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## Valence Arithmetic in the Tolkapaya Lexicon

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In this paper, I survey some aspects of verb stem morphology in the Tolkapaya (Western) dialect of the Yuman language Yavapai, which is spoken in central Arizona. I focus on the arithmetic effect of two stem-forming suffixes, *-o* and *-v*, which respectively add and subtract arguments, increasing or decreasing the valence of the verb to which they are suffixed.<sup>1</sup>

### 1. Verb stem formation in Tolkapaya

1.1. Tolkapaya words and stems. The canonical Yuman word shape (Langdon 1970) is

(1) C- C- C- ... (C)V(:)(C) -C ...

— the underlined root (whose vowel is stressed) is the minimal word, but many words include derivational and/or inflectional prefixes and suffixes, represented here by "C". ("Schwas" are added to break up most resulting consonant clusters, according to language-specific rules, such as those discussed for Yavapai by Shaterian 1983.) In a departure from this schema, Tolkapaya roots must include an onset consonant (Munro 1982), and thus are minimally CV or CVC.

Stems, as I will use the term, are words without inflectional morphology. Verb stems are identifiable as follows: a stem may occur alone with no affix other than absolutive *-i* (when phonologically appropriate, as explained below);<sup>2</sup> such an absolutive verb stem may be translated either with a bare infinitive or with a third-person subject (and, when appropriate, a third-person object) and neutral non-future tense.<sup>3</sup>

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<sup>1</sup> I thank my teacher, Molly Fasthorse, who has taught me almost everything I know about Tolkapaya, the other Yumanist scholars whom I cite, and everyone who has worked on Tolkapaya with me over the years. I am also grateful to the members of the UCLA American Indian Seminar and the participants in the 1994 Holan-Penutian Workshop in Eugene for their helpful comments and to Marion Bond for her especially useful input. Munro and Fasthorse (in preparation) constitutes the data base from which most of the material discussed here is taken.

<sup>2</sup> The useful term "absolutive" is due to Hardy (1979), who gives fuller descriptions of the meaning and use of most of the Tolkapaya morphemes I describe here. As the discussion should make clear, Tolkapaya absolutive endings have no connection with ergativity.

Consonant-final noun stems similarly may carry an absolutive suffix, in this case *-a* (Hardy 1979), incidentally, but the occurrence of this morpheme is unpredictable. Many consonant-final noun stems may be pronounced without absolutive *-a*, some may be pronounced either with or without *-a* (in which case Ms. Fasthorse identifies the pronunciation with *-a* as belonging to some other Yavapai dialect), while still others must always have *-a*. This matter deserves further study, but at present the occurrence of nominal absolutive *-a* following consonant-final stems does not appear to be either phonologically or semantically conditioned.

<sup>3</sup> Neutral non-future tense corresponds to English present or past tense without any special aspectual modification (though occasionally a progressive translation might be used in the present). It may be useful to note the differences between a verb plus absolutive *-i* and a verb with the most common tense/aspect/modal suffix, *-ma*. Both can receive the neutral non-future translation, but *-i* verbs (though not *-ma* verbs) can also be translated as citation forms or "names" of verbs (corresponding roughly to English infinitives). Verb-plus-*ma* is somewhat more common in the neutral non-future than verb-plus-*i*.

Absolutive verbs may have a third-person translation because, though subjects of other persons are indicated with prefixes, there is no morphological prefix in the third person. With the second-person *m-* subject prefix,

The absolutive suffix *-i* follows any consonant-final verb stem in the absence of (other) inflectional endings.<sup>4</sup> It does not appear after vowel-final stems, which are otherwise identical in usage, however, and thus should also be considered absolutive forms. Any suffix that conditions the appearance of *-i* may be considered stem-forming (and, I would argue, derivational). (2) below is an example of a vowel-final verb stem in the (unsuffixed) absolutive form, while (3) is a consonant-final verb stem, which must be followed by the absolutive suffix *-i*.<sup>5</sup>

(2)            *'úu*        'to see', 'He sees it'  
                  see

(3)            *yáam-i*    'to go', 'He goes'  
                  go-abs<sup>6</sup>

(All semantic types of verbs — transitive, intransitive, active, stative, and so on — are inflected similarly in Tolkapaya.) (4) below presents three derived stems containing the consonantal derivational suffixes *-ch* (plural subject) and *-k* (proximate).<sup>7</sup> Although the verb root to which they are added is vowel-final, the whole stem is consonant-final, so once again absolutive *-i* must be added after the derived stem to produce a pronounceable Tolkapaya word.

(4a)           *'úu-ch-i* 'to see [pl]', 'They see it'  
                  see-pl-abs

(4b)           *'úu-k-i* 'to see [prox]', 'He comes here to see it'  
                  see-prox-abs

(4c)           *'uu-k-ch-i* 'to see [prox pl]', 'They come here to see it'  
                  see-prox-pl-abs

However, the incomplete utterance (5) is a verb with the same-subject switch-reference suffix *-k*, an inflectional suffix occurring on verbs of complex sentences whose subjects are the same as some higher (usually immediately following) matrix verb. In contrast to the proximate suffix *-k*, the same-subject subordinator *-k* may occur word-finally:<sup>8</sup>

absolutive verbs may be translated either as second-person-subject declaratives or as imperatives.

<sup>4</sup> As the parentheses suggest, I regard it as moot whether *-i* should be considered "inflectional".

<sup>5</sup> All citations in this paper are presented in the practical orthography for Tolkapaya used in Munro and Fasthorse (in preparation), which is based on that used by Hardy (1979). Verb stems defined with English infinitives are given exactly as they would be listed in the dictionary, except that the dictionary does not use hyphens between morphemes. Hyphens are used in the practical orthography to separate sequences of sounds that could be confused with digraphs (thus, *k-w* means a sequence of *k* plus *w*, while *kw* is a unit); in the examples below, such hyphens are replaced with equals signs.

<sup>6</sup> The abbreviations used in this paper include abs = absolutive, minus = minus argument, nom = nominative, obj = object, pl = plural, plus = plus argument, prox = proximate, ss = same subject, tns = neutral tense. 1, 2, and 3 indicate persons.

<sup>7</sup> Yuman plural formation is idiosyncratic and lexical, as shown originally by Langdon for Diegueño (e.g. 1970); *-ch* generally indicates plural subject, but does not occur on all verbs with plural subjects, since many verbs have irregular plurals, primarily involving unexpected changes in vowel length. *-K* is a directional suffix normally indicating that the action in question is performed in the direction or vicinity of the speaker; it also has less literal uses. For more about the meaning of the stem-forming suffixes, see section 1.3 below.

<sup>8</sup> Same-subject *-k* may optionally be followed in some (though not all) constructions by an augment vowel *-a*.

- (5)            *'úu-k...* 'He sees it and he...'  
                 see-ss

The occurrence of absolutive *-i* in the (4b) but not (5) shows that the proximate directional suffix *-k* is stem-forming, but that the same-subject switch-reference suffix *-k* is not.

Verb stem formation is lexical and thus subject to typical derivational idiosyncracies: affixation of a stem-forming prefix or suffix may cause unexpected phonological changes in a root, stem and affix may combine in unexpected ways, derived meanings may vary unexpectedly, and such affixations may not be fully productive. In the remainder of this section, I briefly survey Tolkapaya stem-forming morphology.

1.2. Stem-forming prefixes. The discussion above covers only the identification of stem-forming suffixes. There are also stem-forming prefixes, which follow the inflectional person prefixes *'* (first person) and *m-* (second person) (and other prefixes indicating subject-object combinations; cf. Hardy 1979). I will consider any prefixes between the root-initial consonant and these pronominal prefixes to be stem-forming by definition. Most such prefixes are consonants, though a few prestress vowels also occur. Most of these prefixes are very far from productive, and I will not discuss them further here.<sup>9</sup> (There are also proclitics, which precede the pronominal prefixes; in procliticized verb stems cited below, a \* conventionally separates the proclitic from the rest of the stem. Tolkapaya proclitics have an interesting status, since their meaning is generally derivational,<sup>10</sup> though they occur outside of inflection, but I will not consider them further here.)

1.3. Stem-forming suffixes. There are five important stem-forming suffixes,<sup>11</sup> two of which were exemplified in (4) above. Plural subject *-ch*, as mentioned, is reasonably productive, but does not occur with all verb stems. Proximate *-k* and distal *-m* generally indicate actions directed respectively toward and away from the speaker or some point of reference. The use of minus-argument *-v*<sup>12</sup> and plus-argument *-o* are described later in this paper.

The five Tolkapaya stem-forming suffixes occur in the following order:

- |     |      |                       |           |            |           |
|-----|------|-----------------------|-----------|------------|-----------|
| (6) | VERB | <i>-k</i> (proximate) | <i>-v</i> | <i>-ch</i> | <i>-o</i> |
|     | ROOT | <i>-m</i> (distal)    | (minus)   | (plural)   | (plus)    |

The proximate and distal suffixes generally do not cooccur. It is relatively rare to find combinations of more than two of the above suffixes, but a number of combinations of three of them have been recorded, always in the above order.

<sup>9</sup> Some discussion of the Tolkapaya derivational prefixes is provided by Shaterian (1983) and Bond (1995), following the analysis of the corresponding Diegueño prefixes in Langdon (1970). Many of these prefixes have "instrumental" meanings — for instance, the *ch-* prefix on the verb *chhúyi* 'whistle' in (7) means 'with the mouth'.

<sup>10</sup> The only productive inflectional proclitics I know of are plural subject *paa-* and the subordinator *nya-* 'when', that occurs on the verbs of some switch-reference-marked clauses. Most proclitics are lexically included with particular verb stems, many of which do not occur alone.

<sup>11</sup> A few verb stems end in a cluster of a consonant (presumably stem-final) plus a consonant other than *k*, *m*, *v*, or *ch*, indicating that the language may once have had other stem-forming consonantal suffixes. No verb stem ends in any unstressed vowel other than (absolutive) *-i* or (plus) *-o*, however.

<sup>12</sup> Many Yuman languages have another common *-v* derivational suffix used in plural formation. I have found no trace of such a suffix in Tolkapaya (there are, of course, verbs whose plural stems include a suffix *-v*, but in every case that same suffix also occurs in the non-plural stem).

## 2. Tolkapaya *-o*: Add an Argument

The *-o* suffix is added to Tolkapaya verbs to license an additional argument in the clause, increasing the valence of that clause by one. Verbs formed with the plus-argument suffix *-o* have two quite distinct meanings, applicative and causative. (The suffix becomes *-wo* after vowels, as described by Hardy 1979: 25.)

2.1. Applicative *-o*. The meaning of an added applicative argument licensed by *-o* is analogous to that of datives in more familiar languages; the *-o* argument is often a benefactive. Thus, for example, the verb exemplified in (7a) is intransitive; it has only one argument, the subject. The verb in (7b), however, is transitive: because of the addition of *-o* to the stem, it takes an additional argument, which behaves syntactically like any other object:

- (7a)            *'-chhúy-i*. 'I whistle'  
1-whistle-abs
- (7b)            *'-chhúy-o*. 'I whistle at him'  
1-whistle-plus

Since there is no prefix to indicate a third-person singular object, (7a) and (7b) are inflected identically. But *chhúyo* 'whistle at' may appropriately take object prefixes (8ab), while *chhúyi* 'whistle' may not (8cd):

- (8a)            *Ny-chhúy-o*. 'He whistles at me'  
3>1-whistle-plus
- (8b)            *Paa-'-chhúy-o*. 'I whistle at them'  
pl.obj-whistle-plus
- (8c)            \**Ny-chhúy-i*.  
3>1-whistle-abs
- (8d)            \**Paa-'-chhúy-i*.  
pl.obj-1-whistle-abs

Some examples of other intransitive verbs which can be used with *-o* are given in (9), along with the meanings of the derived *-o* verbs.<sup>13</sup> As the translations suggest, the exact interpretation of the applicative argument added with *-o* is not predictable, but must be marked for each verb. Further, not all intransitive verbs may be used with applicative *-o*:

- (9)            *chpúy-i* 'to tell a lie'; *chpúy-o* 'to tell a lie for'  
*mar\*ipúy-i* 'to be ashamed'; *mar\*ipúy-o* 'to be ashamed for, be ashamed of'

<sup>13</sup> As noted in section 1.2, proclitics that are lexically included in a verb stem are followed by \* in the listing of that stem, to indicate the position of pronominal prefixes. Thus *Mat'ipúyi* means 'I am ashamed'.

*Sál kl'úkí* and *yú vrúth 'í* contain non-agreeing syntactically incorporated body part words (*sál* means 'hand', *yú* means 'eye').

Complex expressive verbs (Langdon 1977) like 'to wink' and 'to make a grab' contain 'i 'say'. Only 'say' is inflected for these verbs: thus *Yú vrúth 'í* means 'I wink'.

*sál kl'úk-i* 'to raise one's fist'; *sál kl'úk-o* 'to raise one's fist against'  
*swáar-i* 'to sing'; *swáar-o* 'to sing for'  
*vmách 'í* 'to make a grab'; *vmách 'íwo* 'to make a grab for, make a grab at, catch,  
 grab'  
*wa\*chá* 'to be careful'; *wa\*chá-wo* 'to be careful about, watch out for'  
*wás-i* 'to beckon'; *wás-o* 'to beckon to'  
*yú vrlíth 'í* 'to wink'; *yú vrlíth 'í-wo* 'to wink at'

The same suffix may also add an applicative argument to a transitive verb like the ones exemplified in (10). Once again, although the meaning of the added argument is generally benefactive, its interpretation varies lexically:

- (10) *'óoy-i* 'to bring'; *'óoy-o* 'to bring for, bring to'  
*chkyát-i* 'to cut'; *chkyát-o* 'to cut for'  
*chthúl-i* 'to wash'; *chthúl-o* 'to wash for'  
*kkáav-i* 'to buy'; *kkáav-o* 'to buy for'  
*qáw-i* 'to break (something)'; *qáw-o* 'to break (something) of (someone's)'  
*thé* 'to sift'; *thé-wo* 'to sift for'  
*thée* 'to be generous with'; *thée-wo* 'to lend'  
*yó* 'to get'; *yó-wo* 'to get for'

2.2. The second use of plus-argument *-o* is in the formation of causative verbs. (11) presents some intransitive verbs which are causativized with *-o*:

- (11) *'hán-i* 'to be good'; *'hán-o* 'to make (something) good'  
*'út-i* 'to boil (intr.)'; *'út-o* 'to boil (tr.)'  
*chhlú* 'to burp'; *chhlú-wo* 'to burp (a child)'  
*hwa\*'áv-i* 'to be jealous (of a woman)';<sup>14</sup> *hwa\*'áv-o* 'to make (a woman)  
 jealous'  
*láaw-i* 'to be many'; *láaw-o* 'to do to many'  
*mk=yúl-v-i* 'to wear pants, put on pants'; *mk=yúl-v-o* 'to put pants on (someone)'  
*mshée* 'to be afraid of'; *mshée-wo* 'to warn (someone) about'  
*ráv-i* 'to hurt (intr.)'; *ráv-o* 'to hurt (tr.)'  
*smáa* 'to sleep'; *smáa-wo* 'to make sleep'  
*tív-i* 'to be pregnant'; *tív-o* 'to get (someone) pregnant'  
*'úm-i* 'to be not'; *'úumo* 'to say no to'  
*vhítik 'í* 'to tip over (intr.)'; *vhítik 'íwo* 'to tip over (tr.)'  
*vrlwrlw 'í* 'to wag (of a tail)'; *vrlwrlw 'íwo* 'to wag (one's tail)'

The interpretation of the added argument licensed by causative *-o* is different from that of the added argument licensed by applicative *-o*. The added applicative argument is an object, and the same subject performs the action whether or not *-o* is used (as shown by (7a-b)). This is not true with causative *-o* verbs, however:

- (12) *'-chhlú*. 'I burp'  
 1-burp

<sup>14</sup>'Of...' in parentheses following the definition of a verb specifies a possible subject of that verb. Thus, *hwa\*'áv-i* is an intransitive verb meaning 'to be jealous' whose subject must be a woman.

- (13a)       '-*chhlú-wo*. 'I burp him'  
1-burp-plus
- (13b)       *Ny-chhlú-wo* 'He burps me'  
3>1-burp-plus

(12) and (13a) are both inflected with first-person subject '-. In (12), the first person subject is the burper, but in (13a), the burper is the object. In (13b), a first-person burper must be indicated with an object prefix, since the one who burps is the object of the causative verb *chhlú-wo* 'to (make) burp'.

The plus-argument *-o* suffix may also form causatives of transitive verbs, although this is somewhat less common:

- (14)       '*úu* 'to see, look at'; '*úu-wo* 'to show to'  
*máa* 'to eat'; *máa-wo* 'to feed to'  
*spó* 'to know'; *spó-wo* 'to introduce to, to teach to'  
*thíi* 'to drink'; *thíi-wo* 'to make (someone) drink'  
*wa\*simyé* 'to worry about'; *wa\*simyé-wo* 'to make (someone) worry about'

In Yuman, direct (patient) and indirect (oblique) objects can each be marked with the same object agreement prefixes whose use was exemplified in (8), though only one object may be marked per clause. With some ditransitive verbs, such as '*éé* 'to give', the agreeing object is virtually always the non-patient:

- (15)       *Ny'-éé* 'He gives it to me'; (rare or nonexistent) '?He gives me to him'  
3>1-give:to

With other ditransitive verbs (many of which are derived by the affixation of *-o*), however, either object may be indicated with an object prefix:

- (16)       *Ny-úu-wo* 'She shows me to him', 'She shows him to me'  
3>1-see-plus

Restrictions on which object arguments can be indicated with verb agreement in Tolkapaya deserve further study.<sup>15</sup>

2.3. Previous analysts have agreed on calling *-o* an applicative morpheme,<sup>16</sup> but differ in their analysis of data like those presented in 2.1-2.2.

<sup>15</sup> Sentences with two non-third-person objects (such as 'He shows me to you') are regarded as hard to translate, and are avoided by Yavapai speakers.

There is at least one apparently transitive Tolkapaya verb for which Ms. Fasthorse allows no object agreement, *víwí* 'to resemble, look like':

*Máa* '-*víwí-ma*. 'I look like you'  
you 1-resemble-tns

With *víwí*, an object pronoun must be used to specify the object. (Normally object pronouns are mildly emphatic and can be omitted; with most verbs, object agreement is normally required.)

<sup>16</sup>For me, this term normally refers to a non-subject, generally a semantic oblique, and that is the way I use it here (in reference to the use of Tolkapaya *-o* discussed in section 2.1). The other authors whose analyses I review in section 2.3 have a broader understanding of this term, as shown in the quotation from Hardy (1979) below.

Shaterian (1983) only refers to *-o* as "applicative", but also cites causative examples (1983: 127-28).

Ichihashi-Nakayama (1994), discussing the closely related language Hualapai,<sup>17</sup> which has quite similar phenomena, offers an explanation for the varying interpretations of "applicative" *-o*: "All the verbs [in the applicative group]...express a volitional action and take an agentive subject. When the applicative morpheme attaches to these verbs, the derived constructions express a benefactive-type relation. The verbs listed in [the causative group]..., on the other hand, express a psychological state or emotion and take an experiencer as the subject. Applicative constructions with these verb roots yield a causative meaning. The interpretation of an applicative construction does correlate with the semantic type of the verb root" (1994: 7). While this description works for most but not all of the Hualapai verbs Ichihashi-Nakayama cites, it seems inadequate to explain even the small sample of the Tolkapaya verbs above. Several of the applicative-interpretation base verbs in (9) and (10) above appear not to take volitional agentive subjects (the best example is probably 'to be ashamed'). Further, many of the causative-interpretation base verbs in (13) or (16) do not express psychological states or emotions. If we extend Ichihashi-Nakayama's characterization of the causative-interpretation bases to include verbs with other types of non-volitional subjects, we can bring in 'to burp', 'to be pregnant', 'to see', and 'to wear pants' (though not 'to look at' or 'to put on pants', which are clearly volitional), but there seems to be no way to accommodate meanings like 'to eat' and 'to drink' within this analysis. I do not know enough about the Hualapai lexicon to judge how well Ichihashi-Nakayama's proposal works for that language as a whole, but it seems wrong for Tolkapaya (though quite possibly some semantic phenomenon like that she describes was originally more productive).

Hardy (1979: 24) writes: "The applicative suffix *-(w)ɔ* indicates the presence in the sentence of an additional argument on the verb....The meaning conveyed is either causative...or benefactive." She continues (1979: 27): "The choice of a causative or of a benefactive sense is determined by the context and the semantics of the verb." Hardy's reference to semantics may well anticipate Ichihashi-Nakayama's suggestions, though Hardy does not discuss this further. The mention of context probably refers to data like those I present in the next section, which would be even more difficult to reconcile with Ichihashi-Nakayama's claims, if her analysis were applied to Tolkapaya.

2.4. With a number of Tolkapaya *-o* verbs, the added argument may be interpreted as either a causative subject or an applicative object. Some of these are listed in (17):

- (17)        *'ar\*yé* 'to be happy'; *'ar\*yé-wo* 'to make (someone) happy'; 'to be happy for (someone)  
               *'ich\*wliy-i* 'to be rich'; *'ich\*wliy-o* 'to make (someone) rich'; 'to get rich for (someone)  
               *iipár-i* 'to learn'; *iipár-o* 'to teach'; 'to learn for'  
               *mli* 'to cry'; *mli-wo* 'to make cry'; 'to cry for'  
               *pl* 'to die'; *pl-wo* 'to kill; give up for dead'; 'to die for'  
               *taarháar-i* 'to work'; *taarháar-o* 'to make work'; 'to work for'  
               *tpáth-i* 'to touch'; *tpáth-o* 'to make touch', 'to touch with; touch for'  
               *vchonyk* 'f' 'to jump'; *vchonyk* 'f-wo 'to make jump'; 'to jump for'

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<sup>17</sup> The Pai branch of the Yuman language family includes the Paipai language of Baja California and the Northern Pai group, composed of the languages Yavapai, Hualapai, and Havasupai. Of these, Hualapai and Havasupai are very closely related (probably best considered culturally distinct dialects of a single language).



*vpl* 'I 'to faint'; *vpl* 'I-wo 'to make faint'; 'to faint in order to impress, play dead for'

In each case, the derived *-o* verb may be interpreted either as a causative (with its subject causing the event or state named by the base verb) or as an applicative, with the grammatical relations of the base verb preserved unchanged and an added semantic oblique. As Hardy notes, in such cases only context can determine what sense the speaker intends.

Singular and plural sentences using one of the above sets of verbs, derived from *pl* 'to die', illustrate some interesting consequences of these facts.

- |       |  |   |
|-------|--|---|
| (18a) | ' <i>pl</i> . 'I die'<br>1-die   | ' <i>púuy-i</i> . 'We die'<br>1-die:pl-abs  |
| (18b) | ' <i>pl-wo</i> . 'I die for him'<br>1-die-plus                         | ' <i>púuy-o</i> . 'We die for him'<br>1-die:pl-plus                                 |
| (18c) | ' <i>pl-wo</i> .<br>1-die-plus<br>'I kill him, I give him up for dead' | ' <i>plw-ch-o</i> .<br>1-die+plus-pl-plus<br>'We kill him, We give him up for dead' |

*Pl* 'to die' is a Tolkapaya verb which has an irregular ablauted plural, *púuy-i*. The derived verb *pl-wo*, formed with the add-argument suffix, can have either an applicative ('to die for') or a causative ('to kill', 'to give up for dead')<sup>18</sup> interpretation. Under the applicative interpretation, the subject is the one who dies, so when that subject is plural, the plural stem *púuy-i* is appropriately used with the *-o* suffix. Under the causative interpretation, however, the subject is no longer the one who dies, so the use of the plural stem *púuy-i* is apparently no longer appropriate; in this reading, *pl-wo* is pluralized with the regular plural suffix *-ch*.<sup>19</sup>

Two other Tolkapaya plus-argument verbs that can be interpreted as either applicative or causative provide some insight into how the different causative and applicative meanings might be conflated in some cases. The verbs in (19) are derived from the auxiliaries 'I 'to say' and *wl* 'to do'. In each case, the plus-argument verb means 'to teach by demonstration' — but is this an applicative concept, 'to say [or do] (something for someone, in order to teach him)' or is it a causative concept, 'to make (someone) say [or do] (something, by demonstrating it)'? In this case, the distance between the two uses seems less great.

- (19) 'I 'to say'; 'Iwo 'to teach (someone something, especially by demonstration)'  
*wl* 'to do'; *wlwo* 'to teach (someone something, especially by demonstration)'

2.5. Given the data in the last section, it seems impossible to propose any simple characterization of the semantics of particular verbs which determines whether their derived *-o* verb

<sup>18</sup> 'To give up for dead' certainly is not a standard causative of 'to die'. In both cases, though, the added subject argument is not the person who dies, and it is in that sense that I subsume both under the general term "causative". Incidentally, *pl-wo* is not the most common way to say 'to kill' in Tolkapaya. The usual word for 'to kill' is *neh-i*, a lexically simplex verb.

<sup>19</sup> As noted by Lynn Gordon and Heather Hardy, when plural *-ch* is added to a plus-argument verb formed from a vowel-final stem with the suffix *-wo*, *-ch* intervenes between the *w* and *o* of the suffix. I interpret this interesting fact as suggesting that *-ch* prefers to follow a consonant-final stem if possible.

will be applicative or causative. The meaning (or meanings) of the derived verb must be lexically specified. This is consistent with the fact that *-o* is a derivational (stem-forming) morpheme, and with certain other facts about its use.

For one thing, there are Tolkapaya verbs ending in *-o* which have no associated non-*o* verb, such as

(20) *léeko* 'to stick out one's tongue at'

The meaning of this verb is consistent with an applicative interpretation of *-o* added to a base verb *léek-i* 'to stick out one's tongue'. But that verb does not exist in Tolkapaya.

We have already seen that the meaning of a derived *-o* verb is unpredictable, even without the complication of applicative vs. causative interpretation. ('To give up for dead' is not a normal causative of 'to die', for example, and the range of semantic applicatives added in the verbs in (9-10) is quite broad.) This too is consistent with derivational morphology. A further point is that with some verbs the addition of *-o* apparently has no semantic effect: in cases like the following, *-o* is added to already transitive verbs with no change in meaning:

(21) *'ée* 'to give to'; *'ée-wo* 'to give to'  
*iimá* 'to dance'; *ch-iimá* 'to make (a baby) dance'; *ch-iimá-wo* 'to make (someone) dance'  
*val\*schá* 'to extend credit to (someone) for'; *val\*schá-wo* 'extend credit to (someone) for'

2.6. There is a final way in which the uses of *-o* described here seem odd from a comparative Yuman point of view. The well-known Yuman morpheme used to derived causative verbs is not a suffix *-o*, but rather a prefix, *t-*, which also occurs in Tolkapaya examples like

(22) *'rúuy-i* 'to be hot'; *t-'rúuy-i* 'to heat'  
*kúup-i* 'to have venereal disease'; *t-kúup-i* 'to give (someone) venereal disease'  
*lúth-i* 'to crack (of an egg)'; *t-lúthi* 'to be cracked (of an egg)'  
*nyúr-i* 'to have a design, be printed'; *t-nyúr-i* 'to write'

Pairs like these certainly show that causative *t-* is well-established in Tolkapaya. However, it seems to be less productive in modern Tolkapaya than *-o* is, occurring on fewer causative verbs and on a semantically narrower range of base verbs. (11) above presents a number of causative verbs which would have been expressed with *t-* in other Yuman languages, but which in Tolkapaya are expressed with *-o*:

### 3. Tolkapaya *-v*: Subtract an Argument

While the Tolkapaya stem-forming suffix *-o* has the effect of adding an argument to the proposition expressed by the unsuffixed stem, increasing the valence of that stem by one, the stem-forming suffix *-v* has the opposite effect: it decreases the valence of the unsuffixed stem by one, in several different ways.

3.1. The well-known effect of *-v* is to form passive, middle, or reflexive verbs from originally transitive verbs. For example, corresponding to the transitive verb in (23), the derived verb with the *-v* suffix in (24) may have any of three translations:

- (23a) *chthúl-i* 'to wash'
- (23b) *'-chthúl-i* 'I wash him', 'I wash it'  
1-wash-abs
- (24a) *chthúl-v-i* 'to be washed; to be washable; to wash oneself'
- (24b) *Hamany-che chthúl-v-i* 'The child is washed'  
child-nom wash-minus-abs
- (24c) *Yüre-che chthúl-v-i* 'The dress is washable (The dress washes)'  
dress-nom wash-minus-abs
- (24d) *Hamany-che (yeem) chthúl-v-i* 'The child washes himself'  
child-nom (self) wash-minus-abs

A *-v* verb may have a passive interpretation, as in (24b); a middle interpretation, as in (24c); or a reflexive interpretation, as in (24d). (A reflexive interpretation is often easiest in sentences that include *yeem* 'oneself', but this word is often omitted from reflexive sentences. When it is present, however, only the reflexive interpretation is possible.) Although the meanings of these three types of sentences are different, they share the feature that the entity that gets washed (thus, the semantic object of a transitive sentence like (23b)) is the subject of the *-v* verb (and is thus marked nominative, like a typical Tolkapaya subject.)<sup>20</sup> Moreover, none of these sentences contains an agent distinct from this semantic object (and no agent can be added to them).<sup>21</sup>

As the similarity of the sentences in (24b-d) suggests, Tolkapaya *-v* verbs may often have more than one interpretation. It is not true, however, that all Tolkapaya *-v* verbs may have all three interpretations illustrated in (24). Here are examples of some more Tolkapaya transitive verbs and the *-v* lose-an-argument verbs derived from them. After the translation of each *-v* verb, I have put P, M, and/or R in parentheses, to indicate the interpretation of the *-v* verb as passive, middle, and/or reflexive:

- (25) *'úu* 'to see'; *'úu-v-i* 'to be visible' (M)  
*chfír-i* 'to cut (someone's) hair'; *chfír-v-i* 'to cut one's hair' (R)  
*chk=wár-i* 'to laugh at'; *chk=wár-v-i* 'to be funny [i.e. laughable], to laugh at oneself' (M, R)  
*chkyát-i* 'to cut'; *chkyát-v-i* 'to be cut' (P)  
*krkó* 'to tie, knot'; *krkó-v-i* 'to be tied, knotted' (P)  
*mshée* 'to be scared of'; *mshée-v-i* 'to be fierce' (M)  
*néh-i* 'to kill'; *néh-v-i* 'to be killed, to kill oneself' (P, R)  
*qáw-i* 'to break'; *qáw-v-i* 'to be broken' (P)  
*s=hlok-i* 'to take by the handle'; *s=hlok-v-i* 'to have a curved handle' (M)  
*spó* 'to know'; *spó-v-i* 'to be known, be famous' (P, M?)

<sup>20</sup> Tolkapaya has an accusative nominal case system in which nominatives have a *-ch* or *-che* suffix and accusatives are unmarked. The only type of simple (?) sentence in which Tolkapaya subjects are not marked nominative is predicate nominal sentences (see Munro 197x).

<sup>21</sup> Passive sentences could of course be said to contain a semantic agent, but that agent is not distinct from the patient. (Langacker and Munro (1975) provide some discussion of the implications of this view of passive for Yuman.) Tolkapaya *-v* passives are strictly intransitive.

*thirf* 'to be scared of'; *thirfi-v-i* 'to be scary' (M)  
*wa\*kmól-i* 'to pity'; *wa\*kmól-v-i* 'to be pitiable' (M)  
*yúr-i* 'to enter'; *yúr-v-i* 'to be enterable' (M)

3.2. It does not seem too easy to predict which interpretation of *-v* will be chosen for a given derived verb, aside from the fact that a verb that takes only inanimate objects like 'to enter' would not be likely to assume a reflexive interpretation. In the literature *-v* is generally referred to as "passive" or "mediopassive". Shaterian (1983) provides no discussion of the meaning of the morpheme, but Hinton (1972, for Havasupai), Hardy (1979), and Yamada (1979) each propose a unitary explanation for the suffix.

Hinton (1972) writes about Havasupai that "...the /-v/ suffix...has two possible meanings: (1) that the topic of the sentence is in a state resultant from an action; and (2) that the topic of the sentence performed the action reflexively..." (She does not describe a middle use of the suffix, which perhaps does not exist for Havasupai.) After some argument, however, she concludes that "the suffix /-v/ does not mean two different things after all. It means only one thing: the internal condition of x is changed by the action of the verb."

Hardy (1979: 30-32) writes: "Suffixed to active verbs, ... *-y* derives a verb that describes the quality of being in a state resulting from a previous action...However, with stative verbs...*-y* suffixation describes the subject noun as being in a state as a (potential) goal of another verb....With both active and stative verbs the *-y* construction predicates an attribute of the noun."

Yamada (1979: 36-39) writes: "The majority of verbs which convey a passive meaning when affixed with *-v* are those which are active, more highly transitive verbs [in the sense of Hopper and Thompson 1979]...while those verbs which possess less predictable, more idiosyncratic meanings when affixed with *-v* tend to be stative, cognitive, or less transitive...The *-v* suffix then, whether affixed to an active or to a stative verb may be described as serving the unitary function of lowering the transitivity (or reducing the degree of valence) of that verb....The less transitive the verb, the more stative the verb+*-v* form will be...The *-y* morpheme then, appears in a variety of constructions. Structures featuring *-y* verbal suffixes are linked in that all contain subject-marked NPs which are non-agentive and are affected by the action of the verb."

My own judgment, in the light of data like those in (25), is that while each of the semantic characterizations presented surely contributes to our understanding of the morpheme, each proposal is subject to some counterexamples. Surely 'to take by the handle' is an active verb, but its *-v* derivative does not have a passive meaning. Both Hardy and Yamada seem to conflate the passive and reflexive meanings (though it was these that Hinton sought to tease apart), perhaps because these are so often treated similarly cross-linguistically. How, though, do reflexive verbs "predict an attribute"?

There are also *-v* verbs that seem to share the same sort of detransitivization, but where the semantics are more obscure, such as

(26) *wf* 'to do, do for'; *wf-v-i* 'to dress oneself, get dressed, wear clothes' (R)

Further, as I will show below, other uses of *-v* do not fit these characterizations at all.<sup>22</sup>

<sup>22</sup> Shaterian (1983: 107) notes an additional use of *-v* that is not relevant to the topic of this paper, since it involves the derivation of denominal "attributive" verbs. Somewhat like English *-ed* in *winged* or *footed*, *-v* informs

3.3. Although the three meanings of minus-argument *-v* discussed in sections 3.1 and 3.2 above are semantically disparate (as shown by the concerns raised by Hinton, Yamada, and Hardy), the derived *-v* verbs are similar in that their subject always corresponds to the object of the base verb to which *-v* is added. The agent of the base verb in each case is not expressed as a separate argument.

A second, previously unreported class of uses of *-v* that shares this minus-argument feature is different in that the subtracted argument is not the agent, but rather a non-subject. Thus, for example, the base verb in (27a) is transitive — it has two arguments. The derived *-v* verb in (27b) is intransitive — it has the same subject as (27a), but no grammatical object:

(27a) *Heather-che 'wli thée* 'Heather is generous with money'  
Heather-nom money be:generous:with

(27b) *Heather-che thée-v-i* 'Heather is generous'  
Heather-nom be:generous:with-minus-abs

Derived *-v* verbs like those in (27b) and (28), then, are antipassives — intransitives whose subjects are the same as those of the corresponding transitives, but that do not contain a grammatical object:

(28) *hanák-i* 'to have (a necklace) on'; *hanák-v-i* 'to be wearing a necklace (intr.)'  
*hapín-i* 'to beat (someone) in a contest'; *hapín-v-i* 'to win (intr.)'  
*lwée* 'to marry (a woman)'; *lwé-v-i* 'to be married (of a man)'  
*nyhamlíy-i* 'to marry (a man)'; *nyhamlí-v-i* 'to be married (of a woman)'  
*rée* 'to play with'; *rée-v-i* 'to play'  
*s'hán-i* 'to admire'; *s'hán-v-i* 'to be proud'  
*svó* 'to wait for'; *svó-v-i* 'to wait'  
*thipfir-i* 'to be hard on'; *thipfir-v-i* 'to be strong (of a person)'  
*tsmáach-i* 'to dream about'; *tsmáach-v-i* 'to dream (especially in a religious way)'  
*wa\*myé* 'to feel bad about'; *wa\*myé-v-i* 'to feel bad'

Exactly the same relationship holds in (29) between ditransitives and derived *-v* verbs that are transitives missing one of the non-subject arguments of the base verb:

(29) *kchlich-i* 'to steal (something) from (someone)'; *kchlich-v-i* 'to steal'  
*knáa* 'to blame for' ('to tell (something, i.e., a misdeed) on');  
*knáa-v-i* 'to tell (something)'  
*kváa* 'to ask (someone) for (something)'; *kváa-v-i* 'to pray, ask for (something)'  
*thmá* 'to borrow from'; *thmá-v-i* 'to borrow'

This group of examples shows that a derived *-v* verb need not be intransitive.

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verbs indicating that the subject is equipped with a body part or article of clothing:

*hamáa* 'testicles'; *hamáa-v-i* 'to have testicles; to be male, be intact'

*hé* 'tail'; *hé-v-i* 'to have a tail'

*wál-a* 'wings'; *wál-v-i* 'to have wings'

*mk=yúl* 'pants'; *mk=yúl-v-i* 'to put on pants, wear pants'

I have argued that the minus-argument verbs in this section are different from those exemplified in section 3.1 in that these involve the loss of a semantic non-subject, while the first group involve the loss of a semantic object. The derived reflexive verbs described in section 3.1 might be seen as a problem for this description. A reflexive sentence certainly has fewer distinct arguments (in the sense of Langacker and Munro 1975) than the corresponding non-reflexive transitive — but one might equally well view either the original subject or the original object as the missing argument. I have chosen to treat reflexives together with passives and middles for several reasons: first, the same Tolkapaya *-v* verb often has all three interpretations, or a reflexive interpretation combined with one of the other two, but I have found no cases where a *-v* verb has both a reflexive and an antipassive sense. Second, it is cross-linguistically common for passives and middles to be expressed similarly to reflexives, but less common, I think, for reflexives to pattern with antipassives.<sup>23</sup> Finally, in treating the reflexives together with the passives and middles, I followed the lead of the earlier analysts quoted in section 3.2. Nonetheless, though, whether reflexives are seen as more similar to the passive/middle group or to the antipassive group, or as somewhere in between, they share with both groups the minus-argument feature of *-v*.

3.4. The Tolkapaya lexicon also includes some anomalous lexical occurrences of *-v*. For instance, there are verbs that include a *-v* suffix<sup>24</sup> for which there is no corresponding non-*v* verb, in which case we may perhaps assume loss of an original transitive base:

(30) —; *háachv-i* 'to melt (intr.), to be melted'

In cases like those in (31) both the base and the *-v* verb are intransitive, and there is no apparent argument loss:

(31) *kkisk-i* 'to slip and fall'; *kkisk-v-i* 'to be slippery'  
*mat\*iiipúy-i* 'to be ashamed'; *mat\*iiipúy-v-i* 'to be shameful'

In these cases, it seems possible that the meaning of the base verb has independently detransitivized: if the bases here meant 'to slip and fall on' and 'to be ashamed of', there would be nothing odd about these pairs, since the *-v* verbs could be seen as middle interpretations of the original verb.

Another anomaly involves cases like those in (32). Here again there is no obvious argument loss, but in contrast to the cases in (31), the meanings of the base and derived verbs are very similar. In these cases it may also be the case that the meaning of the base verb has shifted, but it is less clear exactly how:

(32) '*há thpúy-i* 'to swim (in water)' / '*há thpúy-v-i* 'to be bathed, to take a bath'  
*chpúy-i* 'to tell a lie' / *chpúy-v-i* 'to fail to tell the truth'

Finally, pairs of *-v* and non-*v* verbs like those in (33) have exactly the same meanings:

---

<sup>23</sup> The best known cases of passive/middle/reflexive similarity is probably the Spanish *se* construction. English transitive verbs used intransitively may have a variety of interpretations: for instance, a sentence like *The man washes* can be interpreted either with an unspecified object (antipassive) or reflexively, while a sentence like *The dress washes (well)* has a middle interpretation.

<sup>24</sup> I assume (following Langdon's model of Yuman stem structure in (1)) that in cases like (31) that the *-v* of the stem must be a suffix, because there can be only one stem consonant after the stem vowel.

- (33) *chnyúlk-i, chnyúlk-v-i* 'to be a hollow cylinder'  
*thúny-i, thúny-v-i* 'to be soft'

The meanings of the verbs in (33) are somewhat different from those of most of the *-v* verbs we have seen earlier: their meanings seem unrelated to any action or event, but are purely descriptive. This suggests that speakers may have interpreted the stative quality of many of the derived *-v* verbs in section 3.1 (as discussed by the earlier analysts quoted in section 3.2) to suggest that *-v* might be a general suffix for stative verbs.<sup>25</sup>

#### 4. Combinations of *-v* and *-o*

As shown in (6), a *-v* suffix is closer to the verb root than the *-o* suffix, but this linear order appears not to reflect derivational order consistently. Thus, some *-v-o* combinations appear to reflect the derivational order base > base-*v* > base-*v-o*, while others reflect the order base > base-*o* > base-*v-o*.

In (34), for example, the meaning of an original transitive or ditransitive base has an argument subtracted through the suffixation of *-v*, and then an applicative argument is added through the subsequent suffixation of *-o*.

- (34) *knáa* 'to blame for' (i.e. 'to tell (something, i.e. a misdeed) on');  
*knáa-v-i* 'to tell (something)'; *knáa-v-o* 'to tell to'  
*kváa* 'to ask (someone) for (something)'; *kváa-v-i* 'to pray, ask for (something)';  
*kváa-v-o* 'to pray for'  
*s'hán-i* 'to admire'; *s'hán-v-i* 'to be proud'; *s'hán-v-o* 'to be proud of'

The reverse derivation is not possible in these cases. There is no intervening even-more-transitive *-o* verb from which the *-v* verbs could be derived, and it is not clear what its semantics would be if it did exist.

The examples in (35), however, appear to support the reverse derivation. In these examples, an original base transitive verb may be suffixed with either *-v* (forming an intransitive middle) or *-o* (forming a three-argument causative). The *-v-o* verb is, again, a transitive. Although it could possibly be seen as a causativized version of the derived middle, its meaning in both cases seems closer to that of the *-o* causative, of which it seems to be an antipassive:

- (35) *'úu* 'to see'; *'úu-v-i* 'to be visible'; *'úu-wo* 'to show to'; *'úu-v-o* 'to show (something)'  
*mshée* 'to be scared of'; *mshée-v-i* 'to be fierce'; *mshée-wo* 'to give a warning about (something) to'; *mshée-v-o* 'to give a warning about'

#### 5. Conclusion

Previous analyses of Yavapai and the closely related languages Hualapai and Havasupai have concentrated on explaining different semantic interpretations of the valence suffixes *-v* and *-o*, consequently failing to note the remarkable parallelism in the use of these suffixes. *-V* and *-o* function to subtract and add arguments to the verb stems on which they appear, and in each case the subtracted or added arguments may be either semantic subjects or objects.

<sup>25</sup> Probably the existence of the attributive *-v* suffix described in footnote 18 helps facilitate this idea.

The effects of *-v* and *-o* affixation are contrasted in the diagram below; the "affected argument" referred to is the one that is added or subtracted in this valence changing process.

	<i>-v</i> (subtract argument)	<i>-o</i> (add argument)
Affected argument is a semantic subject	middle, passive, reflexive (semantic subject of original verb subtracted)	causative (new [higher] causer subject added)
Affected argument is a semantic object	antipassive (semantic object of original verb subtracted)	applicative (semantic oblique object added)

Because I have access to a broader range of lexical data than was available to any previous analyst considering these questions,<sup>26</sup> my conclusions regarding the feasibility of predicting the interpretation of a given instance of *-v* or *-o* are less sanguine than those of the previous analysts I have cited. There seem to be counterexamples to every proposal that has been made, and I honestly do not think that at this time one can predict the semantics of a *-v* or *-o* verb from the semantics of the base verb,<sup>27</sup> although all the generalizations these earlier scholars have suggested are valuable in suggesting more likely interpretations.

#### References

- Bond, Marion. 1995. Analysis of Tolkapaya Verb Prefixes. Ms.
- Hardy, Heather K. 1979. Tolkapaya Syntax: Aspect, Modality, and Adverbial Modification in A Yavapai Dialect. UCLA Ph.D. dissertation.
- Hinton, Leanne. 1972. The Meaning of /v/: A Study in Havasupai Semantics. Ms.
- Hopper, Paul, and Sandra A. Thompson. 1980. Transitivity in Grammar and Discourse. *Language* 56: 251-99.
- Ichihashi-Nakayama, Kumiko. 1994. The "Applicative" in Hualapai. *Languages of the North Pacific Rim (Hokkaido University Publications in Linguistics 6)*. Sapporo: Department of Linguistics, Hokkaido University.
- Langacker, Ronald W., and Pamela Munro. 1975. Passives and their Meaning. *Language* 51: 789-830.
- Langdon, Margaret. 1970. A Grammar of Diegueño: The Mesa Grande Dialect.
- Langdon, Margaret. 1977. Semantics and Syntax of Expressive 'Say' Constructions in Yuman. In K. Whistler, et al., eds., *Proceedings of the 3rd Annual Meeting of the Berkeley Linguistics Society*, 1-11. Berkeley, Ca.
- Munro, Pamela. 1977. From Existential to Copula: The History of Yuman BE. *Mechanisms of Syntactic Change*, C. N. Li, ed., 445-490. Austin: University of Texas Press.
- Munro, Pamela. 1982. Vowel-initial Roots in Yuman. J. E. Redden, ed., *Proceedings of the 1981 Hokan Languages Workshop (Occasional Papers on Linguistics 10)*, 24-36. Carbondale, IL: Department of Linguistics, Southern Illinois University.
- Munro, Pamela, and Molly Fasthorse. In preparation. Tolkapaya Dictionary.
- Shaterian, Alan H. 1983. Yavapai Phonology and Dictionary. UCB Ph.D. dissertation.
- Yamada, Jeni E. 1979. Foregrounding Constructions in Tolkapaya. J. E. Redden, ed., *Proceedings of the 1979 Hokan Languages Workshop (Occasional Papers on Linguistics 7)*, 25-42. Carbondale, IL: Department of Linguistics, Southern Illinois University.

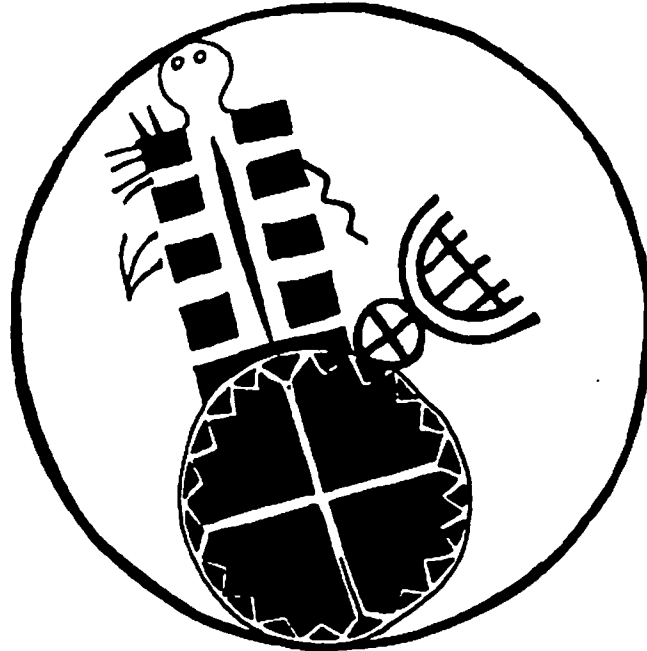
<sup>26</sup> I think this is indisputable. Hinton's paper was written early in her analysis of Havasupai (though she has since gathered considerable lexical data). Although Hardy and Yamada were very experienced with Tolkapaya, neither of them had attempted a large lexical study. Ichihashi-Nakayama's study appears to be based on quite a limited corpus. Shaterian controls a large body of Yavapai lexical data, but he presents no analysis of the distribution of *-v* or *-o* comparable to those of the other analysts.

<sup>27</sup> It would certainly be interesting to try to test the productivity of these interpretations. Unfortunately, it is difficult to see how to test productivity in a threatened language that does not seem to be expanding its lexicon.



**REPORT 9**

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**PROCEEDINGS OF THE  
HOKAN-PENUTIAN WORKSHOP**

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## INTRODUCTION

The papers in this volume were originally presented at the meetings of the Hokan-Penutian Workshops in Eugene, Oregon, July 8-9, 1994, and in Albuquerque, New Mexico, July 5-6, 1995. The 1994 Workshop was held in conjunction with a two-week invitational conference on Comparative Penutian Linguistics (the proceedings of which will be published in a forthcoming issue of the *International Journal of American Linguistics*) and was organized by the coordinators of that conference, Scott DeLancey and Victor Golla. The 1995 Workshop was one of a series of meetings on Americanist linguistics that formed part of the 1995 Linguistic Institute at the University of New Mexico, and was organized by Victor Golla under the auspices of SSILA.

A special feature of the 1995 Hokan-Penutian Workshop was a half-day session on the *Present Status of Hokan Linguistics* specially organized by Margaret Langdon and William H. Jacobsen, Jr. A substantial part of the present volume is given over to Appendices containing the bibliographies and short summaries of pronominal reference and case systems that were prepared for this session. Also included is the draft of a lexicon of Seri, prepared by Stephen A. Marlett and Mary B. Moser for Mary Ritche Key's "Intercontinental Dictionary Series," a lexical database designed to facilitate crosslinguistic research. The format of this database is derived from Carl Darling Buck's *Dictionary of Selected Synonyms in the Principal Indo-European Languages*.

This is the second volume of Hokan-Penutian Workshop Proceedings to be published by the Department of Linguistics, University of California, Berkeley, as one of the *Reports* of the Survey of California and Other Indian Languages, under the general editorship of Leanne Hinton.

Victor Golla  
Volume Editor

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