A Phonemic Analysis of Esselen

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0.0 Introduction

I would like to begin this paper with a fragment of Esselen that is modern in its intent.

(1) sa-le'-ki a-sa'-t-sa
    [salé-kí] asatsa
    good-stative day(time)
    'Good day.'

The item (1) is from Henshaw (1888) and illustrates the sort of problems that the analysis of Esselen poses to the linguist become philologist. One must try to establish the phonetic values of the surviving corpus and segment morphemes; morphosyntax may then be filled out, the documentary materials permitting.

During the course of this paper, I will justify certain aspects of the interpretation given of this isolated example (the value of Esselen /o/ as [ə]; the placement of stress; the morpheme cut in the first word) in the process of offering a structural analysis of Esselen phonology. I would like to acknowledge Madison Beeler as the person who interested me in Esselen. Raw data for phonetic reconstitution was culled from Kroeber (1904), Beeler (1978), and Shaul, Turner and Collins (1981). Due to severe lack of space, the raw data, phonetic reconstructions and distributions of data are not reproduced here.

1.0 Phonology

A study of Esselen phonology has been limited to comparable sets: those items that are recorded in at least two sources and are clearly the same morpheme. Out of 75 sets of data, 70 reconstituted morphemes were defined. Despite the lack of certainty on the nature of some segments in some of the reconstituted shapes, it is possible to attempt
to phonemicize these data and propose some aspects of its sound system. Like reconstructions derived from any comparative study, these results are incomplete and unconvincing on some points. I will try to be clear on the points that are weakly supported or unclear. I will also compare the results of my study with other studies of Esselen phonology: Kroeber (1904), Harrington (ca. 1913) and Beeler (1978).

1.1 Segments

The consonant phones that have been suggested for Esselen are given below in (2).

\[
\begin{array}{llllll}
(2) & p & t & \ddagger & k & ? \\
     & ts & \ddagger & \ddagger & \ddagger \\
     & f & s & \ddagger & x & h \\
     & m & n & \ddagger \\
     & w & l & y \\
\end{array}
\]

The [\ddagger] phone is proposed by Beeler (1978:20) to be phonemic on the basis of some data from Arroyo de la Cuesta (one of the Esselen sources). This occurs only once in the comparable data; the presence of a /\ddagger/ in Esselen must be inferred solely from the Arroyo material. Henshaw (1888) recorded the phone [\ddagger], but it does not occur in the comparative data. The glottal stop has already been dealt with by Beeler (1978:22).

The remaining phones present a number of possible arrangements with regard to phonemic status. Several problems present themselves: (a) does an affricated series of stops parallel the "plain" series, (b) is [\ddagger] distinct from [\ddagger], (c) is [\ddagger] distinct from [ts], and (d) is [s] distinct from [\ddagger]? Although one cannot give a definitive answer to any of these questions, a distributional analysis on this random set of data may suggest possible contrasts.

The preliminary steps toward phonemicization of the reconstituted consonant phones are shown in items (3) through (7). I will discuss each item in turn.

In (3), the distribution suggests that Esselen [\ddagger] could have alternated with [ts]: [\ddagger] initially and [ts] in word medial position.

\[
\begin{array}{llll}
(3) & \ddagger & \text{initial: before } i, u; \text{medial: never} \\
     & t & \text{initial: before } a, o, u; \text{medial: before } i, e, a \\
     & ts & \text{initial: never; medial: before } i, a \\
\end{array}
\]

Note that both [t] and [\ddagger] appear before [i] and that [\ddagger] occurs before both front and back vowels. It is possible that [t] is distinct from
[s], since both occur initially before [u], and that [t] does not equal [ts], since both occur medially before [a].

In (4), the distribution of [s] and [š] are given for the reconstructed data. An alternation between [s] and [š] might be stated: [š] initially and medially before front vowels, [s] medially before non-front vowels. This alternation seems to be borne out in two of the forms for day: [aši] vs. [asătsa], but is contradicted in other forms, given in (5), from Henshaw.

(4) s initial: never; medial: before a
    š initial: before a, o; medial: before i,
(5) ni-š-pana 'my son' (lsing.-poss.-child)
    nemi-š-ĭya 'your bone' (2sing.-poss.-bone)
    -nísí (verb suffix)

In (6), the distribution suggests that [k], [kʰ] and [x] are potentially contrastive.

(6) k initial: before i, e, a, o, u; medial: before i, e, a
    kʰ initial: before a, u; medial: before e, a, u, o, C
    x initial: before e, o; medial: before i

There does not seem to be any way of separating these phones; they are tentatively to be considered as phonemes.

In (7), however, an alternation is suggested between [p], [pʰ] and [f].

(7) p initial: before e, a, u; medial: before a, o
    pʰ initial: before e, a, u; medial: before i, e
    f initial: never; medial: before e

The distribution of these phones suggests that Esselen /p/ had a medial fricated or fricative allophone medially before front vowels. If this allophone were bilabial fricative, both phones [pʰ] and [f] could be collapsed into one explanation.

At least one phonetic constraint emerges from the distributional trends of consonant phones. This is sketched in (8).

(8) /p/ becomes [pʰ] /V-V_/front
    /s/ becomes [š] /V-V_/front

Both of these rules have the same environment and both involve frication. Another rule, shown in (9), has the same environment, but lacks frication.

(9) /č/ becomes [ts] /V-V_
This might suggest that pre-Esselen /ts/ had palatized initially in stems but not medi ally. Despite the lack of a positioning of Esselen [č] next to front vowels, it may be suggested that the intervocalic position was significant in Esselen phonology.

It is worthwhile to compare a phoneme chart for consonants suggested by this analysis with the one proposed by Beeler (1978:22).

(10a) Analysis suggested here:

\[
\begin{align*}
& \text{p} & \text{t} & \text{k} & \text{k̂} & \text{?} \\
& [ts] & \sim & \{\overline{c}\} \\
& [ʃ] & [s] & \sim & [s] \\
& m & n \\
& w & l & y
\end{align*}
\]

(10b) Suggested by Beeler (1978)

\[
\begin{align*}
& \text{p} & \text{t} & \text{k} & \text{?} \\
& \text{p}^{\}=} & \text{t}^{=} & \text{k̂} \\
& \text{c} \\
& s & \tilde{s} \\
& m & n \\
& w & l & y
\end{align*}
\]

I feel that Beeler's affricated series of stops is weak for three reasons. First, distribution suggests that [p] and [p̅] are in complimentary distribution. Two, it seems that [t] is distinct from [ts] in its medial behavior and that it alternates with [č]. Three, an affricated [t] would probably have a voiceless dental fricative as a variant. Other possible differences between the two charts are the exact status of [s], [ts] and [f].

However, some data contradict two of the alternations inferred above, while supporting one of the alternations.

In (11), [s] and [š] are seen to alternate in the same morpheme.

(11) Henshaw al-pa-pi'-si [alpa-piši]  
Kroeber malpapici [m-alpa-piši] 'gossiping'  
Arroyo chis [čis]  
Galliano chishi [čiši]  
Henshaw t'ci'-ci [čiši]  
Pinart chis [čis]  
'cottontail rabbit'
The second set of data may represent two forms of the same morpheme, a shortened form (see below for truncation) and a full form. If the front vowel is removed to produce the shortened form, [s] appears as expected. The first set of data, however, suggests that Esselen /s/ may have been between [s] and [ʃ], and was more palatal before front vowels, possibly [ʃ].

Contrary to the observation of La Perouse that Esselen f "is spoken as by Europeans" (reported in Kroeber 1904:57), i.e. as a labiodental fricative, some evidence indicates that the f phone in Esselen was both a variant of [p] and that it may have been bilabial.

(12) Kroeber malpapica [m-alpa-píši] 'gossip' 
Henshaw al-pa-pi'-si [alpa-píši] 
vs. Kroeber kolxalabп [kolxala-bíš] 'gossip'

Henshaw [mɛp-yaši] 'dance'
La Pérouse [mɛp-pa] 'dance'

In the first data set, the agentive suffix, usually recorded with an initial [p], shows a bilabial alternation. The second data set shows that [p] and [f] alternated, at least some of the time.

Our knowledge of the segmental phonology of Esselen will always be limited. Arroyo de la Cuesta, who heard the language in 1833, inferred from the limited data that he gathered that the language was "gutural, muy clara y facil [guttural, very clear and easy]", but that "No se conoce par esto poco escrito que letras le faltan [it is not known from this small written amount which letters are missing from it]". Despite the large amount of phonetically rendered data in Henshaw (1888), observations about the sound system of Esselen remain tentative.

Previous analysis agrees on the Esselen vowel system as the following: [i, e, a, o, u]. Refinement is possible with regard to the front vowels and the phone [a]. Tense-lax distinctions are reconstitutable: [i] vs. [ɪ] and [e] vs. [ɛ]. Both [i] and [ɪ] can occur stressed.

(13) Henshaw [tɛrˈn-paʃ] 'joker' (joke-agent.)
Henshaw [ɔwepaʃ] 'nice'

It may be suggested that front vowels in Esselen may have tended toward lax articulations.

Some data suggests that /a/ may have been realized as [ɔ] or had [ɔ] as an allophone. Henshaw (1888) uses the written form a to record the phone [ɔ].

(14) tcə-lo-lə'-si [təlo-ləši] 'running water'
This example shows that both [ɔ] and [o] both can occur in unstressed positions. A comparison of the two forms recorded for 'run' will suggest that [ɔ], written as o, is comparable to [a].

(15) Henshaw can-ca-yi'si [can-ɔa-]  
Finart fošošio [fo-ɔo-]

More concrete identity between [ɔ] and [a] may be suggested on the basis of morphological study. Forms of a third person singular marker show both [ɔ] and [a].

(16) Henshaw lâ'-ma-ca-pa [lɔ-maʃa-pa]  
Henshaw lâl-ma-cai-pa [lâl-maʃai-pa]  
he is coming today'  
he is hungry'

Other examples of a more tentative nature could be offered.

A variation between reconstituted [u] and [o] occurs both stressed and unstressed. Only one source out of five (Arroyo de la Cuesta) consistently writes one variant [u]; the other sources vary. The data given in (17) may represent allophonic variation (an [ɔ] belonging to either /o/ or /u/) or perhaps neutralization.

(17) [otpapahu s] 'seal'  
[ta-nu c] 'woman'  
[u k+x x-s-kvi] 'small'  

Concerning diphthongs, I can only add one item to Beeler's (1978:24) treatment; data for the following vowel clusters is offered by Beeler: ai, ei, oi, au, eu, ao. The diphthong [ui] may occur in hûiya ('eat₂ in 'eat pinole').

Given the tentative nature of much of this segmental analysis of Esselen, future work with Esselen should probably utilize a phonetic transcription.

1.2 Syllabic Structure and Phonological Processes

The shapes of most of the reconstitutions show a strict vowel and consonant alternation, as shown in (18).

(18) CV [ta-] 'female'  
CVC [pek] 'one'  
VCV [iʔi] 'wood'  
CVCV [maev] 'sing'  
VCVC [awur] 'teeth'  
CVCVC [yakis-] 'large'  
VCVCV [asâr-ta] 'daytime'  
CVCVCV [tolēma] 'wild cat'
Only about 5% (4/70) of the sample show consonant clusters, as in item (19).

(19) VCCV  [alpa]  'speak'
    CVCCVCV  [koltāla]  'bear'

The tendency towards CV or VC structure was recognized by Kroeber (1904:58), who noted the likelihood "that all combinations of consonants are due to composition or derivation", demonstrating with such data as the following.

(20)  [ama]  'eat'
      [am-lala]  'will eat'
      [ni-š-fe]  'my friend' (Ising.-poss.-friend)

Other examples could be added to this list; this is best reserved for morphological analysis.

A number of minimal pairs help substantiate the CV-only constraint.

(21)  [ta-]  'female'
      [la-]  (third person)
      [iya]  'bone'
      [iyu]  'come'
      [iʔi]  'wood'
      [iši]  'mouth'
      [exe-]  'male'
      [ešē]  'drink'
      [maša-pa]  'arrive' (?)
      [mašai-pa]  'hungry'

Many stem morphemes are polysyllabic.

In those stems where stress is reconstitutable, it is usually on the penultimate vowel. This stress rule is underscored when one notes that certain exceptions (morphemes of two vowels but non-initial stress) have suffixes.

(22)  [yakís-kv]  'large',
      [putū-kv]  'larve',
      [ukxus-kv]  'small',
      [exé-noc]  'man'

The stress rule thus includes at least some suffixes in its domain, allowing a tentative definition of word boundaries, a useful tool for defining words in morphological analysis.

It should be noted that some Esselen stems had special combining forms.
(23) [atsía] 'mother'
    [m-átsi] 'one’s mother'

[ama] 'eat'
[am-lala] 'will eat'

[mpé] 'dance'
[mpé-pal] Hen. 'dance'

Notice the stress shift in the first pair. It is not clear just how extensive the process of truncation was in Esselen. Harrington (ca. 1913:3) suggests that contraction may signal an imperative: "Huiya (to take) becomes iyuh or even yu for the imperative". This statement depends on the morphological analysis of a transitive paradigm and is open to dispute.

A number of affixes seem to be stress-robbing, given the penultimate stress rule.

(24) [ak̂ xi-písi] 'get up'
    [ištolo] 'sleep near the fire'
    [i-yúx-pokó-nísi] 'come to bed'
    [súíyuhuí] 'to bet'
    [i-yúx-̂ i-yúx] 'come-

The i- in the second example is very likely the proximal prefix in the third and last examples (cf. the gloss 'near').

A phonological process that could obscure the vowel and consonant alternation was reduplication. Beeler (1978:27) notes several types (stem-initial, stem-terminal and full reduplication). Ignoring some of the dubious forms in Kroeber's list of reduplicated forms (1904:62), he agrees with Kroeber in suggesting no meaning for reduplication. Several of the forms, however, suggest intensive, plural and repetitive meaning for this device.

(25) Pin. tuksusu 'ears'
    Ta. nenepasu 'feet'
    Pin. lulusex 'arms'

Mer. [pul-pul] '1. boiling water
    2. hot things in general

Hen. [xila-xilV-k-ənːː] 'I am mad' (angry-rdp.-stat.-1 sing.)

Hen., Pin. [šan-ša] 'run'
Hen. [tsh-tšlkmati] 'rattlesnake'
Hen. [čololoshi] 'running water'

It seems that stress on the first member of a fully reduplicated form.
An instance of derivation by vowel change may be evident in the following.

(26) Ga. etze' 'drink'
    Pin. e'sse 'dring'
    Pin. is'e 'lips'

It remains only to mention Harrington's theory of Esselen syllabic structure. Noting the vowel-consonant constraint, Harrington proposed that short vowels were followed by a long consonant and that long vowels were followed by a single consonant. Beeler has suggested that this theory may have been suggested to Harrington by other languages he worked with that had an open-closed syllable canon (Luiseño and Karok). The theory dominated Harrington's elicitations of Esselen perjoratives that Isabel Meadows, his Rumsen consultant, remembered from childhood. Rumsen, a Coastanoan language, may have had the constraint which is typical of Luiseño and Karok. Harrington's intense interest in Esselen phonology will become clear in the next section.

2.0 Esselen Phonology Viewed Typologically

Phonologically, Esselen may be compared to the convenient summary of Proto-Penutian compiled by Shipley (1978:82) and Proto-Hokan compiled by Langdon (1974 and 1979). Hokan is likely to have had monosyllabic roots, a three vowel system and perhaps a series of glottalized stops.

On the other hand, Proto-Penutian was likely to have had the same five-vowel system as the one inferred for Esselen, a number of sonorants (m, n, r, l, w, and y) and had roots with a CVC(C) structure, where the vowels frequently were identical in quality. This concurs well with Esselen syllabic structure, where a noticeable number of the reconstituted roots have identical vowels. Typologically, Esselen seems much closer to the Penutian type than to the Hokan type to which it is supposed to belong.

More specifically, the segment inventory of Esselen proposed here closely resembles Costanoan languages. In (26a), the consonant inventory of Mutsun Costanoan (Okrand 1977:11) is compared to the Esselen consonant inventory here proposed (26b).

(26a) p tty t k ?
    ts č
    s šy
    m n ny
    l ly
    r
    w y
The main differences between these two rosters is that a palatal series is phonemic in Costanoan (but not in Esselen?), and that Esselen lacks a flap/tap /ɾ/ (but cf. La Perouse aour and Galliano ahur = [awur] 'teeth').

The Mutsun and Esselen vowel systems are identical: /i e a o u/ (Okrand 1977:90).

Syllabically, Mutsun had medial consonant clusters, including geminated ones (Okrand 1977:99). Consonant clusters are atypical of Esselen, though there is some question as to whether length was a syllabic property in Esselen as is typical in Costanoan languages (Okrand 1977:90).

The typological similarity between Esselen phonology and Costanoan phonology, noted by Kroeber (1904:80), may have prompted Harrington's stray remark that "Esselen belongs with Sauwuichoid Penutian as opposed to Eastern Penutian" (Beeler 1978:8). At any rate, most of Harrington's rehearsals of Esselen material with his Russen consultant Izabel Meadows concentrate on this very problem. Izabel's varied preference for forms of a given word with and without consonant or vowel length may well be interference from her native Costanoan variety (cf. Beeler 1978:4 on the problem of language interference).
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PREFACE

The 1981 Hokan Languages Workshop met jointly for the first time with the Penutian Languages Conference. Also, there were not only linguistic papers, but also anthropological and archeological papers. These two groups of specialists on American Indian languages will meet together in the future and will also meet with anthropologists and archeologists.

Unfortunately, not everyone who presented a paper at this joint meeting was able to prepare a final version for inclusion in this volume. Also, some of the Penutians were not aware that the proceedings of the meeting would be published in this volume and had made arrangements before coming to the meeting to publish their papers elsewhere. The papers are arranged in the order that they appeared on the program at the meeting except for the Kendall paper, which was not read but sent in for the meeting.

The participants at the meeting gratefully acknowledge all the work done by Shirley Silver and her students in the Department of Anthropology at Sonoma State University, which made the conference run so smoothly and enjoyably. We especially appreciated the help of the students who ran the late-night van shuttle between the university and the motel where the airport bus stopped.

Copies of the 1977, 1978, 1979, and 1980 Hokan Languages Workshops are still available from the Department of Linguistics, Southern Illinois University, Carbondale, IL 62901. The volumes of the 1975 and 1976 workshops, which appeared in the SIU-C series, University Museum Studies, are now out of print, but copies may be obtained in microfiche or hard-bound volumes from ERIC Clearinghouse on Languages and Linguistics, Center for Applied Linguistics, 3520 Prospect St., NW, Washington, DC 20007.

James E. Redden
Carbondale, April 1982
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