the hymn books are in the old system. The new spelling system is used through-
out the educational system. ... Although the new orthography is used and taught
throughout the schools, there are still a number of teachers who continue to use the
old system when writing letters to parents and principals, and even when writing
classroom rules and notices." Capelle (1990:9–10) observed about Marshallese:
"The initial reaction on the part of the teachers to the spelling system was unfavor-
able. However, I soon found that the basic reasons were connected to their lack of
understanding for the reasons for developing and using a standardized spelling sys-
tem. ... I have yet to convince some members of the [Marshall Islands Language]
Commission, especially the older ones and the ones who happen to be reverends and
ministers of the denominations in the Marshall Islands." Emesiochl (1990:50) stated
about Palauan, "One problem is the spelling system. People who are used to the old
spelling system don't want to spell the sounds in terms of the new spelling system."
Ewalt Joseph (1990:14) wrote concerning Pohnpeian: "The biggest problem now is
the orthography. Although the school system has the policy of using the orthogra-
phy, there are other major problems, those running a political course." Writing about
Woleaian, Tawerlimang (1990:23) remarked: "In spite of the fact that the system is
being used in the schools, there are still some people opposed to the system. ... We
also have problems relating to dialects." And Pugram (1990:48) noted for Yapese,
"When the new orthography was established, it was a time for problems, confusion,
and hatred for the new orthography. This still exists today on Yap." Only Elameto
(1990:16) reported a generally favorable reception for the new orthography of
Saipan Carolinian, commenting that "...overall, the reception is good." [11]

   The Micronesian educators quoted above were, however, generally of the opin-
ion that the new orthographies for their language, perhaps with a few modifications,
could be made to work—given more time, more education, more community sup-
port, and, of course, more money. Their views are not unexpected, though, because

10. See Topping 1992 for a review of this work.
11. Jac'.son 1984 provides an interesting account of the development of the Carolinian orthography
    and an insightful discussion of the considerations that governed its design.

all of these individuals were participants in one or more of the three University of Hawai'i projects described above, and nearly all were involved in the design of the new orthographies for the languages on which they were reporting.

It is, of course, to be expected that attempts to promote a "new" or "reformed" orthography will be met with some resistance, regardless of how good the orthography might be. However, in many places in Micronesia, the resulting dissension became a serious impediment to the development of vernacular language literacy programs. This unfortunate outcome points up quite vividly that the single most important consideration in the design of a spelling system is the likelihood of its being accepted. Bad orthographies are worse than worthless, because they may come to stand as obstacles to literacy. Consequently, what I wish to consider next is where we might have gone astray in the design of these orthographies, as well as what we might have done to facilitate their acceptance.

2. ORTHOGRAPHY DESIGN. I begin this discussion by first considering some fundamental principles of orthography design. I then examine how these principles have sometimes been acted upon. In particular, I look at the development of an orthography for Pohnpeian, the language with which I am most familiar. I additionally offer some practical, commonsense recommendations for orthography design.

2.1 IDEAL ORTHOGRAPHIES. The orthographies that were developed for the Micronesian languages were fundamentally based on the "one sound/one symbol" principle that was advocated by the pre-Chomsky structuralists. In a popular textbook from that era, Henry Gleason (1961:418) wrote: "Ideally, an alphabetic system should have a one-to-one correspondence between phonemes and graphemes. That is, each grapheme would represent one phoneme, and each phoneme would be represented by one grapheme."

I believe that Gleason's claim might be better restated as follows. An alphabetic system in which there is a one-to-one correspondence between phonemes and graphemes *might* be ideal if it were: (a) designed by an *ideal* linguist, (b) employing an *ideal* theory, (c) analyzing an *ideal* language, (d) spoken by an *ideal* speaker/hearer, (e) living in an *ideal* society.

Let me explain my *"ideals"* here. (a) An *ideal linguist* would be one who is a native speaker of the language and an exemplary member of the culture, (b) an *ideal theory* would be one that perfectly mirrors psychological reality, both in the realms of production and perception, (c) an *ideal language* would be one totally devoid of variation, (d) an *ideal speaker/hearer* would be one who spoke and heard this ideal language flawlessly and who was fully conscious of all its phonemic distinctions, and (e) an *ideal society* would be one that immediately succumbed to the genius of the linguist who designed the orthography, because, in such a society, all decisions would be made on a purely rational basis.

In reality, Gleason's claim about what constitutes an ideal orthography is clearly inadequate, a fact of which he was aware. He noted (1961:418) that "the one-to-one relationship is chiefly useful as a point of departure in discussing the fit of writing

systems to spoken languages." However, so far as I know, there is no empirical foun-
dation for the claim that an optimal orthography is one that matches graphemes to
phonemes in a one-to-one manner. Further, whose phoneme are we talking about?
There is no consensus among phonologists about what a phoneme is. Obviously,
orthography design also involves making decisions about such matters as word-divi-
sion, punctuation, capitalization. In addition, careful consideration must be given to
basic issues such as what properties an orthography should exhibit in order for it to
be easily read and readily reproduced. Thus, what Gleason provides is a preliminary
statement of what might constitute a good *alphabet*—the core element of a good
orthography. Issues such as word division and punctuation typically gain attention
only after the alphabet problem is solved. In this paper, too, my primary concern will
be with alphabets, though I will continue to use the term "alphabet" interchangeably
with the more inclusive term "orthography." I also wish to clarify that I will be talk-
ing about the development of an alphabet for competent L1 speakers of a healthy
language. The orthographic requirements for a language undergoing revitalization
efforts are quite different and will not be considered here.

   I do not intend in this paper to critique Micronesian orthographic systems that I had
no role in developing. Instead, what I prefer to do is to examine the historical develop-
ment of the Pohnpeian alphabet. Although this involves looking at events that long pre-
ceded the University of Hawai'i's involvement in the development of Micronesian
orthographies, I do this because I believe that most of the basic mistakes we made are
encapsulated within this history. Thus, an account of the evolution of the Pohnpeian
alphabet can serve as a synechdoche—a single example selected to represent the whole.

2.2 POHNPEIAN: A CASE STUDY. Table 1 on page 505 provides a sum-
mary of the stages in the development of an alphabet for Pohnpeian.[12] The first col-
umn lists the phonemes of this language.[13] Note that Pohnpeian contrasts plain
labials with complex labials, the latter being both velarized and labialized. It also
exhibits a contrast between an apical-dental stop and a laminal-aveolar stop—typo-
logically, a somewhat unusual feature. The consonant inventories of all dialects of
Pohnpeian spoken on Pohnpei are identical, but there are differences in the vowel
systems. In the Northern or Main dialect of Pohnpeian, there are seven vowel pho-
nemes. The number of vowels in the Southern or Kitti dialect is unclear, as discussed
subsequently; the Kitti dialect does not contrast /e/ and /ɛ/. Vowel length is contras-
tive in both dialects. Table 1 reflects the vowel inventory of the Northern dialect.

   The columns to the right of the first column illustrate the various ways in which the
phonemes of Pohnpeian have been represented orthographically. The column labeled
"Gulick" represents the first alphabet proposed for Pohnpeian. It was devised by
Luther H. Gulick, a Protestant missionary who went to Pohnpei in 1852.[14] The second
and third columns, labeled Protestant and Catholic, represent later developments advo-
cated by missionaries representing these two Christian denominations.[15] My major

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12. This table is adapted from Murdock n.d.
13. For further discussion, see Rehg 1981.
14. Gulick 1880 is the first grammar and dictionary of Pohnpeian.

interest in this paper, however, is in the systems developed by linguists, which are provided in the last three columns of the table. The column labeled "Garvin" refers to the orthography proposed by Paul Garvin, an American linguist who went to Pohnpei in 1947 as part of a team of scholars who participated in the U.S.-government-sponsored Coordinated Investigation of Micronesian Anthropology. "Yale" refers to the Ad Hoc Committee on Ponapean Linguistics that was formed at Yale University for the purpose of amending Garvin's work. Its members were Paul Garvin, Isidore Dyen, and George Peter Murdock. Finally, PLDP refers to the system that was recommended by a committee consisting of native speakers of Pohnpeian in consultation with linguists from the University of Hawai'i's PLDP project; in this case, Damian Sohl and I were the consultants.[16] I begin with a discussion of Garvin's system.

In a paper that discusses his work on Pohnpei, Garvin (1954:118–19) wrote, "In the third month of my stay, when I had become sufficiently familiar with the language and the problems involved in the promulgation of a new orthography, I formulated a few ... basic ideas for ... [a] proposed spelling reform." Garvin then went on to describe the new orthography he proposed for Pohnpeian, along with the bases for his recommendations. In a paper written five years later, however, he revisited this experience

TABLE 1. POHNPEIAN ORTHOGRAPHY

Sounds	Gulick	Protestant	Catholic	Garvin	Yale	PLDP
/p/	p	p	p	p	p	p
/pʷˠ/	p~pw	p~pw	p~pw	pw/-p	pw/-p	pw
/m/	m	m	m	m	m	m
/mʷˠ/	m~mu~mw	m~mu~mw	m~mu~mw	mw/-m	mw/-m	mw
/t/	t	d	t	t	d	d
/ṭ/	t	t	tt	ṭ	t	t
/s/	j	j	s	s	s	s
/n/	n	n	n	n	n	n
/l/	l	l	l	l	l	l
/r/	r	r	r	r	r	r
/k/	k̬	k	k	k	k	k
/ŋ/	n̬	n	ng	ng	ng	ng
/y/	i	i	i	y	y	i
/w/	w/-u	w~ü/-u	w/-u	w	w	w/-u
/i/	i	i	i	i	i	i
/e/	e	e	e	e	e	e
/ɛ/	e	e	e~ä	e	e	e
/a/	A	a	a	a	a	a
/ɔ/	o	o, oa	o, oa	o	oa	oa
/o/	o	o	o	o	o	o
/u/	u	u	u	u	u	u
/V:/	macron	—	—	VV	Vh	Vh
[ə]	ǫ	—	—	ë	oe	—
/ɛ~ɔ/	—	—	—	ä	ae	—

15. Note that the official spellings of a few major Pohnpeian place names continue these earlier traditions. *Kitti* and *Nett* (in the new orthography *Kiti* and *Net*) reflect the Catholic spelling of the laminal stop, while *U* (in the new orthography *Uh*) exhibits the practice of not writing vowel length.

16. The PLDP orthography committees were similarly constituted everywhere in Micronesia. Micronesian members were appointed by the District Administrators of the six political districts of the Trust Territory of the Pacific Islands. The linguists were from the University of Hawai'i. Only the Micronesian members of these committees had voting rights.

and noted (1959:28): "I had a distinct sense of failure when, once the system was agreed upon ..., I found that the members of the native committee had a great deal of trouble applying the rules. ..." He explained the Pohnpeians' inability to use his system as follows (1959:29): "Unfortunately, the folk culture of Ponape, in spite of the existence of native schools, a money economy, and other urban elements, did not seem to have a vital need for the functions of a standard language. Nor did my native friends ... exhibit to any great degree the attitudes [that] are characteristic of both nascent and established standard language communities. Perhaps this was because they did not yet constitute the nucleus of a native urban intelligentsia."[17] However, what Garvin apparently failed to consider is another, more credible, reason why the Pohnpeians were unable to use his orthography—namely, that they found it to be unusable. There are very good reasons to believe that this was indeed true.

First, Garvin misanalyzed the phonology of the language. He failed to discover that the language contrasts plain vs. complex labials. While it is clear that he heard the contrast between these two types of labials, he analyzed the complex labials as a sequence of two segments—a labial plus w—and he recommended writing such sequences as *pw* and *mw*. A consequence of this analysis was that he never wrote *pw* and *mw* in word-final position, because (1) he failed to note the contrast in that position,[18] and (2) no word could logically end in the sequence /pw/ or /mw/, because glides necessarily occur adjacent to vowels. However, the fact is that plain and complex labials do contrast there. Consequently, Pohnpeians must have been puzzled by his recommendation. In addition, in his analysis of the vowel system, he treated schwa as a phoneme, and he introduced the symbol *ë* to represent it. But, schwa is not phonemic; all vowels in Pohnpeian have central allophones, depending upon the quality of adjacent consonants.[19] Thus, Garvin both underspecified and overspecified the phonemic inventory of Pohnpeian, and the Yale committee perpetuated his errors.

The PLDP committee, working with an improved analysis, corrected these problems by representing the two types of labials in all positions as *p* vs. *pw* and *m* vs. *mw;* in addition, Garvin's symbol for schwa, which for obvious reasons had never gained acceptance on Pohnpei, was eliminated.[20]

Based on these observations, what advice then might one offer to linguists undertaking the task of creating or revising an orthographic system for an undocumented or underdocumented language? I would suggest:

(1) Don't rush into the task of creating or revising an alphabet until you are confident you understand the phonology of the language. Faulty phonological analyses give rise to faulty orthographies.

A second problem with Garvin's alphabet involved his use of diacritics, which he employed for several vowel symbols as well as for the laminal stop. I have been told

17. As Joseph (1987:15) observes: "What Garvin neglects to mention is that if they had constituted an 'urban intelligentsia,' they would also have had the means to arrive at a standard orthography without his assistance. In the language planners consultancy contract, this is a catch-22."
18. Complex labials are velarized but not labialized in final position (Rehg 1981:27–32).
19. See Rehg 1981, pp. 43–46 for further discussion.
20. See Rehg 1981, pp. 377–82 for a report on the PLDP committee's recommendations.

by Pohnpeians who tried to use Garvin's system that everyone disliked the diacritics, primarily because they were a nuisance to type. The fact is, diacritics *are* a nuisance, even on computers. Indeed, the computer age weighs heavily against the use of diacritics in places like Micronesia, where a great deal of correspondence now takes place via e-mail—and without diacritics.

Garvin was informed that there were problems with the use of diacritics, and it is for this reason that the Yale committee was formed. That committee eliminated Garvin's diacritics by returning to an earlier practice of writing the dental stop with a *d* and the laminal stop with a *t*. In addition, they decided to represent /ɔ/ as *oa*, again in accord with an earlier practice. These graphemes were readily accepted because they made it easier to type Pohnpeian, and they were already familiar to the community. The Yale committee also recommended using *h* as a symbol for vowel length, an innovation that was readily accepted by the Pohnpeians.[21] The PLDP committee recommended continuing the use of these digraphs, with the exception of *oe* for schwa (because it is not a phoneme) and *ae*, for reasons to be discussed subsequently. What, then, might one conclude based upon these events in the history of Pohnpeian orthography?

> (2) If it is necessary to introduce new graphemes, opt for ones that are familiar and/or user-friendly. When feasible, use digraphs rather than diacritics.

A third feature of Garvin's orthography that was rejected by the Pohnpeians was his use of *y* and *w* to represent glides in all positions. Traditionally, Pohnpeians wrote both /i/ and /y/ as *i*. In the case of /w/, however, they wrote *w* syllable-initially and *u* syllable-finally. No doubt these practices seemed odd and unwarranted to Garvin, but nevertheless, they work. They do not cause spelling problems, and they represent a well-established orthographic tradition. Consequently, the Pohnpeians simply ignored Garvin's recommendations concerning the spelling of glides. Why? Because, like Garvin's use of digraphs, they represented no improvement upon traditional practices. The PLDP committee chose to endorse the traditional way of writing glides. What is the lesson here?

> (3) If it's not broken, don't fix it. To the maximum extent possible, build on existing practices so long as they do not pose problems for native speakers of the language.

Garvin's recommendations concerning the spelling of glides also points up another important fact about an alphabet—namely, that it is not the same thing as a phonemic transcription. To Garvin's credit, he recognized this fact in his decision to underspecify the spelling system in relation to the /e/ vs. /ɛ/ contrast that exists in the Northern dialect. There are several reasons why this was a good idea: (1) distinguishing between these two vowels would require introducing a new grapheme; (2) the functional load of this contrast is low; (3) traditionally, these two vowels were never distinguished orthographically, and (4), and most important, these two vowels do not contrast in the Kitti dialect. It is a commonly observed fact that native speakers can tolerate a very substantial amount of underspecification in an orthography. Often, by employing a judicious

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21. At the time Garvin was working on Pohnpei, many older Pohnpeians spoke German. Hence, the use of *h* to mark vowel length was already a familiar practice to some.

combination of underspecification and digraphs, the need for diacritics can be elimi-
nated, or at least minimized. So, my fourth recommendation is:

> (4) Bear in mind that a phonemic transcription and an alphabet are not the
> same thing.

Implicit in the one sound/one symbol notion is the idea that there is a single
inventory of phonemes per language, but this is not true of Pohnpeian, nor probably
of most languages. As I have previously noted, the consonant inventories of the two
major dialects of Pohnpeian—Northern and Kitti—are identical, but their vowel
inventories are different.[22] There are also differences in how these vowels are distrib-
uted, as illustrated below:

	NORTHERN	KITTI	
A.	/tɛŋ/	/tɔŋ/	'taut'
	/rɛyrɛy/	/rɔyrɔy/	'long'
	/kɛːp/	/kɔːp/	'yam'
	/wɛrɛk/	/wɔrɔk/	'spouse'
B.	/sɛr/	/sɛr/	'run aground'
	/pel/	/pɛl/	'steer'
	/rɔŋ/	/rɔŋ/	'burned, crisped'

As shown in A., there are a number of forms in which Northern dialect /ɛ/ corresponds to
Kitti dialect /ɔ/; however, as illustrated in B., Northern /ɛ/ sometimes also corresponds to
Kitti /ɛ/. Northern /e/ and /ɔ/ regularly correspond to Kitti /ɛ/ and /ɔ/, respectively.

The correspondences in B. cause no orthographic problems; however, those in A.
do. Garvin proposed to deal with the dialectal variation exhibited by the forms in A. by
introducing what he termed a "variable cross-dialect grapheme"—the symbol ä that
occurs in the last row of table 1. He recommended that this symbol be used only where
/ɛ/ in the Northern dialect corresponds to /ɔ/ in the Kitti dialect. He viewed this as a com-
promise between the two dialects, and he commented in his first paper (1954:121) that
"it was enthusiastically received by both Kitti and Main dialect speakers, as the only
way in which acceptance by both dialect communities could be assured."

From a political perspective, this is a rather neat solution. It also works well for
readers, but it is highly problematic for writers of the language. In the absence of a
dictionary, and none was available at that time, how does someone writing Pohnpe-
ian determine when to use this symbol? That is, unless a writer knows the pronunci-
ation of a pertinent word in both dialects, s/he could not determine when to employ
this "cross-dialect grapheme." So, given that there are probably relatively few bidia-
lectal speakers of Pohnpeian, the following caution might be added:

> (5) Deal with variability in a way that is (a) politically acceptable and (b)
> maximally efficient for both readers and writers.

The PLDP committee proposed a different solution. It recommended using the
Northern dialect of Pohnpeian as the basis for standard spellings because (1) there

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22. A careful study of the phonology of the Kitti dialect remains to be undertaken. Damian Sohl
   (pers. comm.) believes that the vowel transcribed as /ɔ/ in the Kitti forms in (1) is not underlying
   /ɔ/, but a separate phoneme.

are substantially more speakers of this dialect, (2) at that time, many Kitti speakers were already teaching their children Northern dialect spellings, and (3), most significantly, the members of the PLDP committee from Kitti fully endorsed this solution as a necessary concession in support of the goal of establishing a single standard spelling system for the language.

So, how has the PLDP alphabet worked out? The answer, I believe, is that it has fared rather well. Among all the languages in Micronesia, Pohnpeian probably comes closest to having a widely accepted standard spelling system. The PLDP orthographic conventions are used in the Bible, in all government documents, and in all materials coming from the Department of Education. But, unfortunately, the PLDP committee did not succeed in providing an acceptable solution to the dialect variation problem. Many Kitti speakers now oppose the decision to use the Northern dialect as the basis for standard spelling, thus prompting Joseph's comment in section 1.3 about Pohnpeian orthography having problems "running a political course." What he is primarily alluding to is the fact that the current Kitti constitution specifies that Kitti pronunciation be reflected in all documents produced within that state.[23]

The Kitti speakers' reaction, though, is not unreasonable. The problem is that "standard" implies "nonstandard." If you are a Kitti speaker, the new standard orthography renders your dialect "nonstandard," and the Kitti people find this consequence to be unacceptable. Before the advent of the new orthography, the Kitti dialect was considered to be of the same status as the Northern dialect. Traditionally, Pohnpeians did not judge people's speech on the basis of where they were from; rather, they evaluated it on the basis of social appropriateness and eloquence. What is at issue here, then, is the common controversy that arises in relation to issues about who owns the language. It is important to keep in mind that standard languages, regardless of the good intentions with which they are proposed, all too often become weapons in class and regional conflicts. In a "one sound/one symbol"–based orthography, finding an effective means of dealing with variation is often extremely difficult.

In retrospect, it now seems clear that the dissension that has arisen in the Kitti community might have been recognized and dealt with earlier had the PLDP committee solicited wider input from the community. Typically, the PLDP orthographies throughout Micronesia were decided upon by a relatively small number of native speakers who were appointed to these committees by their respective governments. These individuals, with advice from linguists who served as consultants, decided upon a set of spelling conventions that were then conveyed to the general public without their having had any significant input. In retrospect, this was a mistake. Thus, my sixth recommendation is the following:

> (6) Before deciding upon a "standard" orthography, field test a preliminary version to determine its acceptability to the general public.

Now, let me make my main point. I think that each of the orthographic systems designed for the languages of Micronesia violated one or more of the six principles of orthography design that I listed above. A significant consequence is that these

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23. I have been unable to obtain a copy of this document, so I do not know the details of this provision.

orthographies generated a substantial amount of controversy, and such dissension often came to serve as an obstacle to the development of vernacular literacy programs. Because the community could not agree on how its language should be spelled, educators and others have found themselves mired in dissent. Bad orthographies are therefore worse than worthless, because they may come to stand as obstacles to literacy. Thus, my seventh point is:

> (7) Our work can, and often does, have an appreciable impact on small speech communities. Therefore, exercise a prudential concern for the consequences of your actions.

In the remainder of this paper, I wish to comment briefly on the problems of language standardization, as well as on the role literacy might play in the maintenance of currently robust languages.

3. THE STANDARDIZATION ISSUE. John Earl Joseph (1987:15), in an excellent book on standard languages, poses the question: "What inherent reason is there that someone from outside a given culture could not come in, make a detailed and objective examination of the linguistic situation, and then, using previous experience of other cultures as a guide, recommend actions [that] should lead toward a viable standard language? Only that among available previous experiences we have no successful cases of [such] language planning ... at least not on a large scale. Instead, standard languages have come about through a historically stable, long-term sequence of developments. ..." One might contest Joseph's claim by citing counterexamples. With respect to the development of standard orthographies, Albert Schütz (pers. comm.) has suggested that Fijian might be such an exception, and Saipan Carolinian may be another. Nevertheless, Joseph's doubts about the likelihood of an outsider, or even an insider, being able to impose overnight standards of any type upon a language are justified. The problems that have arisen in association with the promotion of standard orthographies in Micronesia are quite common elsewhere. In part, this is because "standards" for languages typically evolve over long periods of time, along a continuum like the following.

(1) Illiteracy → (2) Preliteracy → (3) *Laissez-faire* Literacy → (4) Standard Language

Stage (2) occurs when a preliminary writing system exists for the language, but is controlled by relatively few speakers and is used for limited purposes, such as signing one's name. Stage (3) arises when many speakers know how to write the language, and they employ writing for a variety of functions, but no widespread agreement exists concerning how words are to be spelled or perhaps even what letters are to be employed. Stage (4) typically emerges when there is widespread literacy, when the language becomes a medium of instruction in the educational system, and, perhaps most important, when there is a substantial amount of material being published in the language. Thus, in planning for the development of a standard language, it might be preferable to establish incremental goals, rather than to try to impose a comprehensive set of standards in one fell swoop.

It should also be kept in mind that standard alphabets and spellings are ultimately a matter of convention, not of linguistic principle. We learn to spell by being taught to spell and by being exposed to a great deal of writing. It has to be this way, because

the goals of "one sound/one symbol" and "one spelling for each word" are ulti-mately incompatible. Because variation is a feature of every language, standard spelling systems are always, at least to some extent, logographic. It is also possible to learn an important lesson from looking at the history of a highly standardized lan-guage like English—namely that standardization is not a prerequisite for literacy. We know, of course, that a very impressive body of literature was written in English long before the language achieved the level of standardization that it exhibits today.[24]

So, what does this mean for the advancement of literacy in Micronesia? I would suggest that it means that promoting mastery of the standard spelling system for these languages should be de-emphasized in favor of encouraging people to produce written materials that serve the needs and aspirations of the community. The prospect of realigning existing priorities along such lines will no doubt be met with disfavor by some educators who have invested a very substantial amount of time learning and teaching the standard system (sometimes encouraged by me to do so). However, too little progress has been made in Micronesia to warrant continuing the single-minded pursuit of overnight standardization. In the case of Pohnpei, perhaps it is enough for now to have a single alphabet for the language. Let Kitti and Northern dialect speakers spell in ways that suit them. In the long run, *use* and *content* are what matter, not *form*.

Educators, I am certain, will argue that the consequent inconsistencies in spelling will interfere with the initial acquisition of reading and writing skills, and this is cer-tainly a legitimate concern. But, spelling systems that are based on a dialect other than the child's own will also be a source of interference. One solution might be to develop primers that are suitable for each of the major dialects of a language.[25] Later, after the child has mastered the basic skills of literacy, it might then be possible to expose the child to reading materials designed for other dialect areas, assuming the dialects are reasonably similar. Learning how speakers from other parts of the speech community employ the language, and learning to respect such differences, might well prove to be a significant and constructive component of the language arts curriculum.

If, however, it is the goal of an education department to promote a single, standard orthography, then it is obvious that teachers and students will need to have ready access to dictionaries of their language. For some languages, however, such dictionaries do not exist or are now not available. Many of the dictionaries that were developed for the Micronesian languages under the auspices of the PLDP are now out of print, with no possibility of their ever being reprinted. Further, none of these dictionaries was designed for use by elementary school children.[26] To move these languages in the direction of widespread standardization, then, it will first be necessary to resolve exist-ing orthography problems and then to develop useful monolingual children's dictio-

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24. Even English, of course, permits some regional variation in spelling, as well as alternate spellings for individual words.
25. Such a solution is appropriate for a language like Pohnpeian, where there are only two major dialects and where the dialects minimally diverge. It may not be a sensible solution under differ-ent circumstances. What is certain is that there is no single solution to this problem that will work for all languages.
26. Rehg 1995 provides commentary on the format of the Micronesian dictionaries that were developed at the University of Hawai'i.

naries, an objective that linguists ought to keep in mind when they set about compiling dictionaries for languages being used in the local school systems.

Obviously, linguists and educators are going to need to give careful consideration to what might be the consequences of promoting a standard orthography for the languages of Micronesia, or for any language. Insisting on adherence to a standard system can be counterproductive. Further, if the motivation for standardization is based on the common belief that a standard spelling system somehow "legitimates" a language and enhances its prestige, then it should be noted that this might not be true, especially if orthographic problems draw attention to the fact that the target language has failed to achieve the level of standardization exhibited by English. As John Earl Joseph (1987:x) has observed, "what has seemed to be the socially justified approach—to evaluate all languages by the same standardization scale, ignoring historical priority—is deeply unjust. With the criteria set by the European languages, not only are those languages likely to weigh in first, but there is an underlying implication that all languages, with or without European contact, should in time accede to the Europe-derived cultural trappings. ...."

4. WHY LITERACY? The schools of Micronesia are aggressive in promoting literacy, but it is literacy in English rather than in the child's first language that everywhere takes precedence. What, then, might this mean for the future of the languages of Micronesia? Are these languages more likely to die because they are not supported by vigorous programs of vernacular language literacy?

Based upon what we now know about the causes of language endangerment and death, the likely answer to this question is "no." Language shift is precipitated by a variety of factors, most of which are beyond the control of the school system—for example, the erosion of the traditional culture, the transition to a wage-based economy, immigration and emigration patterns, and many other phenomena, all of which can affect the vitality of a language. In fact, it seems reasonable to assume that virtually *everything* that is happening within a society has the potential to accelerate or retard language loss.[27] Accelerators are values and community practices that have the effect of increasing the use and prestige of the *metropolitan language*, in this case English. Retardants are the opposite. They are values and community practices that have the effect of increasing the use and prestige of the *indigenous language*, in this case the local languages of Micronesia.

Nevertheless, it is widely believed that vernacular language literacy enhances the vitality of a language. Anonby (1999:39), for example, claims that "in general, languages with literary traditions survive longer than languages with only oral traditions," and Ostler and Rudes (2000:11) state that "introducing literacy is widely seen as a necessary first step in maintaining and promoting use of the language." I do not doubt that there is a correlation between language vitality and the existence of a literary tradition, but it is by no means evident that a cause/effect relationship is involved. Further, while Ostler and Rudes accurately characterize the *common* view of the role of literacy in language maintenance, it is far from obvious that this is the *correct* view. The production of written materials for languages like Chamorro or Hawaiian, which are currently undergoing revitalization efforts, is obviously essential, because there is a need to make these

27. See Palmer 1997 and Rehg 1998 for further discussion.

languages readily accessible to the many nonnative speakers attempting to learn them. In the case of most Micronesian languages, however, where usage generally remains robust, the reasons for promoting vernacular language literacy are less obvious.[28]

First, so far as I am aware, there is little evidence to support the belief that literacy is an effective safeguard against language loss. In fact, the history of Hawaiian provides compelling evidence that it is not. Wilson (1991:2) notes: "It is often claimed that Hawai'i had the distinction of having the most literate citizenry of any nation in the world in the 1800s. Over 100 different newspapers were printed in Hawaiian during the 1900s with writers, editors, and readers products of Hawai'i's Hawaiian-medium public schools. " Nevertheless, by the 1960s the language was teetering on the brink of extinction. Today, as a result of heroic efforts by its supporters, the future of Hawaiian looks more secure, and the written materials from the 1900s are playing an important role in its revitalization. It is clear, however, that they did not prevent its decline.

Second, except for the Bible and other religious materials, there is characteristically little to read in Micronesian languages, thus pointing up the simple truth that there is an important distinction to be made between "having an orthography" and "having a literature." One of the reasons for the paucity of reading materials in Micronesia, I suspect, is that Micronesian educators have bought into the idea of autonomous literacy—literacy for its own sake.[29] If one of the goals of Micronesian education, however, is to develop a substantial, well-received body of literature in these languages, then I suggest that it will first be necessary to determine what functions vernacular language literacy might serve. The missionaries' efforts to promote literacy were successful, in part because they had a clear purpose in mind—to enable Micronesians to read the Bible. Umwech (1990:37) notes: "While living on Puluwat in the summer of 1988, I observed strong community interests in literacy in both Puluwatese and Trukese [now Chuukese]. ... Many families spent a portion of several days a week in their homes engaged in group Bible reading, especially to children." Unfortunately, the vernacular language reading materials introduced into the schools of Micronesia have not typically had such a clear purpose, nor have they had a comparable impact on literacy activities in the community. At present, there is nothing in the experience of Micronesians that tells them that the acquisition of vernacular literacy skills is going to advance their (secular) station in life.

Third, promoting literacy in Micronesian languages potentially puts them in direct competition with English—within the same domain. As in the case of orthographies, the danger is that young Micronesians will measure their own languages against English language norms, and to the extent that their languages appear lacking, they will be judged inferior. This concern is, in fact, legitimate, as evidenced in an essay written by an anonymous student at the College of Micronesia. In an essay entitled *English Language, the Preserver of Languages*, this student writes : "The English language has many advantages. The English language has its own alphabet. It has a whole lot more words

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28. Only two languages in this region are clearly threatened—Chamorro, which is being replaced by English, and Sonsorolese, which is being replaced by Palauan.
29. I take the term "autonomous literacy" from Street 1984. Of course, much the same can be said about the practitioners of autonomous linguistics who worked with these programs.

than the Mwoakilloan [Mokilese] dictionary. ... The Mwoakilloan language does not have a lot of words. Many words are repeated. In the Mwoakilloan dictionary, you can find words that mean three to five different things. We do not have feeling words; therefore, we cannot express ourselves. On the other hand, the English Webster's Dictionary has 88,773 words. Using English, you can say what you mean by using the specific word for that specific feeling" (Anon. 2003a). While some of the reasoning evidenced in this essay is spurious, sentiments of the type it expresses are regrettably quite real, quite widespread, and, in terms of language survival, quite lethal.[30]

Fourth, vernacular language literacy programs often fail to address the concerns that adult Micronesians voice about what is happening to their language. On Pohnpei, for example, many parents worry that young people have impoverished vocabularies, that their speech is rife with what they consider to be grammatical errors, that they do not know how to use the language of respect, and that they are not learning the oral histories of their own people. Unfortunately, literacy programs in Micronesia rarely attempt to directly address such concerns.

Given these observations, it might seem somewhat peculiar that so many linguists and educators persist in their efforts to promote vernacular language literacy. Why do they do so? One common reason entails the notion of "transfer." The familiar argument is that if you teach children first to read and write in their own language, then it will be easier for them to learn to read and write in English. But, as another anonymous student at the College of Micronesia has noted (Anon. 2003b): "Once you learn how to write in English you automatically can write in Pohnpeian." Although this claim is incorrect, it reflects a common attitude on Pohnpei and elsewhere that "transfer" works both ways. The more fundamental question, however, is, if vernacular literacy is being promoted because it facilitates the acquisition of English, then how do such efforts support the well-being of the local languages? I am concerned that they do not. In fact, I think it is reasonable to believe that the types of transitional bilingual education programs that are currently widespread throughout Micronesia are, in the long run, more likely to be accelerators rather than retardants of language loss.

I most certainly do not mean to denigrate the efforts of those who are promoting literacy in the Micronesian languages. I count myself among their ranks. But, if one of the goals of the Micronesian educational systems is to support the local languages, then some fresh thinking is going to be required on the part of all, not only about orthographies and standardization, but about literacy as well. I hesitate to make any suggestions about what the schools in Micronesia ought to be doing, because my training is in linguistics and not in education. I think it is quite clear, however, that, if the political leaders and educators in Micronesia are concerned about the future of their languages and cultures, then they are going to have to engage in some long-range planning that involves developing meaningful goals, not only for literacy skills in the local languages, but for orality skills as well. Further, I believe that the languages of Micronesia need to be given a rightful and respected place throughout the entire educational system—from the earliest grades all the way through to the course offerings of the

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30. Mühlhäusler 1996 provides additional discussion of the possible negative impacts of literacy on traditional non-literate societies.

College of Micronesia. We cannot ignore the fact that English empowers the people of Micronesia as nothing else does. It gives them access to education, to the media, to their nation, and to the world. Clearly, English plays an essential role in the educational systems there. But so also might the local languages, which give people access to their past, to their community, to their culture, and to their identity. Like Wallace Stegner, I believe that "no society is healthy without both the will to create anew and the will to save the best of the old; it is not the triumph of either tendency, but the constant elastic tension between the two that should be ... our great tradition" (Stegner 1985:285).

5. UNINTENDED CONSEQUENCES. Let me now turn to a final and important question. As linguists, what might we do to support threatened indigenous languages like those in Micronesia? Once again, I think Don Topping got it right when he wrote that "the linguist's role is not to lead, but to provide support when asked" (Topping 2003:527). But, we are not going to be asked if we have nothing useful to offer. In the case of Micronesia, it seems to me that the linguists' approach to the maintenance of small languages has been to try to recreate them in the image of English or some other metropolitan language. What we have learned is that this approach does not work.

I have suggested in this paper several reasons why this approach has fallen short of expectations, but I have not yet dealt with what I suspect is probably the most fundamental one of all—namely, that the idea of "developing" the Micronesian languages came from American linguists and educators, and not from the Micronesians themselves.[31] A striking incident involved Don Topping. In the late 1970s, the staff and participants of the BEPM met in the conference room of the University of Hawai'i's Social Science Research Institute. This room is on the 7th floor of Saunders Hall and has a panoramic view of Waikīkī and Diamond Head. Pointing to the high-rise hotels that line the beaches of Waikīkī, Don asked the Micronesians: "Do you want your islands to look like that?" The response of the Micronesians was an immediate and enthusiastic "Yes!" None of the Americans who were in that meeting ever forgot that incident, though we did not all necessarily grasp its full significance at the time.

Micronesians, like people everywhere, are concerned with improving their standard of living. They want better health care, better schools, better jobs, and, ultimately, better lives for themselves and their children. Because they see the acquisition of English as an essential element in the pursuit of these goals, English is the language that is promoted in the schools. As an anonymous student at the College of Micronesia wrote (Anon. 2003b): "It's true that the teachers often take their eye away from teaching the [Pohnpeian] language. Meaning that they do not really bother teaching their L1 to the children because they are fluent in their L1. And there is a reason for that. Because English is the language of success almost everywhere on earth and on Pohnpei, the teachers found it better to teach the English language to the children. If you go to Kolonia and look for a job in the private areas, they even interview you in English." This same student was nevertheless confident that Pohnpeian will endure. S/he noted: "As a Pohnpeian speaking person, I know that the language is very strong and would stay

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31. See Topping 1992 for a brief account of the genesis of these efforts.

firm as long at the culture is alive. Language shift is possible to happen through mixing of both English and Pohnpeian. Dying out is not possible."

It is possible that this student is right. At present, we have no predictive science of language vitality, and it is unlikely that we will ever have one, given the very large number of factors that impinge upon language survival. Topping was certainly correct, however, when he wrote (2003:527): "Our experience in Micronesia tells me that as long as the indigenous language gives the appearance of being robust, the alarm cries of linguists will go unheeded. It is only when the threat of cultural extinction becomes real ... that language and cultural retention becomes a serious matter of concern." Ironically (or perhaps not), it is a fact about Micronesia that the major proponents of English have for the most part been the Micronesians, and the champions of the local languages have for the most part been the foreign linguists and educators. There are, of course, many exceptions on both sides, the most noticeable among the Micronesians being those individuals who participated in the University of Hawai'i programs described at the beginning of this paper. What is also telling, though, is the fact that most of the funding that has been utilized in support of the Micronesian languages has come from external sources in the form of grants from the United States government. All too often, when these funds dried up, so too did the indigenous language programs they supported.[32] Thus, while it is clear that the Micronesians have the capacity to sustain their own languages, it is not nearly so obvious that their leaders have the will to do so.

Ultimately, of course, the survival of small languages everywhere is beyond the control of foreign linguists. As Topping (2003:527) wrote, "... the real saviors of the endangered languages will be the people who speak them, not the linguists who talk about them." But, if we are called upon to assist communities that care about the long-term well-being of their language, then we must carefully weigh our actions. In the case of Micronesia, some very good work was done on these languages, but the "Law of Unintended Consequences" also came into play. This is the law that reminds us that the actions of individuals—and especially agencies, institutions, and governments—invariably have effects that are not intended or anticipated. Thus, we set out to promote literacy in the Micronesian languages, but some of our efforts had just the opposite effect. Disputes over orthographies, unrealistic expectations concerning standards, an insufficient understanding of the literacy needs of these communities, and reliance on external funding all hindered progress toward that goal. Consequently, I have come to believe that if the linguistic community is serious about documenting and supporting the threatened languages of the world, we must move such endeavors into the mainstream of our discipline. What we need now, far more than good intentions, is excellent research that can serve as the foundation for excellent applications and excellent training. Further, given Topping's observation that only the people who speak threatened languages can save them, I believe that linguistics departments everywhere must strive to recruit, support, and train speakers of such languages—in particular, those who evidence a wholehearted commitment to conserving their linguistic heritage.

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32. After completing and circulating a nearly final draft of this paper, I learned that the National Language and Culture Institute at the College of Micronesia, commented on in Section 1.2, had been closed down due to loss of funding from the U.S. government.

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