

Reading between the Lines: A Closer Look at the First Hawaiian Primer (1822)¹

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‘ŌLELO HŌ‘ULU‘ULU / SUMMARY

Na ka puke li‘ili‘i *The Alphabet* (i kākau ‘ia e ka po‘e mikionali ma ka MH 1822) i waele i ke ala e hulihia a‘e ai ka ‘ike a me ka mo‘omeheu ku‘una o kānaka ma o ia mea he ‘ike palapala. Ua hō‘ike ‘ia mai ma nā palapala like ‘ole o ia au ka mo‘olelo o ke pa‘i a ho‘olaha ‘ia ‘ana o ua puke li‘ili‘i nei a me ke ‘ano i loli iho ai ka no‘ono‘o ‘ana o ka po‘e e a‘o mai ana i kona mau ‘ao‘ao. Akā, a hiki i kēia manawa, ‘a‘ole i wehewehe ‘ia mai ka ‘i‘o o ia puke a me ke ‘ano i ho‘onohonoho ‘ia ai.

Nānā ‘ia ma kēia ‘atikala noi‘i ia mau hi‘ohi‘ona ma ka pō‘aiapili pālua, ‘o ia ho‘i ke kālai‘ōlelo a me ka mo‘olelo o ia au. Hō‘ike pū ‘ia ma ‘ane‘i ke ‘ano i akaku‘u iho ai ka pī‘āpā mua loa i pehu wale i nā koneka he iwakālua a koe mai nā koneka ‘ewalu o kēia au.

Ma o ka ho‘ohālikelike ‘ana iā *The Alphabet* me nā puke a‘o kākau na ko ‘Enelani, na ko ‘Amelika ho‘i, ma ka pau ‘ana o ke kenekulia ‘umikumamāwalu, maopopo koke ke kumu i kālele nui ‘ia ai ka ‘ike hakina ‘ōlelo a me nā ana kālele ‘ōlelo (pili he ‘umi o nā māhele ‘umikumamālīma o ia puke li‘ili‘i i ia mau kumuhana ‘elua).

Ke ‘ōlelo hou ‘ia nā lula o *The Alphabet* ma ka ‘ōlelo kālai‘ōlelo o nēia au e holo nei, i loko nō o ke kama‘āina ‘ole o ia po‘e mikionali i ke ‘ano nui o ka ‘okina me ke kahakō ma ka puana ‘ōlelo Hawai‘i, ua lohe ‘ia nō na‘e e ko lākou pepeiao nā loli ma ka helu hakina ‘ōlelo, ka pana ho‘i o ka leo, ke loa‘a mai ka ‘okina paha, ke kahakō paha.

Ma ka pau ‘ana o nēia ‘atikala, kilo ‘ia nā hopuna‘ōlelo he ‘u‘uku i loa‘a ma nā māhele hope ‘elima o *The Alphabet*, kahi e puka mai ai ka mana‘o, ‘a‘ole i pa‘a loa ka ‘ike ‘ōlelo kanaka a ua po‘e mikionali lā ma hope o ‘elua makahiki ma Hawai‘i nei; he ‘ike ‘ōlelo a pilina‘ōlelo e ulu a‘e ana ma ka holo ‘ana mai o nā makahiki.

The Alphabet, an 1822 booklet prepared by the missionaries in Hawai‘i, opened the door to a major intellectual and cultural revolution—Hawaiian literacy. Contemporary records tell us how this primer was printed and distributed, and how it affected its readers. But until now, neither its content nor its organization has been explained.

This study describes those features from both historical and linguistic points of view. It explains how and why the inflated alphabet of twenty consonants was reduced to eight in the current orthography.

Comparing this work to late eighteenth-century American and English primers reveals why syllables and accent patterns figure so prominently (ten of the fifteen sec-

tions in the work are distinguished by these features). Restating them in modern linguistic terms shows that although the analysts were unaware of the ‘okina ‘glottal stop’² and vowel length as essential elements in the phonological system, they noted their effects on syllable count and prosody.

Finally, the study takes a careful look at the relatively few examples of Hawaiian sentences in *The Alphabet* (the remaining five sections), showing that after two years of studying Hawaiian, the missionaries’ command of the language and its structure was still evolving.

Having her eye directed to the first class of letters—the five vowels, she [Ka‘ahumanu] was induced to imitate my voice in their enunciation, a, e, i, o, u. . . . She followed me in enunciating the vowels, one by one, two or three times over, in their order, when her skill and accuracy were commended. Her countenance brightened. Looking off from her book upon her familiars, with a tone a little boasting or exulting . . . the queen exclaimed, “Ua loa a iau! [Ua loa‘a ia‘u] ‘I’ve got it!’” . . . She had passed the threshold, and now unexpectedly found herself entered as a pupil. Dismissing her cards, she accepted and studied the little book, and with her husband, asked for forty more for their attendants.

—Hiram Bingham’s account of Ka‘ahumanu’s
breaking the literacy barrier (1847: 164–65)³

The “little book” that Bingham mentioned above was called simply *The Alphabet* (1822; abbreviated here as *TA*). The word “little” is appropriate: it is only sixteen pages long, and the printed area on each page is only approximately 3" × 5"—somewhat smaller than today’s average paperback. However, its influence on Hawaiian literacy, and indeed, on Hawaiian culture and history, was inversely proportional to its size.

I. PRELUDE TO THE FIRST PRINTING

Although a few Hawaiians had learned to read and write English in the first years of European and American contact, widespread literacy in Hawaiian began in early 1822, when *TA* was printed and distributed. But its history precedes its birth by several years—a trial-and-error period that saw missionaries, explorers, and Hawaiians experimenting with different ways to write the language. When we read the accounts of visitors to the islands in the pre-missionary period, we find that most of the compilers of the dozen or so word lists that were collected used spellings that were based on the conventions of their native language—in this case, English, French, Spanish, or Russian (Schütz 1994:53–75). As a result, none of these ad hoc alphabets accurately represented the sounds of Hawaiian.

As for the missionaries’ more concentrated efforts, even though several members of the First Company of Missionaries had begun their study of Hawaiian with the help of native speakers at the Foreign Mission School in Cornwall, Connecticut, their journals and letters show that they had not yet agreed upon an orthography for the Hawaiian words they wrote (Schütz 1994:98–102). The only “system” (in the true sense of the word) devised at that time was a short-lived alphabet that used both letters and numbers to represent the vowel sounds (Schütz 1989, 1994:85–97).

When the missionaries arrived in Hawai'i on 30 March 1820, they found that the foreign residents there were of little help in their search for a practical orthography. Convention had already fixed many common spellings in a form that only suggested the actual pronunciation; for example, note *Owhyhee* and other examples in the following quotation. Some less common names of places and people were spelled differently by each person who wrote them. As Hiram Bingham (1847:153) described the problem:

Those who had attempted to write the names of places and persons in the islands, had materially failed. . . . Though we obtained a few words and phrases from Wm. Moxley⁴ and others, we found the dialect in use by foreigners often materially misled us, so that none could be trusted as to accuracy; and it required time to detect and unlearn errors. In the oft recurring names of the principal island, the largest village, and of the king of the leeward islands, "Owhyhee," "Hanaroorah," and "Tamoree," scarcely the sound of a single syllable was correctly expressed, either in writing or speaking, by voyagers or foreign residents.

It was obvious that the missionaries could not rely on the spellings that had been in common use for decades. Still, before the ultimate goal of converting the Hawaiians to Christianity could be reached, they had to be able to read religious tracts written in their own language.⁵ Describing the first year of the mission in Hawai'i (1820), Hiram Bingham described the main problem (1847:101):

But how shall a rude nation be speedily instructed without books, or the use of the press? True, the missionaries had books, English, Latin, Greek and Hebrew, but neither they nor the nation had any books in the language of the country, or in any of the Polynesian dialects. Our ignorance of the language of the people and their ignorance of ours, was, of course, an impediment in the way of intercourse between the teacher and the pupil, at first very great; and the absolute destitution of suitable books for the work of teaching the nation, was an embarrassment rarely or never to be found among Asiatic tribes.

But any and all such "suitable books" had to build on a firm foundation. Albertine Loomis, great-granddaughter of Elisha Loomis, the printer, summarized the problem (1966:147):

It would have been foolish to go to press with an imperfect orthography, more than foolish to print Bible passages so badly rendered that they promised earthly riches when they meant to proffer heavenly. So the printing waited, and the only school-books at the Mission were Noah Webster's speller⁶ and the English Bible.

1.1 THE DILEMMA

The preceding paragraphs illustrate the dilemma that faced the missionaries. On the one hand, it was imperative to teach the Hawaiians how to read and write their own language, for the conventions of the time demanded that the printed word, as well as oral sermons, be in the local language. On the other hand, as Bingham noted, none of the Company knew Hawaiian well enough even to begin to analyze the sounds of the language—the basis for an alphabet.

In spite of these problems, they had to make a start. Although they were indeed using an “imperfect orthography,” as Loomis described it, the missionaries recognized the difficulties of the task that lay before them (Bingham 1847:152):

To make the spelling and reading of the language easy to the people, and convenient to all who use it, was a matter of great importance, almost indispensable to our success in raising the nation. It was, therefore, a part of our task to secure to the people a perfect alphabet, literal or syllabic,⁷ of all the sounds which were then in use, and which would need soon to come into use⁸ in the progress of the nation.

But how could they construct a “perfect” alphabet? Advice from New England philologists took five months or more to reach them, and as noted above, they found that the local residents were of little help (Bingham 1847:153):

No foreigner or native, at the islands, could illustrate or explain the peculiarities and intricacies of the language.

The only course of action was to begin printing instructional booklets in a provisional alphabet.

2.7 JANUARY 1822: AN ERA BEGINS

In spite of the deficiencies of their “provisional” alphabet, the missionaries printed the first book in the Hawaiian language just three months short of the second anniversary of their arrival. This historic event took place in a thatched-roof house behind the Levi Chamberlain residence, now part of the Hawaiian Mission Houses Historic Site and Archives. (The present-day successor of this building houses a replica of the original press, still in working order.)

Bingham (1847:156) described this first printing, telling how Ke’eaumoku “applied the strength of his athletic arm to the lever of a Ramage press, pleased thus to assist in working off a few impressions of the first lessons.”

This edition of *The Alphabet* consisted of five hundred copies,⁹ but two thousand more were printed in September. The following figures hint at how great the demand was for this book (or, for that matter, *any* book): in 1825, the press printed twenty thousand copies of an eight-page version (called *Ka Be-a-ba*), and forty-one thousand copies of a work called simply *A E I O U a e i o u* (Judd, Bell, and Murdoch 1978). Of course, these figures refer to the number of copies printed. It is impossible to know how many more Hawaiians were reading the books since copies were shared, especially in classrooms.

3. THE ALPHABET IN DETAIL

In order better to understand how both children and adults in Hawai‘i learned to read, we need to take a careful look at the primer that had such a profound effect on thousands of Hawaiians in the 1820s.

In spite of its title, this booklet is much more than just a list of the letters of the alphabet.¹⁰ As soon as students were able to recite the alphabet (and match each letter

with its corresponding sound), they progressed to units larger than just consonant and vowel letters. As a matter of fact, the whole book is organized on the principle of moving from smaller units to successively larger ones, as the following abbreviated section heads show:

- | | |
|--|-------------------------|
| 1. Vowels and consonants | 5. Two-syllable words |
| 2. Diphthongs | 6. Three-syllable words |
| 3. A syllable containing a short vowel | 7. Four-syllable words |
| 4. A syllable containing a diphthong | |

In addition to the topics in these lists, the book contains five short passages for reading. In the following sections, we analyze the contents of these sections, an exegesis of sorts.

3.1 VOWELS¹¹

Once the missionaries were in Hawai‘i and immersed in the Hawaiian language, they realized that the first obstacle to an efficient alphabet was the English method of writing vowels. After discussing the matter among themselves, they decided to scrap that system. The wisdom of their decision was made evident by their correspondence with other scholars, not only in the Pacific mission field but also in England and in New England.

The first exchange was with missionary-scholars who had a head start in developing an alphabet for a Polynesian language. For example, the brethren in Tahiti had decided on an awkward way to write Tahitian vowels, based on the English system but also including an epsilon [ɛ] (Newbury 1961:78)! The Rev. John Davies, better trained than his colleagues, acted independently to convince the directors of the London Missionary Society that the unorthodox orthography voted in by the majority should be changed to a simpler one that matched the systems in Continental Latin and some living European languages (Schütz 1994:107). As for the match between symbol and sound, the “values” assigned to the vowels were those of the Continental, not the English, system of pronouncing Latin.

The Hawai‘i missionaries also sought the advice of the scholars Peter Du Ponceau (from Philadelphia) and John Pickering (from Cambridge, Massachusetts), whose works added weight to their decision to use the Latin system of writing vowels. For example, Pickering wrote, with respect to Native American languages (1820:11):

. . . that it would be best to adopt as the basis of our Indian orthography, what we call the foreign sounds of all the vowels; that is, the sounds which are usually given to them by those European nations . . . who, like ourselves, use the Roman alphabet in their own languages.

Du Ponceau’s indirect contribution was a point made in his essay “English Phonology” (1817): that scholars were wrong to approach a language first from the point of view of the letters used, rather than the sounds used. This practice, he maintained, was backwards, and his discovery—although not well known—was a giant step forward in the field of phonetics.

Ironically, one of the missionaries' earlier wishes—a book in another “Polynesian dialect” to guide them in their attempt to form an alphabet—was granted almost simultaneously: a Māori grammar and dictionary (Kendall and Lee 1820)¹² arrived in Hawai‘i only a few days before the first printing in 1822. Just a glance at the opening pages reveals that the compilers wrote Māori vowels in the European way, thus confirming the Hawai‘i missionaries' decision to do likewise.

An almost unnoticed feature of the Māori grammar is that the authors used acute accents freely (if sporadically) to indicate vowel length.¹³ This system is set out clearly on the first page, reproduced here as table 2.

Table 1. Māori vowels (Kendall and Lee 1820:1)

THE ALPHABET		
Vowels		
Long	Short	Sound
Á á	A a	as in <i>father</i> , and as in <i>pad</i> .
É é	E e	as <i>a</i> in <i>bate</i> , and <i>e</i> in <i>bet</i> .
Í í	I i	as <i>ee</i> in <i>feet</i> , and as <i>i</i> in <i>fit</i> .
Ó ó	O o	as <i>o</i> in <i>pole</i> , and the same sound shortened.
Ú ú	U u	as <i>oo</i> in <i>boot</i> , and as <i>oo</i> in <i>good</i> .

It is clear, especially from the English examples, that vowel length is important in Māori.¹⁴ Unfortunately, this concise and accurate analysis was better in theory than in practice, for Kendall and Lee confused vowel length with accent—a problem also prevalent in various analyses of Hawaiian.

When the cumbersome English system for writing Hawaiian vowels was replaced by the Latin/Continental system, spellings such as *ee* (for [i]) and *oo* (for [u]) were discarded, resulting in the following letters and their corresponding sounds (TA 1):¹⁵

Table 2. Hawaiian vowels

Vowels.		
Names.	Ex. in Eng.	Ex. in Hawaii.
A a ... â	as in <i>father</i> ,	la—sun.
E e ... a	— <i>tele</i> ,	hemo—cast off.
I i ... e	— <i>marine</i> ,	marie—quiet.
O o ... o	— <i>over</i> ,	ono—sweet.
U u ... oo	— <i>rule</i> ,	nui—large.

Traces of English spelling appear in the third column from the left (under *Names*): an attempt to show the pronunciation of the Hawaiian vowels through (1) common English conventions, and (2) one letter with a circumflex. These relationships reflect the common practice at the time of considering the principal value (sound) of a vowel letter to be the sound of its name.¹⁶ Note in particular the *oo* “pronunciation” for Hawai-

ian *u*, necessary to show that the sound did not correspond to the *name* of the English letter *u*, which in spelling is pronounced [yu].

3.1.1 LONG VOWELS

Unfortunately, the publications of the Mission Press—especially those written to help succeeding groups of missionaries learn Hawaiian—did not include diacritical marks to delineate more finely those “tones and accents” they found so difficult to discern. Perhaps the strongest reason they did not do so is precedent: modern English has no short/long contrast in its vowel system, and its writing system does not mark accented vowels.

As for the Latin precedent, although long vowels were recognized, the convention in the early nineteenth century was to write them only when discussing meter (Schütz 1994:135). This practice also served to emphasize the connection between vowel length and accent, even though it is asymmetrical—that is, all long vowels are accented, but not all accented vowels are long. (See Schütz 1994:136–38.)

This asymmetrical feature of vowel length is illustrated, although not stated explicitly, in §§5.2 and 5.3 of the present study. We can begin by hypothesizing that, based on their growing familiarity with the language, 'cvcv¹⁷ was considered the “normal” accent pattern for a two-syllable word in Hawaiian. The “deviations” illustrated in the two sections named above, 'cv'cv and cv'cv, are caused by a long vowel or diphthong disturbing this normal pattern. However, it was not realized until much later that accent was not an independent feature but conditioned by the presence of a long vowel or diphthong.

Some earlier descriptions of other Polynesian languages did hint at vowel length and accent. In addition to the Māori example cited above, all of William Anderson's word lists¹⁸ (except the printed version of his Hawaiian list) marked accented syllables. Martin and Mariner's Tongan grammar and dictionary (Martin 1817) added acute accents and diaereses to the vowel letters.

Even before the Māori grammar arrived in Hawai'i, at least some of the missionaries were using their own system of diacritics for the vowel sounds. For example, in his transcription of Hawaiian words, Bingham (1821) used macrons, breves, and acute accents.

From all these different sources, then, one can assume that Bingham, Loomis, and their associates were accustomed to using diacritics in their linguistic work to add some kind of phonetic finesse to the rough sketch of the orthography, even if they could not distinguish vowel length from accent. Why, then, did they not incorporate accented vowels into their system, at least for the material designed to explain Hawaiian to outsiders? The reason appears to be a practical one: the missionaries' requests to the American Board of Commissioners for Foreign Missions (ABCFM) in Boston for special type were never honored (Schütz 1994:139).

3.1.2 DIPHTHONGS

The answer to the question, does Hawaiian have diphthongs? has, like the spelling of the word itself,¹⁹ varied. Since diphthongs are listed prominently in the primer, it is self-evident that the compilers considered them a part of the Hawaiian sound system. However, if Lorrin Andrews, the mission's principal grammarian, had helped to write

the primer (he did not arrive in Hawai‘i until 1828), this list might not have been included. Andrews wavered in his own opinion, first writing (1838:394):

Until lately, the most intelligent Hawaiians would never admit that two vowels ever coalesced so far as to make but one sound;²⁰ and in a Hawaiian’s ear, both vowels in a diphthong are distinctly and separately heard. But since some of the scholars in the Seminary [Lahainaluna] have gotten more perfectly the idea of what is intended by the term diphthong, by a little attention to the Greek and English languages, they are not only ready to admit that there are diphthongs in their language, but that there are a great many of them.

However, Andrews’s concept of a diphthong was unusual in that it included not only such sequences as *ae* [‘ae] ‘to assent’ and *ai* [‘ai] ‘to eat’, but also *ee* ‘to enter’ [actually e’e], which has a glottal stop between the vowels. His counterexamples—that is, combinations of vowels that did not form diphthongs—almost all have an ‘okina ‘glottal stop’ separating the vowels. Analysts at that time had not yet realized that the ‘okina was a full-fledged consonant but thought instead that it served as a barrier to forming diphthongs.

Such examples show that Andrews had a vague phonetic idea of a diphthong: a combination of vowels that formed “one sound.” We can restate this feature more formally: based on their behavior in the penultimate position in a word (or measure—an accent unit), certain vowel pairs function as a unit, not as a sequence. For example, the position of the accent in *káula* ‘rope’ (two syllables) shows that *au* is a unit, forming the nucleus of one syllable. In contrast, the accent pattern in *kuáwa* ‘valley’ (three syllables) shows that the same vowels in the opposite order—*ua*—do not function as a unit.

Table 3 lists the vowel combinations that were considered diphthongs in 1822 (TA 2):

Table 3. Hawaiian diphthongs

Ae	as in <i>ayes</i> , ²¹ - - - - -	ae [‘ae]—yes.
Ai	as in <i>aisle</i> , or <i>idol</i> , - - - - -	ai [‘ai]—food.
Ao	as <i>a</i> in <i>far</i> , followed closely by <i>o</i> ;	ao [‘ao]—bread
Au	like <i>ow</i> in <i>vow</i> , - - - - -	pau—all.
Ei	as in <i>eight</i> , nearly, - - - - -	lei—beads.
Eu	as <i>a</i> in <i>late</i> , followed by <i>oo</i> ; - -	weuweu—grass
Ou	as <i>o</i> followed closely by <i>oo</i> ; - -	lakou [lākou]—they

Although all Hawaiian diphthongs are falling (i.e., the level of prominence “falls” from the first vowel to the second),²² the examples can also be arranged into phonetic (formal) types based on vowel height:

1. A (a low vowel) followed by *i* or *u* (high vowels): *ai*, *au*.
2. A followed by *e* or *o* (mid vowels): *ae*, *ao*.
3. E (a mid vowel) followed by *i* or *u* (high vowels): *ei*, *eu*.
4. O (a mid vowel) followed by *u* (a high vowel): *ou*.

Missing from the 1822 compilation are two more combinations that are likely to be diphthongs: *oi* and *iu*.²³

An interesting feature of table 3 is the (futile) attempt to give English equivalents to demonstrate the difference between the members of the pairs *ae/ai* and *ao/au*. This is one of several examples that show why it is difficult to determine who the intended users of this primer were. If they were exclusively speakers of Hawaiian, they would not need English examples to show them how to pronounce Hawaiian vowels and diphthongs. Nor would they need English glosses for the Hawaiian words. On the other hand, speakers of English learning Hawaiian could not be the target readers since English glosses are confined to these two tables; the remainder of the Hawaiian words and sentences are not translated. Note also that there is no attempt to show the raising of /a/ to [ʌ] before /i/ or /u/.²⁴ Native speakers would do this naturally; speakers of English would not.

Table 4 shows each of the seven diphthongs alone and combined with various consonants (TA 3). It was intended that students recite this partial syllabary in class.

Table 4. Diphthongal syllables

Ae	lae	nae	pae	tae	ei	lei	nei	pei	rei
ai	hai	kai	mai	wai	eu	heu	peu	teu	weu
ao	hao	kao	mao	nao	ou	kou	hou	mou	tou
au	mau	nau	rau	wau					

Searching for these forms in Pukui and Elbert 1986 shows that they all correspond to words—and some to more than one word.²⁵ The table shows the following patterns:

1. Most of the forms beginning with a vowel (in spelling) can actually refer to two words—one with a vowel onset and the other with the vowel preceded by a glottal stop. For example, *ai* and *'ai*, *ao* and *'ao*, *au* and *'au*, *eu* and *'eu*.
2. As later sections will show, *lei* and *rei* are the same word.
3. *Nau* could be either /nau/ or /nāu/.
4. All these vowel combinations are potential diphthongs, that is, if a short syllable is added to the form, the sequence in question is accented on the first element. For example, *mau* + *na* would be accented *māuna*, not **maúna*.²⁶

In summary, Hawaiian diphthongs are defined by two important criteria, **form** and **function**. The list just above shows the formal features that all diphthongs share, and the position of accent on any of these vowel sequences in the penultimate syllable of a word confirms that the sequence functions as a unit—that is, as a diphthong.

* * * * *

Up to this point, *The Alphabet* presents little controversy. The framers of the orthography admitted that it was not perfect, but at least workable. It was not until they became more familiar with the language—and the primer that represented it—that almost unsurmountable problems arose. We will discuss them in §6.

But before we discuss that topic, we examine the organization of the remainder of the primer—especially how it differs so markedly from current readers. We find that it is closely related to the state of the art in the late eighteenth and early nineteenth centuries, and the training of the missionaries who compiled it.

4. THE MODEL FOR A SYLLABLE-CENTERED APPROACH

Just a quick glance at *TA* shows that it bears little resemblance to a modern introductory primer for any language. Today, we are unlikely to find a teaching text organized by syllable count. But this practice was common when it was published. In the following sections, we discuss how that organization stemmed from a book often mentioned in the writings of the missionaries themselves: *Noah Webster's Blue-Back Speller*.²⁷

4.1 NOAH WEBSTER'S SPELLER

In their own schooling in the first part of the nineteenth century, the missionaries to Hawai'i are almost certain to have learned to read, write, and spell by using a textbook written by Noah Webster. His most important work before he compiled his dictionaries, this text was commonly called simply "Webster's speller."²⁸ As E. Jennifer Monaghan described it (1983:14, 31), the main goal of the spelling book was to teach reading, for which spelling—in particular, spelling aloud—was a prerequisite: "As far back as one can trace the history of reading methodology, children were taught to spell words aloud, syllable by syllable." Webster himself wrote (1783 [1800]:28):

Let a child be taught, first the Roman letters, both small and great—then the Italics—then the sounds of the vowels; not pronouncing the double letters *a* and *u*, &c separately, but only the sound that those letters united express—then the double letters. All this a child should know before he leaves the Alphabet and begins to spell.

In his summary of Webster's recommendations for teaching reading, Michael Hancher (2010:1, 1n.) listed these underlying tenets:

Reading should be taught atomistically, letter by letter: first letters, then syllables, then monosyllabic words, then disyllabic words. For Webster, to read was to decipher, or to "spell."

Hancher added this note pertaining to the last sentence: "Webster's dictionary definitions of read and spell were closely allied."

In the edition just quoted from, Lesson 1 begins with a table of syllables (called a "syllabarium") to be spelled aloud and then pronounced as units: *ba be bi bo bu by*. Thus, students began to learn to read by reciting the names of the letters and then pronouncing the syllable the letters spelled: *be, a—ba*.²⁹ After this exercise, students could proceed to the lessons.

The following list shows how the speller (Webster 1800) is organized. It shows only

those sections that illustrate the progression from short forms to longer ones so that we can see how closely *TA* followed this arrangement.

Syllables from two to three letters in length
 Easy Words of Two Syllables, accented on the First
 Easy Words of Two Syllables, accented on the Second
 Easy Words of Three Syllables; the full Accent on the First, and a weak Accent on the Third
 Easy Words of Three Syllables accented on the Second
 Easy Words of Three Syllables, accented on the First and third
 Easy Words of Four Syllables; the full Accent [on] the First, and the half Accent on the Third
 Easy Words of Four Syllables, accented on the Second
 Webster's complete syllabary appears as table 5.³⁰

Table 5. A sample of Webster's syllabary (1800:28)³¹

ba	be	bi	bo	bu	by	ha	he	hi	ho	hu	hy
ca	ce*	ci*	co	cu	cy*	ma	me	mi	mo	mu	my
da	de	di	do	du	dy	na	ne	ni	no	nu	ny
fa	fe	fi	fo	fu	fy	ra	re	ri	ro	ru	ry
ka	ke	ki	ko	ku	ky	ta	te	ti	to	tu	ty
ga	ge	gi	go	gu	gy	wa	we	wi	wo	wu	wy

* They should be taught to pronounce, *ce, ci, cy*, like *se, si, sy*.

Incidentally, in both Hawaiian and English teaching and reference materials, the emphasis on syllables lingered. For example, in his 1865 dictionary, Andrews divided headwords into syllables. Correspondingly, in most English dictionaries,³² the convention continued, since users look at headwords to decide where to hyphenate a word. Today, a word-processing program has to contain that information in order for an automatic hyphenating feature to function.

In summary, the missionaries in Hawai'i drew on their own schooling, especially their textbooks, which they adapted to fit Hawaiian syllable and word patterns.

4.3 SYLLABLE BY SYLLABLE

It is easy to see that the Hawaiian primer followed, as closely as it could, the organization of Webster's works. For example, table 9 (*TA* 2–3) presents a syllabary: each of the twelve³³ consonants is followed by each of the five vowels, making a total of sixty syllables. Missing are syllables that consist of a vowel alone, or a consonant followed by a diphthong. When pronounced as words in a list, each of these syllables would be long³⁴ and accented.

Table 6. Hawaiian syllabary³⁵

ba	be	bi	bo	bu	na	ne	ni	no	nu
da	de	di	do	du	pa	pe	pi	po	pu
ha	he	hi	ho	hu	ra	re	ri	ro	ru
ka	ke	ki	ko	ku	ta	te	ti	to	tu
la	le	li	lo	lu	va	ve	vi	vo	vu
ma	me	mi	mo	mu	wa	we	wi	wo	wu

Although the practice has disappeared today, the classroom exercise of spelling aloud also focused on syllables: pupils first pronounced each letter of the syllable, and then put the sounds together and pronounced the syllable, repeating this process until the complete word was spelled. This exercise, as practiced in Hawai‘i, was described by Andrews (1832:159):

The teacher takes a Pia-pa [i.e., speller, primer], sits down in front of a row or several rows of scholars, from ten to a hundred perhaps in number, all sitting on the ground, furnished perhaps with Pia-pas, perhaps not. The teacher begins: says A. The scholars all repeat in concert after him, A. The teacher then says E. They repeat all together, as before E, and so on, repeating over and over, after the teacher, until all the alphabet is fixed in the memory, just in the order the letters stand in the book; and all this just as well without a book as with one. The abbs³⁶ and spelling lesson are taught in the same way.

One result of applying this methodology to Hawaiian is that it produced a new word: *Pia-pa* (as it is spelled in the selection above). Just as American schoolchildren spelled aloud by naming the letters that formed the first syllable, and then pronouncing the result: “*b, a—ba*,” so did Hawaiian learners. The Hawaiian version also used the names of the letters and the resultant syllable: *bē-ā—bā*; by 1824, this had become the Hawaiian word for ‘alphabet’ (Judd, Bell, and Murdoch 1978:4). This title appeared on at least two more primers or alphabet tables printed before the spelling was regularized in 1826. However, after *b* had been eliminated from the alphabet, *p* took its place in this new coinage. From that time on, the word for ‘alphabet’ has been *pī-āpā*, first appearing with this spelling (minus the *kahakō* and ‘*okina*) in a book title in 1828 (Judd, Bell, and Murdoch 1978:14).

It is clear that the purpose of all these first exercises was to teach the mechanics of pronouncing words, one by one. Not until page 9 do we find short sentences, labeled “First exercise in reading.”

Comparing the English and Hawaiian materials also shows that there was much more uniformity in the materials used in the early part of the nineteenth century than in those used now. Noah Webster’s “Americanized” reader served a large portion of the American student population at the time. In contrast, now there is such a range of teaching materials that it would be extremely difficult to compile a list of introductory readers used in American primary schools.

In the following sections, we “translate” the terminology of 1822 into current linguistic language, noting which features of the Hawaiian sound system were observed by the missionary-linguists.

5. RESTATING *THE ALPHABET* IN MODERN TERMS

Most of the examples of English in *TA* are headings that describe, in terms of syllables and accent, features that certain groups of words have in common. In the following sections, we examine the examples under those headings and restate them, using both modern linguistic terminology and our accumulated knowledge about Hawaiian sounds and letters. (The words in the following tables are limited to the first and last lines of each section, but all the data were examined. See the reprint of *TA* for the full set.) The modern spelling in brackets follows each form.

5.1 “WORDS OF TWO SYLLABLES, ACCENTED ON THE FIRST” (TA 4–9)

Table 7. “Words of two syllables”

A a	[a‘a, ‘a‘a]	a ka	[aka, ‘aka]	a mu	[amu]	a pu	[apu, ‘apu]
ro a	[loa]	*ti tu	[kīkū]	*wa wae	[wāwae]	wi ni	[wini]

This list, the longest in the booklet (548 words; five pages out of sixteen), contains the most common type of root words in Hawaiian—(C)V(C)V, that is, optional consonants and obligatory vowels. In this pattern, the first syllable must be a simple vowel or a diphthong, each either short or long. The final vowel must be monophthongal and short.³⁷ For some forms, the second consonant is not optional, since certain vowel combinations produce a diphthong, with the vowels coalescing into one syllable.³⁸ In the full set, the diphthongs in the first syllable are *ai*, *au*, and *ou*.

As just one illustration of how an alphabet without *kahakō* or ‘*okina* could give a skewed picture of the vocabulary, note that Andrews 1865 contains eleven entries spelled A-a, corresponding to disyllables with accent on the first. If we check Pukui and Elbert 1986 for authentic examples of A a with this accent pattern, we find only a‘a ‘rootlet’ or ‘a‘a ‘challenge’. If we add words with the same spelling but with a long vowel on the second syllable that changes the accent pattern, the number is raised to twenty-four. (This high number reflects not only Andrews’s inability to recognize long vowels and glottal stops, but also his practice of entering some words three times—as a noun, an adjective, and a verb.)

The sample list above contains two misfits: *kīkū*³⁹ and *wāwae*, since the two syllables of each are accented. In *wāwae* as a citation forms, we hear the second syllable slightly more strongly accented than the first one. This form belongs in table 11, discussed in the following section. Some ambitious readers might like to check all 548 words against the current dictionary for mismatches. But the results would not be very useful.

5.2 “WORDS OF TWO SYLLABLES, HAVING NO CERTAIN DISTINCTION OF ACCENT” (TA 9)

Table 8. “Words . . . no certain distinction of accent”

A a	[‘ā‘ā]	ao ao	[‘ao‘ao]	au hao	[‘auhau]	a he	[āhē]
he i	[hē‘ī]	la kou	[lākou]	ne ne	[nēnē]	wa wa	[wawā]

The only words fitting into this category (a total of fifty-six) are those with two accented syllables. Thus, each syllable contains a long vowel or a diphthong. (Based on this criterion *wawā* does not belong in the list). For example, the first word above must be ‘*ā’ā* ‘stammer’, not any of the other twenty-three *A a* entries in Andrews 1865. We can interpret the phrase “having no certain distinction of accent” this way: if one of these words is pronounced as a citation form, we hear phrase accent, which emphasizes the second syllable (see the similar statement in the paragraph above). In a longer phrase, if the word in question doesn’t end the phrase, each syllable is accented more or less equally.

In this list, each word consists of two measures (separated here by a raised dot)—for example, ‘*ā’ā*, ‘*ao’ao*, *lā·kou*.

This category, along with those in §§5.3 and 5.4, demonstrates the importance of accent in this early analysis of the language: it represents vowel length, which was (1) difficult to hear in some positions, and (2) not recognized as phonologically important even when it was perceived.

5.3 “WORDS OF TWO SYLLABLES, ACCENTED ON THE SECOND” (TA 10)

Table 9. “Words . . . accented on the second”

*Ai e	[‘ai‘ē]	*u pe	[ūpē, ‘ūpē]	*hi nai	[hīna‘i]	*ma nao	[mana‘o]
u ka	[‘ukā]	*hi hi	[hīhī]	ma mae	[mamae]	pi lau	[pilau]

Words that fit into this group are made up of a short first syllable and a long second syllable, the nucleus of which is a long vowel or a diphthong, either short or long.⁴⁰ This feature implicitly guides the teacher and the students to the proper pronunciation. For example, as written in 1822, *u ka* could represent either *uka* ‘inland’, *‘uka* ‘wrinkles’, or *‘ukā* (call to hogs). But because the word is included in this set, it is clear that it is *‘ukā*, whose accent on the second syllable indicates that the vowel is long.

This sample, only eight words from a total of thirty-six, reveals some of the inaccuracies of the missionaries’ prosodic perceptions at that time. *‘Ukā*, *mamae*, and *pilau* are the only words in the list with an accent exclusively on the second syllable. *Mana’o* is trisyllabic (the *‘okina* was ignored), and the remainder contain two long syllables.⁴¹

Here are some misfits from the longer list. *Nana* might represent *nanā* ‘snarling’, but if it is meant to be the more common *nānā* ‘look’, it is a misfit since both syllables are accented. *Uha* could be one of four words (*uha* ‘colon’, *ūhā* ‘eel’, *‘uha* ‘waste’, or *‘ūhā* ‘thigh’), but none of them consists of a short syllable followed by a long one.

5.4 “WORDS OF THREE SYLLABLES, ACCENTED ON THE SECOND” (TA 11)

Table 10. “Words of three syllables, accented on the second”

A a a	[‘a‘a‘a]	a o he	[‘a‘ohe]	a li a	[alia]	i kai ka	[ikaika] ⁴²
*pi la li	[pīlali]	po ho o ⁴³	[]	*pu i wa	[pū‘iwa]	wa hi ne	[wahine]

With just a cursory glance at the complete list of 184 words, one can spot words that don't belong there. An obvious mistake is to miss a long vowel or diphthong in the first syllable, for example, *'ōlelo*, *'ōlena*, *kaulua*, *aikāne*, all of which consist of two measures and thus accented on both the first and second syllables.

This group shows another common pattern for roots. In these forms, the vowel in the accented syllable can be short, long, or a diphthong (short or long). From the truncated list above, an example of an accented diphthong in the second syllable is *ikaika* 'strong'. An example of a word with a long vowel in the penultimate syllable is *ho'āla* from *ho'o* + *ala* (Jeffrey Kapali Lyon, pers. comm., 29 March 2014).

5.5 “WORDS OF THREE SYLLABLES, HAVING A SLIGHT ACCENT ON THE FIRST, AND THE FULL ACCENT ON THE THIRD” (TA 13)

Table 11. “Words of three syllables, having a slight accent on the first, and the full accent on the third”

A ka mai	[akamai]	he le lei	[helelei]	ma na ka	[manakā]	*pe pei ao	[pepeiao]
*ha la wai	[hālāwai]	lu a wai	[luawai]	pe le leu	[peleleu]	ti po pou	[kipopou]

Words in this group (only twenty) should consist of two measures: a disyllable followed by a long syllable (with either a long vowel—*mana·kā*—or a diphthong—*aka·mai*—as its peak). We can rewrite the list, first, showing measure divisions:

aka·mai	hele·lei	mana·kā	pepei·ao
hā·lā·wai	lua·wai	pele·leu	kipo·pou

and next, showing the accent patterns that this notation represents:

ˌakaˈmai	ˌheleˈlei	ˌmanaˈkā	peˌpeiˈao
ˌhāˌlāˌwai	ˌluaˈwai	ˌpeleˈleu	ˌkipoˈpou

Both these notations show clearly that all the words in this sample except *pepei·ao* and *hā·lā·wai* fit the pattern. However, the full list contains several more words that do not belong there.

5.6 “WORDS OF FOUR SYLLABLES, ACCENTED ON THE FIRST AND THIRD” (TA 14)

Table 12. “Words of four syllables”

A hi a hi	[ahiahi]	a mu a mu	[amuamu]	a va hi a	[ˈawahia]
ho lo wa a	[holowaˈa]	mi na mi na	[minamina]	wi ni wi ni	[winiwini]

This section, 102 words in all, consists of forms that can be divided into two measures, each consisting of an accented syllable followed by an unaccented one. The accent pattern is as follows: *ˌahiˈahi*.⁴⁴ Interestingly, over two-thirds of the examples are redu-

plicated forms (like the example), and many of the others can be divided into common forms, including four that begin with the common prefix *ho'o*.

5.7 TRACES OF THE 'OKINA

Stranger still, that prevalent Polynesian sound, the so-called catch, written with an apostrophe, and often or always the gravestone of a perished consonant. (Stevenson 1891:12)

From the mid-nineteenth century on, those who have studied Hawaiian in a professional way have known that the 'okina is not just a vague "guttural" sound, or the remnant of a missing *t* or *k* in related languages. For example, influenced by Pierre Gaussin's work on Tahitian, Marquesan, and Polynesian in general (1853),⁴⁵ William D. Alexander wrote (1864:5), "This guttural is properly a consonant and forms an *essential* part of the words in which it is found." But for several reasons, these findings were not widely known.

First, the glottal stop was not a distinctive sound in the languages that the missionaries were familiar with, so there was no conventional letter with which to write it. Next, it was very difficult, especially for speakers of English, to hear it at the beginning of a word. Finally, although it was easy enough to hear an 'okina between vowels, some grammarians (as mentioned earlier) felt that in that position it was simply a way to prevent certain vowel combinations from forming diphthongs.⁴⁶ But returning to 1822, we can see that *TA* contains some explicit and implicit clues that suggest that even at that time, the compilers heard *something*. The problem was that they were not sure *what* they heard.

As an example of an explicit clue, an apostrophe appears in the following words: *ia'u*, *ola'i*, *hana'i*, and *ike'a*. In *ia'u*, it definitely represents an 'okina. However, in the next two words it has a different function. The Pukui-Elbert dictionary describes *ola'i* as "Bible spelling for *ola + ai*." *Hana'i* could be a contraction of *hana ai* (see Andrews 1865). *Ike'a*⁴⁷ is unexplained (Jeffrey Lyons, pers. comm., 24 October 2014).

For examples of an implicit clue, see the group "Double vowels pronounced separately" (*TA* 3).

Table 13. "Double vowels pronounced separately"

Lesson 2.				
Aa	ee	ii	oo	uu
waa	kee	lii	hoo	puu

All the words on this list are disyllabic, with the second syllable beginning with an 'okina (and sometimes the first, if the written form begins with a vowel). Although some of the words are easy to recognize (e.g., *lii* [*li'i*] 'small', *puu* [*pu'u*] 'hill'), others present a range of possibilities. For example, the spelling *aa* could represent any of four

possibilities: *a'a* ‘root’, *a'a* ‘dare’, *a'ā* ‘lava’, or *a'ā* ‘stutter’. *Oo* could represent one of three: *o'o* ‘ripe’, *o'ō* ‘to crow’, or *ō'ō* ‘digging stick’.

It is no accident that in all the examples in table 13, the *'okina* occurs between like vowels—a combination impossible to interpret as a diphthong.

* * * * *

Treating the *'okina* in this section may not seem logical, but perhaps it is, since it was not considered a consonant. As the next section shows, the sounds that were definitely consonants in the minds of the grammarians of the 1820s presented their own problems—seemingly unsolvable.

6 CONSONANTS: A PHONOLOGICAL AND PHONETIC QUAGMIRE

The move from the English to the Latin/Continental way of writing Hawaiian vowels was achieved with little opposition. Interpreting the consonants, however, turned the study of Hawaiian into a major battlefield. At first, the analysts were unaware of the difficulties that the consonants presented, but once these were recognized, they were on center stage for the next four years. The following section describes the problem.

6.1 CONSONANT VARIATION

The list of consonants in TA (table 5) contains no hints of consonant variation; only the “foreign” consonants stand out as exceptional in some way. In other words, there are no indications that the native system contained fewer than twelve consonants. However, if you scan through the letters in large print and boldface, you can see that they include five not found in today’s alphabet: *B*, *D*, *R*, *T*, and *V*. The presence of these letters raises important questions: Why are they there? How were they used?

Table 14. Hawaiian consonants

consonants.	Names.	consonants.	Names.
B b	be	N n	nu
D d	de	P p	pi
H h	he	R r	ro
K k	ke	T t	ti
L l	la	V v	vi
M m	mu	W w	we
<i>The following are used in spelling foreign words:</i>			
F f	fe	S s	se
G g	ge	Y y	yi

Judging from the labeling in the table, we might assume that only the four letters in small print would be used for consonants in borrowings.⁴⁸ However, note Bingham’s examples in the following quotation (1847:155):

We could not, in good conscience, throw out every consonant in the names of Obed, Boaz, Ruth, David, Ezra, Russia, and Gaza, and nearly all out of such names as Sabbath, Christ, Moses, Joseph, Boston, and Genessaret, simply because such consonants could be dispensed with in writing the words familiar to the people.

From Bingham's list, the following words contain two of the four "foreign" letters (*f* and *y* are missing; none of his examples contain those letters):⁴⁹

- s Sabbath, Russia, Christ, Moses, Genessaret
- g Gaza, Genessaret

but also:

- b Obed, Sabbath, Boaz, Boston
- d Obed, David
- z Boaz, Ezra,
- r Ruth, Ezra, Russia, Christ
- th⁵⁰ Ruth, Sabbath
- v David
- t Christ, Boston, Genessaret
- j Joseph

Bingham's description does not quite match the words in *TA*. According to his examples, the consonants in his list "could be dispensed with in writing the words familiar to the people." However, exercises (see *TA* 2–3, for example) treat *b*, *d*, *r*, *t*, and *v* as if they were necessary for writing true Hawaiian words.⁵¹ Perhaps timing has something to do with these discrepancies, for he was writing his history twenty-five years after the primer was printed, and twenty-one years after the alphabet was streamlined.

But the inconsistencies of Bingham's description are not important. The major problem was that after the primer was printed, it was found that the consonants in the following pairs or groups varied (or alternated) and did not contrast with each other:

- k* or *t* *l*, *r*,⁵² or *d* *p* or *b* *w* or *v*

Within each group, a word could be pronounced with either consonant without changing its meaning. For example, whether one said *maka* or *mata*, it still meant 'eye'.

In *The Alphabet*, the following examples show native words spelled with the problematic consonants. Modern spellings are enclosed in square brackets:

B: *tabu* [kapu]

D: *hidahida* [hilahila]

R: *marie* [mālie], *aore* [‘a‘ole], *ranai* [lānai], *aroha* [aloha], *roa* [loa], *heenaru* [he‘e nalu]

T: *iti* [iki], *maitai* [maika‘i], *ahitu* [‘ahiku], *motu* [moku], *mitioe* [mikioi], *moatata* [mōakāka], *tietie* [ki‘eki‘e], *tuhituhi* [kuhikuhi]

V: *heva* [hewa], *Iehova* [Iēhova], *avaava* [‘awa‘awa], *avahia* [‘awahia], *avakea* [awakea], *kuiheva* [kuhihewa?]

Some other common words that contain the problem consonants do not stand out, since each is written with today's familiar spelling:

Akua 'God' *Lani* 'high chief' *hele* 'go' *loko* 'inside' *hale* 'house'
lohe 'hear' *kumu* 'teacher' *puka* 'perforation' *Makua* 'Father' *kanaka* 'person'
kela [kēlā] 'that (over there)'

The longest word list ("Words of two syllables, accented on the first"; TA 4–9), shows this pattern for words containing the disputed consonants: there are no words beginning with *b-*, *d-*, or *v-* (although these consonants are included in the syllabary in TA 2–3, reproduced as table 9 below). The following list shows other letters at the beginning and a fuller range in the middle of words:

Initial	Medial
<i>r-</i> 6	<i>-r-</i> 12
<i>t-</i> 10	<i>-t-</i> 12
	<i>-v-</i> 5
	<i>-b-</i> 1

It is important to remember that in 1822, as the examples above show, all these letters were used to spell native words. As noted earlier, the table of consonants included four "used in spelling foreign words": *f*, *g*, *s*, and *y*. The "foreign" words used in the primer are the following: *Kraist*, *Ierusalemā*, *Iesu*, *Baptaise*.

One might ask, if this alphabet represents how Hawaiian words were heard, why change it?⁵³ The answer is simple: the larger set of consonants presented an insurmountable obstacle, for the spelling of *every* word with one of the interchangeable consonants would have to be memorized. For example, if spellings had been fixed as they appear in *The Alphabet*, students and teachers would have to remember that *Akua* 'God' was spelled with a *k*, but *motu* 'island' was spelled with a *t*.

In short, the provisional system violated the cardinal qualities of an ideal spelling system:

1. We can spell a word correctly when we hear it.
2. We can pronounce a word correctly when we see it written.

The following section describes the missionaries' solution to this problem.

6.2 ADJUSTMENTS AFTER 1826

The only way to avoid several possible spellings for a large part of the vocabulary was to choose one letter from each of the sets of alternating consonants. In linguistic terms, this decision foreshadowed what we call the *phonemic principle*: the distinctive sounds in a language (and the basis for its alphabet) are those that keep the meanings of words separate. Thus, since *tolu* and *kolu* both meant 'three', there was no contrast between *t* and *k*, and thus no need to write both letters. This same principle held for the other groups. After repeated consultations with native speakers, in 1826 the missionaries voted to keep *k*, *p*, *l*, and *w* (among the troublesome sets), and to discard *t*, *b*, *r*, *d*, and *v*.⁵⁴

This move made Hawai‘i’s writing system very efficient. We find endorsements of the revised orthography such as the following (Loomis and Loomis, Journal, 18 August 1826):

We have rendered the orthography of the language much more simple by removing from the alphabet one of each of the interchangeable letters, and now hope to have uniformity of spelling.

Another missionary described the practical results of this simplicity (Richards 1828):

With our present alphabet a boy of fourteen, with common intelligence may in one month become a perfect master of the orthography of his language and be able to read and write the whole of it with correctness.

The framers of this alphabet did not intend to simplify or otherwise change the spoken language. As a matter of fact, speakers of Hawaiian on Ni‘ihau still use *t* (in addition to *k*), even though since the 1830s, they have used a Bible that spells words with *k*. Nor has the language been “diminished” by the decision to streamline the orthography. Hawaiian reached its current precarious state because of social and political pressures, not because of the size of its alphabet.

7. CONTENT

The reading exercises in *TA*, limited in number and size, may be the clearest evidence that the Hawai‘i missionaries’ pedagogy was strongly influenced by Webster’s works. One important feature of the elementary primers is the attention paid to the phonological structure of words, rather than the language in context. Even Webster’s title is suggestive: *The American Spelling Book*.⁵⁵

As further evidence, Webster did not present any sentences until page 43 (interestingly, the four pages of sentences that follow contain only one-syllable words—another example of the “Syllables Rule” doctrine of the work).

As for the content of both Webster’s work and *TA*, in the simplest terms, the connected discourse was aimed at presenting Christianity to new readers, young and old alike, and instilling in them the rudiments of Christian behavior. This moralistic content was not unusual. Even later in the nineteenth century, the giant of American primers, the McGuffey readers,⁵⁶ emphasized obedience and respect to their elders, kindness to animals, and neatness, in addition to religious precepts.

8. ARE THE SENTENCES GRAMMATICAL?⁵⁷

TA includes five “tables” (lessons) that consist of sentences, forty-one in all, ranging from simple (four words) to complex (forty-one words).

The first set, four imperatives on how to behave in a classroom (e.g., “keep still inside the house,” “listen to your teacher”), would have been familiar to those missionaries who had been teachers—such as Sybil Bingham. Still, one can’t help wondering how adult learners (especially royalty!) reacted to admonishments in that form.

As endnote 50 indicates, William H. “Pila” Wilson noted early on that some of the sentences were ungrammatical. Noenoe Silva (pers. comm.), in a detailed analysis of the seven sentences in Table XI, found that:

1. Some sentences could have several different meanings.
2. Sentence 2 she considered “not completely ungrammatical, just not adept.”
3. Sentence 3 she found not only ungrammatical but bordering on unintelligible. The second clause, as it stands, is “nonsensical,” but perhaps the result of a possible typographical error.
4. Sentence 4 was “not too bad,” but she provided a rewritten version.

The remaining three sentences are intelligible.

Jeffrey Kapali Lyon offered the following analysis (pers. comm., 25 February 2015; brackets in the original):

Many of the sentences of TA contain awkward and difficult phrases as well as non-native grammar. Following is a list of the main problems.

Possible typographical errors (especially where the mistake is not repeated elsewhere): *i'u* [i'a'u]; *a ore* (elsewhere *aole* [a'ole]); *ko honua* [ka honua]; *hoi ai* [ho'i ia]; *ina no* [nāna nō]; *aohe me o* [a'ohe mea 'ē]. There seem to be an unusually large number of these in the Hawaiian sentences, probably due to both inexperience in the language and the inexperience of the printer.

English word order: *Ke Akua makemake i kanaka maitai* [Makemake ke Akua i [ke] kanaka maika'i]; *Iehova aia no i loko o ka lani* [aia nō 'o Iēhova i loko o ka lani].

Misuse of *a/o* possession: *ka olelo hou maitai a ke ola* [ka 'ōlelo maika'i hou o ke ola]

Incorrect prohibition marker: *a ore hana hewa* [mai hana hewa!]

Odd word choice: *I hoomake kela no kakou* [i make ?] 'he died for us'.

Experimental word choice: *heiau* here used to mean 'church'. This meaning was later rejected, and *heiau* was relegated to indicate pagan temples only. *Aloha make*, intended to mean 'dying love' but likely to have been understood as 'dead love'; *la tabu* [lā kapu] 'restricted day' would later become *lā Sābati* 'Sabbath day'.

Insufficient understanding of the anaphoric marker *ai*: *Mai ke kumu mai i hana ia e Iehova ka lani* [mai ke kumu mai i hana 'ia ai e Iēhova ka lani]

Awkward use of conjunctions and prepositions: *a o ko honua* [a me ka honua]

Omission of noun markers: *ike'a e lalo nei* [i'ikea e ko lalo nei]

This list could be expanded, but the reader can see that the Hawaiian is far from “correct” as the composers of these sentences would have understood the term. The errors also indicate that the missionary writers had inadequately communicated their wishes to the Hawaiians who were helping them on this publication.⁵⁸

9. ANSWERS AND QUESTIONS

The Alphabet has become known as the book that introduced literacy to the Hawaiian people. But until now, its content has not been analyzed carefully. I have tried to do that from both linguistic and historical points of view—asking and trying to answer a number of questions. First we list the questions that the present study has answered—at least partially:

What accounts for the fuller alphabet, containing twenty consonants as opposed to eight in the current alphabet?

Why are syllables emphasized so strongly?

Similarly, why is accent emphasized?

Why are there so few sentences or examples of longer discourse?

However, we are left with a number of questions still unanswered (and perhaps, before now, unasked), mainly on matters that lie outside the content of the booklet itself.

1. With so many words simply listed with no context, how did classroom teachers pronounce a written form that could represent several different pronunciations? The ‘*okina* presented the main problem. For example, *hea* (TA 5) could represent *hea* ‘call’ or *he’a* ‘inflamed’. Aside from an occasional apostrophe, the only clue to the presence of an ‘*okina* in a word is the category named “Double vowels pronounced separately.”

Long vowels presented a slightly different problem. In some written forms, a long vowel could be predicted by the nature of the list the word occurred in. For example, *aha*, listed in the category “Words of two syllables, accented on the second” (TA 10), would have to represent ‘*ahā* ‘number four’, not ‘*aha* ‘assembly’. In penultimate position, however, both short and long vowels can occur without any change in the accent pattern. For example, in the most common pattern—“Words of two syllables, accented on the first” (TA 4–9)—*kane* could be *kane* or *kāne*.⁵⁹

Normally, speakers/readers would use context to decide which word of several possibilities was intended. But lists of words provide no context whatsoever (beyond the phonological feature that binds them together).

2. As for justifying a textbook that contains mostly lists of syllables and words and only four groups of sentences, I have suggested that the missionaries were simply following a pattern that they were accustomed to, since it is likely that they themselves were taught from Webster’s primer. But there remains the question of how to sustain interest in the classroom beyond the novelty effect of the *palapala*.

3. Did teachers supplement the limited material in the primer? Were they qualified to do so? Were they asked to do so? If so, what materials did they use?

4. Note the English explanations of the features that distinguish the different patterns of words—inconsistent in what purported to be a Hawaiian primer/reader. How were they handled in the classroom? Were they translated into Hawaiian? For example, how were terms such as *diphthong* and *accent* explained in Hawaiian?

5. Now that we realize that there was no contrast between the members of the sets

$k \sim t$ $l \sim r \sim d$ $p \sim b$ $w \sim v$

another set of questions arises, from both the teachers’ and students’ points of view.

First, how did teachers pronounce words written with *b*, *d*, *r*, or *v*? Including these consonants resulted in twelve separate (written) syllabaries. If we take *b* and *p* as an example, we are led to ask, did teachers try to make a distinction in their pronunciation of *ba bi be bo bu* and *pa pi pe po pu*?

6. The next question follows naturally: How did students cope with these anomalies? Wouldn’t it be confusing to be presented with *b*-syllables and *p*-syllables that must have sounded exactly alike, even though they were written differently?

We might look at the 1822 primer from two linguistic points of view, both connected with common faults of orthographies—*over-differentiation* and *under-differentia-*

tion (Pike 1947:141–42). In simpler terms, an alphabet may contain more letters than are necessary, or fewer. Both of these problems are represented in the 1822 alphabet—the plethora of consonants and the lack of *‘okina* or *kahakō*—but the one that had the most immediate effect on Hawaiian literacy was the former—too many letters.

The difficulty that this system presented to readers and writers could be divided into two categories, *recognition* and *recall*, depending on how the alphabet was being used. For readers, seeing words written with *b*, *d*, *v*, or *r* may have slowed comprehension, but by pronouncing the word, they could arrive at the correct meaning.

However, for writers, recall was necessary. For example, they had to remember, that the /l/ in *hilahila* ‘shy’ was written as *d*, in *aloha* ‘love’ as *r*, and in *lani* ‘sky, chiefly’ as *l*.

One might suppose that once the alphabet was streamlined, these problems vanished. However, it was impossible immediately to replace the thousands of books and pamphlets that were printed before that time. Nor could those who had already learned to read and write be retrained immediately.

7. What is perhaps the most significant question lies outside the content of the book: How easy or difficult was it to retrain the tens of thousands of Hawaiians who had learned to read and write using the old system? From 1822 through 1826, the Mission Press produced at least 194 thousand copies⁶⁰ of Hawaiian-language imprints (Judd, Bell, and Murdoch 1978:3–10), all in the old orthography. Bingham (1847:152–56) wrote in detail about the first printing of *TA* in his chapter that covered the year 1822, but he did not mention the revised orthography in his chapter that covered 1826.

For those who had been taught the new system, the changes wrought by the 1826 decision could be dealt with almost automatically. In reading older material, they had only to remember only a simple set of rules—for example, in one’s mind, replace every *b* with a *p*, every *r* with an *l*, and so on.

But perhaps this was a problem that lay mainly in reading material out of context, such as the word lists that make up most of *TA*. In the books that were produced after 1826, context played a much more important role. For example, in 1827, the Mission Press printed the Gospel of Luke, hymns, quotations from the Bible, a catechism, the law of Jehovah, “Thoughts of the chiefs,” and the Sermon on the Mount (Judd, Bell, and Murdoch 1978:10–13). Because these later works used the language in context, not just in word lists, it would not have been difficult for readers to deal with the spelling changes.

Finally, as with any change of systems (such as the introduction of metrics or decimal currency in Great Britain and parts of the Commonwealth), the transition is difficult only for the interim generation.

* * * * *

The voices that might have expressed frustration or puzzlement about the revised spelling of 1826 have long been silent. But perhaps there is a parallel between the situations resulting from the changes to the orthography then and those made in recent decades involving *‘okina* and *kahakō*. Now dissenting voices are audible. When asked about negative reactions to modern written material that uses the full orthography, Keao NeSmith wrote (pers. comm., 27 August 2012):

I've heard native speakers complain in the past about how the 'okina appear to break up the word in ways that cause them not to recognize the word. For example, some find the spelling 'oia'i'o [truth] very confusing. Others don't know what to make of the *kahakō*.

Such reactions go back at least as far as the mid-1980s, when such matters as writing 'okina and *kahakō* on street signs was considered controversial enough to be newsworthy. The whole affair seemed made to elicit responses from the uninformed. For example, a trustee of the Office of Hawaiian Affairs (but not necessarily a speaker) was quoted as saying, "Nobody understands them (glottal stops) except the linguists. . . . Even the kupunas [elders] don't understand what you're talking about" (*Honolulu Star-Bulletin*, 28 May 1986).

But don't both opinions reflect the speakers' level of education and familiarity with the newer system? As for education, perhaps if linguistics played a larger role in the primary and secondary curricula in Hawai'i, both in English and in Hawaiian, students would be better equipped to understand the advantages of an alphabet with a one-to-one match between letters and sounds. And familiarity with the system would not be a problem after a decade or two. As with any new technology, whether it be the introduction of decimal currency in Aotearoa in 1967 or a revised spelling system in Hawai'i, it takes only a generation for users to accept such changes, unaware that prices of goods were once reckoned in pounds, shillings, and pence, or that some Hawaiian words had once been spelled with *t*, *b*, *r*, *d*, or *v* and without 'okina or *kahakō*.

NOTES

1. This paper had its beginnings as one of four presentations from a panel on literacy sponsored by the Hawaiian Mission Children's Society (HMCS) on 4 April 2009. On 1 Feb 2014, the official name of the HMCS became the Hawaiian Mission Houses Historic Site and Archives. Within the references, the original name connected with publications is retained.

I am grateful to Noenoe Silva, Kapali Lyon, and 'Ōiwi Parker Jones for their invaluable help with various parts of the paper.

The word *primer*, with the meaning of an 'elementary lesson book', is pronounced with a so-called "short *i*" [ɪ]. A word with the same spelling but pronounced with a so-called "long *i*" [aɪ] refers to a 'base coat for painting'.

2. In the Hawaiian alphabet, a single opening quotation mark represents the 'okina.

3. This took place in the third year of the mission, 1822.

4. Campbell (1816:130–31) described Moxley as a "young American . . . who understood the language" and acted as an interpreter.

5. Other linguistic works, such as a grammar and a dictionary, although desirable and often discussed, were more of a convenience for the missionaries and other nonnative speakers than for the Hawaiians themselves.

6. See §4.1.

7. Note that Bingham mentioned the possibility of a syllabic writing system. In fact, he experimented with the idea, even producing a set of syllabic symbols for Hawaiian (Rumford 1997).

8. This philosophy is reflected in the list of four consonants "used in spelling foreign words," on page 1 of *TA* (appendix).

9. Actually, the first eight pages were printed in January, and the second eight in February (Judd, Bell, and Murdoch 1978:3).

10. Neither *Webster's Third New International Dictionary* (1961) nor the *Oxford English Dictionary* (1971) has 'primer (introductory reader)' as one of the meanings of *alphabet*. However, one of the meanings of *alphabet* in the latter work hints at the 'primer' sense: "the key to any study or branch of knowledge; the first rudiments."

11. The section heading should be "vowels and consonants," but consonants—and problems with their interpretation—are treated in §6.

12. In this collaborative effort, Kendall's role was that of a missionary in the field with practical knowledge of Māori; Samuel Lee was a well-known Arabic and Hebrew scholar at Cambridge, England.

13. And in many cases, accent as well, since all long vowels are accented. (However, not all accented vowels are long.)

14. What is missing is evidence that would prove a *contrast* between short and long vowels, such as *kahu* 'garment' and *kāhu* 'harrier hawk'. The English examples of "short" and "long" differ more in quality than in quantity, whereas in Māori and Hawaiian, the opposite situation holds.

15. The booklet's practice of referring to whole sections as "Tables" will be ignored. Thus, the tables in the present work do not correspond to "Tables" in the booklet. The numbers refer to the pagination in *TA*, reproduced later in this issue of the journal.

16. That is, the name of the letter in a recitation of the alphabet.

17. "Cv" denotes a sequence of consonant and vowel. The vertical line marks the beginning of an accented syllable. A high vertical line denotes primary accent while a low vertical line denotes secondary accent. For example, the word *aka'mai* consists of three syllables: *a*, *ka*, and *mai* (the latter containing a diphthong). Of these, the syllable *mai* is perceived to have primary accent, the syllable *a* is perceived to have secondary accent, and the syllable *ka* is said to be unaccented.

18. See Schütz 1994:55-65.

19. Note the spelling *diphthong* in the primer. Now a common misspelling, it was an acceptable variant in 1822.

20. On first reading, this description seems reasonable. However, on closer inspection, we find it impossible to explain explicitly what "make . . . one sound" means. As the following discussion shows, the term *diphthong* can be defined only by taking both form and function into account.

21. It is not clear what this refers to. Is it the plural of *aye* 'affirmative vote', as in "The ayes have it"?

22. Pukui and Elbert (1986:xvii) called Hawaiian diphthongs (except *iu*) "rising." Apparently Elbert thought that the terms "rising" and "falling" with respect to diphthongs referred to vowel height, not to levels of prominence.

23. Because the relative sonorities of *i* and *u* are similar, sometimes it is difficult to determine where the accent is when the combination is in penultimate position (not only in Hawaiian, but also in other related languages). According to Larry Kimura, in some dialects, *oe*, as in *moena*, is pronounced as a diphthong—i.e., with accent on *o* (Parker Jones, in press).

24. For example, the first vowel in *mai* or *mau* would sound more like English *uh* than *ah*.

25. All the forms, whether they were actual words or not, end in a vowel and contain no consonant clusters. Thus they were pronounceable. A primer written over a century later (Atchlerley 1930) asked students to do the impossible—to pronounce such consonant combinations as *hm*, *km*, *kp*, and *kw*.

26. "*" marks a form that does not exist, or an earlier form that has been reconstructed from present evidence.

27. This was one of its nicknames rather than its actual title (see the references). It is possible that the missionaries were familiar with another primer, produced in England but widely used in the United States—Thomas Dilworth’s *A New Guide to the English Tongue* (1740, in its 52nd edition by 1788.) But so far as I can find, only Webster’s was mentioned.

28. See the comment by Albertine Loomis, §1.

29. Monaghan (1983:14) noted that not until the appearance of McGuffey’s *Readers* in 1836 did American children begin to learn to read from a “reader” rather than a “speller.”

30. A slight difference between Webster’s English syllabary and Dilworth’s, produced only seven years earlier, is that Webster added *y* as a vowel, a concept that was alive and well as late as the 1980s and perhaps beyond, when students were taught that the English vowels were “*a, e, i, o, u,* and sometimes *y.*”

31. The rows have been rearranged. The missing syllables (beginning with *j, l, s, v*) are not explained. A later edition (1829) includes three of these but omits *j*. *Q*, of course, occurs only before *u*. Nor is the slightly altered alphabetical order of the consonants explained.

32. In the headwords in Samuel Johnson’s classic English dictionary (1755), words are not hyphenated, but accented syllables are marked.

33. Missing the ‘*okina*, of course.

34. Here, the term *long* excludes diphthongs.

35. Note that syllables with diphthongs do not appear in this list. Other than containing questionable consonants, these open syllables are certainly pronounceable for Hawaiian readers.

36. This apparently refers to another part of the syllabic tables. I have seen the term used in British novels as late as the 1920s, apparently referring to a classroom exercise.

37. Diphthongs and long vowels would be accented.

38. An example would be **aki*, two syllables. If the consonant were dropped, the resultant form would be **ai*, which is one syllable.

39. It is odd that this word, found in Pukui and Elbert 1986, is not found in Andrews 1865 or the Baibala Hemolele, and the one occurrence found in the Hawaiian-language newspaper databases is unclear (i.e., it could be *kiku* or *kikū*). The *kiku* in *TA* is likely not the same as the *kikū* in Pukui and Elbert, and perhaps the word in *TA* is a typographical error or mishearing. There is no cognate in Māori or Tahitian.

40. Not all words on the list fit this exact description. For example, some words contain a long first syllable, which would be accented. But the intonation pattern of such a form pronounced out of context would give the second syllable slightly more emphasis.

41. As noted by Jeffrey Kapali Lyon (pers. comm., 29 March 2014). In words with two long syllables, the length on the first vowel was often unnoticed since it didn’t change the common accent pattern as the second one did.

42. In this form, the sequence *a + i* unites to form a diphthong—*ai*.

43. Unidentified.

44. As mentioned before, phrase accent on this form emphasizes the second measure, thus giving the impression of secondary accent followed by primary accent.

45. See Schütz 1994:145.

46. For a more detailed account, see Schütz 1994:141–46.

47. This is probably the old passive ‘*ikea*, and the apostrophe serves to mark the place of an imagined lost *i* from the passive particle ‘*ia*, i.e., ‘*ike* ‘*ia*. The writers recognized that ‘*ikea* was semantically identical to ‘*ike* ‘*ia*, and, contrary to later practice, inserted the apostrophe here to show that they thought the *i* had dropped.

48. Of course, many borrowings contain native consonants: e.g., *kuke* ‘cook’, *laka* ‘lock’.

49. Here, the examples are based on spelling, not sound.

50. Since the missionaries were familiar with Greek, they understood that *th* stood for one sound [θ], and not a consonant cluster (Lyon, pers. comm., 29 March 2014).

51. We draw this conclusion because they appear in the first exercise meant to be read aloud. Surely it would have been pedagogically unwise to begin to teach reading by using syllables with “foreign” letters.

52. Note that both *lei* and *rei* appear in table 4.

53. Even after nearly two centuries, this question is still asked by people unfamiliar with the phonemic principle.

54. Even though these superfluous letters were deleted from the alphabet, they were still used in spelling some borrowed words. They are entered in the Pukui-Elbert dictionary (1986) as alternate spellings, and it is likely that speakers assimilated their pronunciations to the nearest native sounds.

55. Note, in §1, its nickname: “Webster’s speller.”

56. Between 1836 and 1960, 120 million copies were sold (Wikipedia, accessed 18 February 2014).

57. This topic was suggested by William H. Wilson, pers. comm., 18 June 2012.

58. Lyon plans to expand this topic as an article.

59. Incidentally, this list contains no words with a diphthong in the first syllable.

60. This figure may be too low since the compilers of the bibliography may not have been able to provide figures for all editions of each book. For example, mission records noted that successive editions of an 1825 spelling book totaled about 150 thousand copies (Schütz 1994:165).

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