1 Introduction

1.1 Two types of transitive suffix in Oceanic

A number of Oceanic languages have a “short” monosyllabic suffix -Ci as well as a “long” suffix -Caki/-Cakini (e.g. Clark 1973, Lynch et al. 2002, Naitoro 2018). The Fijian root *viri* ‘throw’ appears with at least three suffixes like this:

(1) Different transitive suffixes for *viri* ‘throw’:
   a. au a *viri-ki* iko.
      1sg pst throw-TR 2sg
      ‘I threw at you.’
   b. iko *viri-tak-a* na cava?
      2sg throw-REAS-3sg ART.N what
      ‘Why did you throw?’
   c. au a *viri-tak-a* na polo.
      1sg pst throw-ACCOM-3sg ART.N ball
      ‘I threw the ball.’

1. A syntactic puzzle: Both suffix types are associated with applicative and transitive functions (e.g. Foley 1976, Schütz 1985, Evans 2003, Naitoro 2018):
   - The short suffix -Ci is most commonly employed to form transitives, but, with some verbs, it reliably adds a goal/path argument (1a).
   - The long suffix -Caki usually looks like an applicative (1b), but, with some roots, it adds a theme argument (1c).

At the same time, short and long suffixes do not stack and all attach to bare intransitive roots.

2. A morphophonological puzzle: All -Ci and -Caki/-Cakini suffixes start with an idiosyncratic consonant, which varies by root. A long-standing question is whether to treat these as part of the root or suffix underlyingly (e.g. Hale 1968, 1973; Kiparsky 1970; McCarthy 1981; Sanders 1990, 1991; De Lacy 2001).}

1.2 This talk: A Fijian case study

My proposal:
   - Because of variation in consonants across suffixes and non-verbal contexts, I analyze the idiosyncratic consonant as the realization of *v* (cf. Lichtenberk 2001, Ashley 2012), much like theme vowels in Slavic.
   - The idea that -Ci is a transitivity marker is captured by treating *-i* as the exponent of transitive Voice, taking *v* and Voice to be distinct functional heads (Pylkkänen 2002, Harley 2013).
   - I propose that the long suffix -Caki incorporates an additional argument-introducing Appl head -ak.

Why do some verbs depart from this pattern?
   - I identify several subclasses of verbs like *viri* ‘throw’ in (1a–c) with which short and long suffixes show an unexpected alternation.
   - On the basis of “accompaniment” readings that arise with verbs of motion, I propose that these verbs do not take DP objects directly, but a hidden PP small clause complement.
   - This prepositional structure is sometimes realized as -ak also, giving rise to these apparently exceptional patterns.

⇒ In this way, the Oceanic pattern can be thought of in terms of familiar syntactic ingredients, provides insight into the range of functional heads that may appear to express transitivity.
2 Thematic consonants as v

2.1 Thematic consonants in Oceanic and their analysis

A well-known feature of Oceanic languages is that many verbal suffixes start with an apparently idiosyncratic consonant.

In Māori, many verb roots can surface with a passive suffix -Cia, whose consonant varies arbitrarily (e.g. Biggs 1961, Hohepa 1967):

(3) Idiosyncratic consonant in Māori passive:
   - inu - inu-ria ‘drink’
   - fau - fau-ria ‘tie’
   - apo - apo-ria ‘gather’
   - tu: - tu:-ria ‘begin’
   - tohu - tohu-ngia ‘show’

These consonants derive from a root-final consonant in Proto-Oceanic, e.g. *inum ‘drink’. Modern Oceanic languages are vowel-final, so these consonants now surface only with a following suffix.

Two analyses

As famously discussed by Hale (1968, 1973), there are at least two plausible ways of approaching these consonants:

1. In the “morphological analysis”, the consonant has been reanalyzed to be part of the suffix, and variation in the consonant is just allomorphy.
2. In a “phonological analysis”, the consonant is underlyingly still part of the root, but undergoes deletion whenever it would appear in a word-final position.

Much has been written about which of these analyses should be preferred, especially focusing on the Māori data (e.g. Kiparsky 1971; McCarthy 1981; Sanders 1990, 1991; De Lacy 2001).

2.2 Thematic consonants in Fijian

In this talk, I present evidence that the “morphological” analysis is correct, at least for Fijian.

What thematic consonants look like in Fijian

Fijian (Central Pacific) is spoken by about 700,000 people. Data here comes from elicitation sessions with three speakers of Standard Fijian, and two field methods classes at Queen Mary.

In Fijian too, all verbal suffixes contain an initial idiosyncratic consonant. The “short suffix” -C(i) (4a–b), for instance, permits the variation in Table 1.

(4) Transitive with short suffix -C(i):
   a. e a kau-ti au mai ko Eroni.
      3sg pst bring-tr 1sg dir art.pr Eroni
      ‘Eroni brought me/Jone.’
   b. au a rai-ci au.
      1sg pst see-tr 1sg
      ‘I saw myself.’

Table 1. Idiosyncratic consonants in the -C(i) suffix.

<table>
<thead>
<tr>
<th>Consonant Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>c [ð] rai ‘see’, tagi ‘cry’, vunau ‘preach’</td>
</tr>
<tr>
<td>t caqe ‘kick’, kau ‘bring’, kaasivi ‘spit’</td>
</tr>
<tr>
<td>v gunu ‘drink’, dola ‘open’, kalu ‘whistle’</td>
</tr>
<tr>
<td>r koto ‘lie’, gito ‘play’, cobo ‘cover’</td>
</tr>
<tr>
<td>k viri ‘throw’, vacu ‘punch’, voro ‘break’</td>
</tr>
<tr>
<td>m sili ‘wash’, canu ‘gather’, cedu ‘slurp’</td>
</tr>
<tr>
<td>g [ŋ] bili ‘push’, cece ‘lift’, lili ‘hang up’</td>
</tr>
<tr>
<td>y boru ‘paint’, vuakegu ‘retire’, kabu ‘scatter’</td>
</tr>
<tr>
<td>n buku ‘add (to a fire)’, caba ‘join’, cauve ‘carry’</td>
</tr>
<tr>
<td>∅ voli ‘buy’, soli ‘give’, tara ‘build’</td>
</tr>
</tbody>
</table>

As in Māori, some of these can be reconstructed to Proto-Oceanic (e.g. *tani ‘cry’, *poli ‘buy’).

1The following consonants do not seem to appear in -C(i) suffixes: s, b [β], w, l, and the prenasalized voiced stops b, d, and q [ŋ] (see Milner 1972:27,89), largely reflecting restrictions on root-final consonants in the proto-languages (see Arms 1973, 1974). The l does appear in the transitive suffix laki, which has an intensity reading.

2Verbs with a * come from the Gatty (2009) dictionary. All other verbs come from my notes.
A morphological solution for Fijian

- In Fijian too, Hale’s analytical question arises. I argue that these thematic consonants are independent morphemes (Lichtenberk 2001; Ashley 2012), realizations of v, as has been suggested for thematic vowels in Slavic.

(5) Structure of kau-ti:

\[
\text{VoiceP} \\
\text{Voice} \rightarrow \_i \text{vP} \\
\text{v} \rightarrow \_t \sqrt{\text{kau}} \\
\text{-i} \rightarrow \_t \\
\]

- I treat variation in the thematic consonant as allomorphy, conditioned by the root and the following suffix:

(6) **Vocabulary Insertion rules for thematic consonant:**

\[
\text{v} \rightarrow -t / \text{bring} \quad \text{Voice}_{p} \\
\text{v} \rightarrow -v / \text{drink} \quad \text{Voice}_{p} \\
\text{v} \rightarrow -r \quad \text{Voice}_{p} \\
\]

(There is some evidence in the next section that the following suffix is part of the conditioning environment at least with some verbs.)

2.3 Evidence for a morphological analysis

**Different consonants with the same root**

- One argument for this analysis comes from the distribution of these consonants across different verbal suffixes. With some verbs, the same thematic consonant can always appear, such as with the root qalo ‘swim’ (7a–c).

(7) **Same thematic consonant across suffixes with qalo ‘swim’:**

a. au a qalo-ya-k-a.
   1sg pst swim-tr-3sg
   ‘I swam to it.’

b. ko Eroni e a qalo-yak-a na koli.
   3sg PST swim-accom-3sg ART N dog
   ‘Eroni swam with the dog.’

c. na cava iko qalo-yak-a?
   ART N what 2sg swim-reas-3sg
   ‘Why did you swim?’

- But many verbs allow for some variation (see also Table 2 and 3). The verb lua ‘vomit’ appears with three distinct thematic consonants (8a–c).

(8) **Thematic consonants across suffixes with lua ‘vomit’:**

a. au a lua-c-a na moce-moce.
   1sg PST vomit-tr-3sg ART N NMLZ-sleep
   ‘I vomited onto the bed.’

b. au lua-taki dalao.
   1sg vomit-accom taro
   I vomited up taro.’

c. iko lua-tak-a na cava?
   2sg vomit-reas-3sg ART N what
   ‘Why did you vomit?’

- A morphological analysis captures both patterns, since it allows for the root alone or the root and the suffix together to condition the form of v:

(9) **Vocabulary insertion rules for qalo ‘swim’ and lua ‘vomit’:**

\[
\text{v} \rightarrow -r / \text{vomit} \quad \text{Voice}_{p} \\
\text{v} \rightarrow -c / \text{vomit} \quad \text{Voice}_{p} \\
\text{v} \rightarrow -t / \text{vomit} \quad \text{ACCOM} \\
\text{v} \rightarrow -t / \text{vomit} \quad \text{REAS} \\
\]

- Some suffixes too are reliably associated with particular thematic consonants.

- The applicative reason -taki usually surfaces with the thematic consonant -t, as discussed in section 4.

- A similar lesson emerges from the intensity suffix -laki. This suffix can be added to a transitive to create an intensity reading, as in (10a–b).

(10) **Intensity suffix -raki/laki:**

a. ko Eroni a saba-ki au.
   ART PR Eroni PST slap-tr 1sg
   ‘Eroni slapped me.’

b. ko Eroni a saba-laki au.
   ART PR Eroni PST slap-int 1sg
   ‘Eroni slapped me repeatedly.’
The default form of this suffix is clearly -\textit{laki}. But a small set of verbs surfaces with -\textit{raki} instead (e.g. Schütz 2014:162).

As noted by Arms (1973), there are also number of cases in which either the thematic consonant of the short suffix is preserved, or an entirely different thematic consonant appears:

\begin{verbatim}
(11) Variation in thematic consonants with intensity suffix:

<table>
<thead>
<tr>
<th>Transitive</th>
<th>Intensity form</th>
<th>Root</th>
</tr>
</thead>
<tbody>
<tr>
<td>mere-\textit{ki}</td>
<td>mere-\textit{kaki}</td>
<td>'crumble'</td>
</tr>
<tr>
<td>sos-i</td>
<td>sos-\textit{kaki}</td>
<td>'scratch'</td>
</tr>
<tr>
<td>tavu-\textit{ni}</td>
<td>tavu-\textit{kaki}</td>
<td>'char'</td>
</tr>
<tr>
<td>wiri-\textit{ci}</td>
<td>wiri-\textit{caki}</td>
<td>'turn, revolve'</td>
</tr>
<tr>
<td>moi-\textit{ci}</td>
<td>moi-\textit{taki}</td>
<td>'twist'</td>
</tr>
<tr>
<td>cegu-\textit{vi}</td>
<td>cegu-\textit{yaki}</td>
<td>'breathe on'</td>
</tr>
</tbody>
</table>
\end{verbatim}

⇒ An allomorphy analysis can capture these patterns if -\textit{l} is conditioned by the intensity suffix, with lexical exceptions conditioned by root and suffix.

But do we know that these are \textit{v} heads?

- One argument comes from the formation of adjectives. A productive way of forming adjectives is through reduplication and attachment of the suffix -\textit{(C)a} (Schütz 1985:17.9; Dixon 1988:232).

The suffix can be attached to some of the same roots, but in this context, the idiosyncratic consonant associated with the -\textit{C(i)} suffix does not appear (12).

\begin{verbatim}
(12) Adjectival suffix -\textit{(C)a} does not appear with idiosyncratic consonant:

| qaro-ti | 'prick' |
| sava-ti | 'wash'  |
| tubu-ri | 'grow'  |
| varo-ti | 'saw (wood/planks)' |
\end{verbatim}

These facts follow if the consonant is no longer synchronically part of the root, but a \textit{v} morpheme, which is naturally absent in adjectival structures.

\[3\]
The adjectivizing suffix may have its own idiosyncratic consonant, which may be distinct from the one that appears with verbs, as in pairs like \textit{waki-i mix} (of viscous/solid materials) and \textit{wakiwaki-ta} 'viscous' or \textit{laga-ti} 'to wave a war club assertively' and \textit{lagalaga-ua} 'assertive', from Gatty (2009). Such facts could be interpreted as evidence that the adjectival suffix -\textit{(C)a} is also composed of two morphemes, with the consonant a realization of an \textit{a} head.

## 3 The short suffix as Voice

### 3.1 The short suffix

What are the other components of the verbal suffixes?

- I first present evidence that the "short suffix" -\textit{C(i)} also realizes a Voice head, taking \textit{v} and Voice to be distinct functional heads (e.g. Pykkänen 2002, 2008; Harley 2013).
- In intransitives, Fijian verbs are usually bare, so only the (typically bisyllabic) root surfaces:

\begin{verbatim}
(13) Fijian verb is intransitive without suffixes:
\begin{enumerate}
\item au a bale.
\begin{tabular}{l}
1sg pst fall
'I fell.'
\end{tabular}
\item keimami cabe tiko.
\begin{tabular}{l}
1excl.pl sit prog
'We all (exclusive) are sitting.'
\end{tabular}
\end{enumerate}
\end{verbatim}

- To form a transitive, the most common strategy is to add the short suffix -\textit{Ci}.

The short suffix can be added to an unergative (14a) or an unaccusative (14b):

\begin{verbatim}
(14) Unergative gunu 'drink' forms transitive with -\textit{vi}:
\begin{enumerate}
\item au a gunu.
\begin{tabular}{l}
1sg pst drink
'I drank.'
\end{tabular}
\item au a gunu-\textit{v-a} na yaqona.
\begin{tabular}{l}
1sg pst drink-tr-3sg art.n kava
'I drank the kava.'
\end{tabular}
\end{enumerate}
\end{verbatim}

\begin{verbatim}
(15) Unaccusative kau 'take' forms transitive with -\textit{ti}:
\begin{enumerate}
\item e a kau yani na i-vola.
\begin{tabular}{l}
3sg pst take dir art.n nmlz-book
'The book was taken.'
\end{tabular}
\item e a kau-t-a yani na i-vola na cauravou.
\begin{tabular}{l}
3sg pst take-tr-3sg dir art.n nmlz-book art.n youth
The youth took the book.'
\end{tabular}
\end{enumerate}
\end{verbatim}

\[3\] The short suffix as Voice

Note: Deletion of final -\textit{i} is obligatory before 3rd person singular object clitic -\textit{a} (but not in Western Fijian, Pawley and Sayaba 1971:424). See Aranovich (2013) and Van Urk (2020) on the distribution of -\textit{a}.
3.2 The short suffix as Voice

Generalization: the short suffix appears whenever there are two full nominal arguments in the clause, regardless of thematic roles.

The short suffix is absent in noun incorporation (Alderete 1998, Aranovich 2013, Van Urk 2020), in which the verb root is adjacent to an articleless noun:

(16) No short suffix in noun incorporation:

a. e a gunu yaqona ko Eroni.
   3SG PST drink kava ART.PR Eroni
   ‘Eroni drank kava.’

b. e dau kau ilokoloko tuga mai ko Eroni.
   3SG HAB take pillow always ART.PR Eroni
   ‘Eroni always brings pillows.’

In addition, Fijian allows the causative prefix vaka/vlfla- to attach to intransitives. In causatives, the short suffix also marks transitivity:

(17) Short suffix appears in causative:

a. e a vā-gunu-vi au na marama.
   3SG PST CAUS-drink-TR 1SG ART.N woman
   ‘The woman made me drink.’

b. e a vaka-kau-t-a yani na ivola na marama.
   3SG PST CAUS-take-TR-3SG ART.N book ART.N woman
   ‘The woman sent the book.’

Proposal: The short suffix is the realization of a Voice head with a valued ϕ-probe, and so appears whenever object agreement is successful.

(18) Proposal:

1. Intransitives lack object agreement and so there is no short suffix.\(^4\)

2. In noun incorporation, the object is reduced and ineligible for ϕ-agreement (Baker et al. 2005).

3. The causative structure comes with own Voice head, which can target the causee DP.

4 In unergatives, the ϕ-probe will fail to find a goal. In unaccusatives, I posit that Voice is absent.

4. Reason -taki

4.1 A reason applicative

- Another verbal suffix is reason -taki, which combines with most intransitive verb roots to introduce a reason argument (19a–b).\(^5\)

(19) Suffix -taki introduces a reason argument:

a. iko a gunu-tak-a na lega.
   2SG PST drink REAS-3SG ART.N problem
   ‘You drank because of a death.’

b. na cava iko a sa-kure-tak-a?
   ART.N what PST 2SG SPONT-shake REAS-3SG
   ‘Why were you shaking?’

- Reason -taki shows no obvious selectional restriction: it combines with unergatives like gunu ‘drink’ (19a) and unaccusatives like kure ‘shake’ (19b).

Proposal: Reason -taki involves a high applicative head -ak in the sense of Pylkkänen (2008), which can appear in the extended projection of any root:

(20) Representation of reason -taki in (19a):

⇒ I propose that -t is an allomorph conditioned by Appl\textsubscript{REAS}, blocking forms conditioned by the root and Voice jointly. In support, some verbs with the same consonant across suffixes permit variation (qalo-vaki/qalo-taki ‘swim because of’).

\(^5\)See Massam (1998) on the cognate aki in Niuean, which also has an applicative function.
4.2 The restriction to intransitives

**Question:** If -taki is a high applicative, why is it not found on transitive verbs?

- Fijian maintains a **ban on more than two DP arguments in the same clause.**
  - There are no double object ditransitives.
  - The causative prefix vaka/va- must attach to intransitives.
  - Reason -taki attaches only to intransitives.

- I attribute this ban to a **Distinctness requirement**, in the sense of Richards (2010), which prevents multiple DP objects in the same VoiceP phase.

- As evidence for this idea, note that reason -taki can be added to a verb with an incorporated object (see also Schütz 1985:157 and Aranovich 2013):

  (21) **Reason -taki can surface after incorporated noun:**
  a. na cava iko a soko-wasa-tak-a
     ART.N what 2SG PST sail-ocean-reas-3SG
     ‘Why did you sail oceans?’
  b. e a gunu-yaqona-tak-a na siga ni sucu na marama.
     3SG PST drink-kava-reas-3SG ART.N day 1NK birth ART.N woman
     ‘The woman drank kava because of a birthday.’

Since an incorporated noun is not a full DP, Distinctness is satisfied.

**Arguments introduced by reason -taki are not regular objects**

- Examples like (21a–b) also reveal that -taki is Merged above the position of a regular object, as in an applicative analysis.

- In addition, arguments introduced by -taki fail to undergo noun incorporation:

  (22) **Objects introduced by reason -taki cannot incorporate:**
  a. *iko a gunu-(taki) lega.
     2SG PST drink-reas  problem
     ‘You drank because of problems.’
  b. *iko a dabe-(taki) mosi ni daku-mu.
     2SG PST sit-reas  pain 1NK back-2SG
     ‘You sat because of back pain.’

5 The -Caki suffix

5.1 Introducing the long suffix

- A number of Fijian verbs show an unusual alternation between the short suffix and a bisyllabic suffix -Caki, which is used to introduce a “different type of object” than the short suffix (Arms 1974; Schütz 1985; Dixon 1988).

- The -Caki suffix is distinct from reason -taki in function and variation in the consonant. I refer to -Caki as the **long suffix**.

- With a number of verbs, the short suffix introduces a goal/path argument (23a–b), while the long suffix adds a theme (24a–b):

  (23) **Goal argument added by short suffix**
  a. au a viri-k-a na tagane.
     1SG PST throw-tr-n ART.N man
     ‘I threw at the man.’
  b. e a kalu-v-a na tagane na marama.
     3SG PST whistle-tr-3SG ART.N woman
     ‘The woman whistled at the man.’

  (24) **Theme argument added by long suffix**
  a. au a viri-tak-a na polo.
     1SG PST throw-accom-tr-n ART.N ball
     ‘I threw the ball.’
  b. e a kalu-vak-a na sere na tagane.
     3SG PST whistle-accom-tr-3SG ART.N song ART.N man
     ‘The man whistled the song.’

⇒ This pattern is **surprising** for a number of reasons:

  - Applicatives do not usually add themes and it is unclear why they would be restricted to a specific set of roots.
  - The short suffix isn’t otherwise associated with a specific type of thematic argument.

5.2 Verbs of motion

- I will argue for an analysis of these verbs in which they do not combine with their arguments directly, but always involve a PP small clause complement.

- To motivate this approach, I start by analyzing **verbs of motion**, with which the long suffix gives rise to a distinctive “accompaniment” interpretation.
Many verbs of motion combine with both the short and long suffix. The short suffix adds a goal/path (25a–b). The long suffix produces what I will call an “accompaniment” reading (25c–d).

(25) Verbs of motion with short and long suffix:

a. au a qalo-v-a na yanuyanu. 1sg pst swim-tr-3sg art.n island
   ‘I swam to the island.’

b. au a qasi-v-a na sala. 1sg pst crawl-tr-3sg art.n path
   ‘I crawled the path.’

c. ko Eroni e a qalo-vak-a na koli. art.pr Eroni 3sg pst swim-accom-3sg art.n dog
   ‘Eroni swam with the dog.’

d. au a qasi-vak-a na gone. 1sg pst crawl-accom-3sg art.n child
   ‘I crawled with the child.’

I refer to this reading as accompaniment because (25c–d) describe scenarios in which the agent is leading the object along (e.g. the child is on my back).

As Schütz (1985:200) notes, “[the] accompanying object (in both senses!) never refers to another actor, but to something that can be carried.”

These interpretations are available with a wide range of motion verbs, as evident in the overview in Table 2.

Table 2. Motion verbs with short and long suffixes.

<table>
<thead>
<tr>
<th>Root</th>
<th>Meaning</th>
<th>Short suffix</th>
<th>Long suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>qalo</td>
<td>‘swim’</td>
<td>-vi (goal)</td>
<td>-vaki (accompaniment)</td>
</tr>
<tr>
<td>ova</td>
<td>‘swim’</td>
<td>-ci (goal)</td>
<td>-saki (accompaniment)</td>
</tr>
<tr>
<td>kada</td>
<td>‘run’</td>
<td>-vi (goal)</td>
<td>-vaki (accompaniment)</td>
</tr>
<tr>
<td>cici</td>
<td>‘run’</td>
<td>-vi (goal)</td>
<td>-vaki (accompaniment)</td>
</tr>
<tr>
<td>yaqa</td>
<td>‘creep’</td>
<td>-vi (goal)</td>
<td>-vaki (accompaniment)</td>
</tr>
<tr>
<td>cabe</td>
<td>‘go up’</td>
<td>-ti (path)</td>
<td>-taki (accompaniment)</td>
</tr>
<tr>
<td>qasi</td>
<td>‘crawl’</td>
<td>-vi (path)</td>
<td>-vaki (accompaniment)</td>
</tr>
<tr>
<td>dolo</td>
<td>‘crawl’</td>
<td>-vi (goal)</td>
<td>-vaki (accompaniment)</td>
</tr>
<tr>
<td>kevu</td>
<td>‘climb down’</td>
<td>-ti (path)</td>
<td>-taki (accompaniment)</td>
</tr>
<tr>
<td>lade</td>
<td>‘jump over’</td>
<td>-vi (path)</td>
<td>-vaki (accompaniment)</td>
</tr>
</tbody>
</table>

5.3 A small clause analysis

Motion verbs in many languages do not usually combine with a direct object (e.g. Hoekstra 1984; Folli and Harley 2006):

(26) English verbs of motion do not take direct object:

a. I crawled (*the child).

b. Fatima swam (*the dog).

But, as noted by Hoekstra and Mulder (1990) and Folli and Harley (2006), it is often possible to add an object inside a PP small clause:

(27) Small clause structure provides accompaniment reading:

a. I crawled [the child around the garden].

b. Fatima swam [the dog to the shore].

These constructions have the same accompaniment interpretation!

Proposal: Fijian motion verbs have a similar structure! What looks like a transitive structure in (28a) actually involves a PP small clause (28b):

(28) Small clause analysis of long suffix:

a. ko Eroni e a qalo-vak-a na koli. art.pr Eroni 3sg pst swim-accom-3sg art.n dog
   ‘Eroni swam with the dog.’

b. √P
   √swim qalo
   PP
   DP
   na koli
   -ak
   art.n dog
   ACCOM

I propose to identify -Caki with this additional prepositional structure. In this view, -ak in all of its guises spells out an argument-introducing head. This preposition incorporates into the verb, through head movement, so that it looks similar to the applicative suffix.

8 One key question is how to treat the thematic consonant, since analyzing it as v ends up putting it in the wrong position after successive head movement (Root-P-v). One option is that the thematic consonant in this case spells out a functional head inside the PP, p. See also footnote 9.
Evidence for a complementation structure

Objects introduced by -Caki suffixes may incorporate, unlike reason objects:

(29)  Objects introduced by long suffixes may incorporate:
   a. ko Eroni a qalo-vaki koli.
       ART.PR Eroni 3SG PST swim-ACCOM dog
       ‘Eroni swam with dogs.’
   b. au lua-raki dalo.
       1SG vomit-ACCOM taro
       ‘I vomited up taro.’
   c. e a kalu-vaki sere na tagane.
       3SG PST whistle-ACCOM song ART.N man
       ‘The man whistled songs.’

-Caki suffixes are obligatorily preserved in noun incorporation, surfacing inside of the incorporated noun. Reason -taki, in contrast surfaces outside an incorporated noun.

As a result, it is possible for reason -taki and -Caki to co-occur with noun incorporation.9

(30)  Reason -taki can co-occur with long suffix:
   na cava iko a qalo-vaki-koli-tak-a?
   ART.N what 2SG PST swim-ACCOM-dog-REAS-3SG
   ‘Why did you swim with dogs?’

Verbs of motion with a short suffix

I adopt the same structure for verbs of motion with a short suffix, but without an overt realization of the small clause.

In this view, the goal/path argument is not added by the short suffix, but this covert PP structure.

These small clauses will usually only add one object, because of the Distinctness requirement discussed in section 4.2, unless one argument incorporates:

(31)  Noun incorporation with alternating verbs:
   e a cabe-ulini-vanua-tak-a na beki na tagane.
   3SG PST go.up-head-POSS-PLACE-ACCOM-3SG ART.N bag ART.N man
   ‘The man went up the mountain with a bag.’

5.4 Other verb classes with -Caki suffixes

What about verbs that appear to take themes?

- I’ll argue that this analysis extends to these cases as well, and that these verbs do not in fact take themes in a regular way.
- There are two relevant subclasses of verbs. With verbs of ballistic motion, the short suffix marks a goal (32a–b), and the long suffix the theme (32c–d).

(32)  Verbs of ballistic motion with short and long suffix:
   a. au a kolo-v-a na tagane.
       1SG PST throw-TR-3SG ART.N man
       ‘I threw at the man.’
   b. au a vana-∅-a na tagane.
       1SG PST shoot-TR-3SG ART.N man
       ‘I shot at the man.’
   c. au a kolo-tak-a na polo.
       1SG PST throw-ACCOM-3SG ART.N ball
       ‘I threw the ball.’
   d. e a vana-tak-a na dakai na marama.
       3SG PST shoot-ACCOM-3SG ART.N gun ART.N woman
       ‘The woman shot the gun.’

- With verbs of (bodily) emission,10 the short suffix marks a goal (33a–b), and the long suffix introduces the emission/theme (33c–d).11

(33)  Verbs of emission with short and long suffix:
   a. au a lua-c-a na moce-moce.
       1SG PST vomit-TR-3SG ART.N nmlz-sleep
       ‘I vomited onto the bed.’
   b. e a mimi-ci au na gone.
       3SG PST urinate-TR 1SG ART.N child
       ‘The child peed on me.’
   c. au a lua-rak-a na dalo.
       1SG PST vomit-ACCOM-3SG ART.N taro
       ‘I vomited up the taro.’
   d. au a mii-cak-a mai na dra.
       1SG PST urinate-ACCOM-3SG DIR ART.N blood
       ‘I peed blood.’

9Note that such examples provide evidence too for two distinct sources of the thematic consonant, v associated with the long suffix and t associated with the reason suffix.

10Note that I include in this class verbs that describe emission of sound, particularly kalu ‘whistle’ and kaci ‘call’. With these, the short suffix marks the goal, as with verbs of bodily emission, and the long suffix the message or song communicated.

11Note that the verb ‘urinate’ surfaces as mii and mimi, apparently interchangeably.
A full list of these verbs appears in Table 3, based on lists in Foley (1976), Dixon (1988), and Schütz (2014), and a manual search of Gatty’s (2009) dictionary.

Table 3. Verbs of ballistic motion and emission.

<table>
<thead>
<tr>
<th>Root</th>
<th>Meaning</th>
<th>Short suffix</th>
<th>Long suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>viri</td>
<td>‘throw’</td>
<td>-ki (goal)</td>
<td>-taki (theme)</td>
</tr>
<tr>
<td>coka</td>
<td>‘spear’</td>
<td>-i (goal)</td>
<td>-taki (theme)</td>
</tr>
<tr>
<td>kolo</td>
<td>‘throw’</td>
<td>-vi (goal)</td>
<td>-taki (theme)</td>
</tr>
<tr>
<td>ula</td>
<td>‘toss’</td>
<td>-ki (goal)</td>
<td>-taki (theme)</td>
</tr>
<tr>
<td>vana</td>
<td>‘shoot’</td>
<td>-i (goal)</td>
<td>-taki (theme)</td>
</tr>
<tr>
<td>kaci</td>
<td>‘call’</td>
<td>-vi (goal)</td>
<td>-vaki (emission)</td>
</tr>
<tr>
<td>kalu</td>
<td>‘whistle’</td>
<td>-vi (goal)</td>
<td>-vaki (emission)</td>
</tr>
<tr>
<td>kaasivi</td>
<td>‘spit’</td>
<td>-ti (goal/emission)</td>
<td>-vaki (emission)</td>
</tr>
<tr>
<td>mii/mimi</td>
<td>‘urinate’</td>
<td>-ci (goal)</td>
<td>-vaki (emission)</td>
</tr>
<tr>
<td>veka</td>
<td>‘poop’</td>
<td>-ci (goal/emission)</td>
<td>-vaki (emission)</td>
</tr>
<tr>
<td>lua</td>
<td>‘vomit’</td>
<td>-ci (goal)</td>
<td>-vaki (emission)</td>
</tr>
</tbody>
</table>

Proposal: Like verbs of motion, these verbs in fact only combine with a small clause. Variations in small clause structure yield the alternation between short and long suffix.

Why treat these verbs the same way?

- With these verbs too, the short suffix marks a goal/path.
- All of these verbs are unergative (in contrast to the other suffixes), which follows if what distinguishes them is that they take a small clause complement in the transitive.
- These themes are not as different from the accompaniment reading as they may seem. All three verbs classes describe movement, and the long suffix always introduces the entity that travels along this trajectory (see also Hill 2002:547).

Independent evidence for unusual themes

- The idea that apparent themes of verbs of ballistic motion and emission may involve additional hidden structure comes from the distribution of dative case in Icelandic.
- A well-known problem in the study of quirky case is that some verbs exceptionally take dative themes (e.g. Einarsson 1945; Jóhannsdóttir 1996; Svenonius 2002; Jónsson 2012);

(34) Dative themes in Icelandic:

a. Nautið meig þá öllu vatninu.
   bull.def urinated then all.dat water.def.dat
   ‘The bull then urinated all the water.’

b. Einar kastaði spjótnu 70 metra.
   Einar threw javelin.def.dat 70 meters
   ‘Einar threw the javelin 70 meters.’

c. Barnið hellti mjólkinni á göðið.
   child.def spilled milk.def.dat on floor.def
   ‘The child spilled the milk on the floor.’
   (Jónsson 2012:147)

- Jónsson (2012) identifies the following three verb classes:

(35) Verb classes that take dative objects in Icelandic:


   (Jónsson 2012:146)

- We can make sense of these patterns if emission verbs and verbs of ballistic motion may involve additional prepositional structure that assigns dative.

- (Pouring verbs seem to appear with short suffixes in Fijian (e.g. sova-ri ‘pour’, savu-qi ‘pour water on’) although I found at least one case with a long suffix (to-vaki ‘to be filled with (liquid)’).

Concluding remarks

- This paper has presented a syntactic analysis of the properties of -Ci and -Caki suffixes in Fijian.
- I argued for an analysis of thematic consonants as realizations of v, taking them to be independent morphemes (Lichtenberk 2001; Ashley 2012).
- In addition, I proposed an account of apparent departures from the transitivizing function of -Ci and applicative function of -Caki by arguing that the relevant verbs combine with a small clause complement.
References


de Lacy, Paul. 2001. Maximal words and the Māori passive. AFLA 8, MIT.


Appendix A: Patterns of verbalization

- A more complex argument for identifying thematic consonants with \( v \) comes from verbalization.
- The most common suffix on verbalized roots is in fact the suffix -taki (e.g. Arms 1973, Schütz 1985: sec. 12.3.5). Loanwords usually appear with -taki, for instance.\(^{12}\)

\[ (36) \text{Loanwords appear with -taki:} \]

<table>
<thead>
<tr>
<th>Root-</th>
<th>-taki</th>
</tr>
</thead>
<tbody>
<tr>
<td>barasi</td>
<td>‘brush’</td>
</tr>
<tr>
<td>vurumu</td>
<td>‘sweep using a broom’</td>
</tr>
<tr>
<td>mop</td>
<td>‘mop (the floor)’</td>
</tr>
<tr>
<td>polisi</td>
<td>‘polish’</td>
</tr>
</tbody>
</table>

(Tamata 2003: p. 219)

- Similarly, -taki combines with nouns to form verbs, such as bai-taki ‘to put a fence around’ from bai ‘fence’ and gato-taki ‘to speak in a glottal stop dialect’ from gato ‘glottal stop’ (Schütz 1985: p. 164–165).
- When a causative is added to a non-verbal predicate or a verb that lacks a transitive, -taki appears, as in vaka-levu-taki ‘increase’ from levu ‘big’.

\[ (37) \text{Insertion rule for -tak} \]

\[ v \rightarrow \quad \text{ build} \]

\[ \phi \]

It may seem odd for -tak to be the default form, but nothing prevents \( v \) from spelling out a larger morpheme. The default use of -taki is widely recognized in work on Fijian (e.g. Armes 1973, Foley 1976, Schütz 1985, Dixon 1988, Tamata 2003).\(^{13}\)

\[ (38) \text{Short suffix appears in causative:} \]

a. e a vá-gunu-vi au na marama. 3SG PST CAUS-drink-TR 1SG ART.N woman
   ‘The woman made me drink.’

b. e a vaka-kau-t-a yani na ivola na marama. 3SG PST CAUS-take-TR-3SG DIR ART.N book ART.N woman
   ‘The woman sent the book.’

- Noun incorporation is possible in this configuration, but the incorporated noun intervenes in between the root and the transitive suffix:

\[ (39) \text{na turaga e a vaka-} \]

\[ \text{tara-} \quad \text{vale-taki} \quad \text{ira na lewe ni koro.} \]

\[ \text{ART.N chief 3SG PST CAUS-build-house-TR 3PL ART.N village} \]

‘The chief made the villagers build houses.’

- The thematic consonant usually associated with tara ‘build’ is -∅.
- But, in this situation, the suffix -taki must be used, because the presence of the noun blocks adjacency between root and \( v \):

\[ (40) \]

\[ \text{Noun} \]

\[ \text{v} \]

\[ \text{tara} \]

\[ \text{v} \rightarrow \quad \text{build} \]

\[ \phi \]

\[ \text{Noun} \]

\[ \text{vale} \]

\[ \text{build} \]

\[ \text{house} \]

\[ (41) \]

\[ v \rightarrow \quad \phi \quad \text{build} \quad \text{Voice}_v \]

\[ \Rightarrow \text{In this way, evidence from verbalization too suggests a link between these transitive suffixes and } v.\]

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\(^{12}\)There are a small number of loans with -Ci suffixes, such as kisi-vi ‘kiss’ and loka-ti ‘lock’.

\(^{13}\)In support of this idea, note that there appears to be no variation in the initial consonant of default -taki, since -tak is one morpheme. In her survey of transitive endings on loaned verbs, for instance, Tamata (2003) notes that only -taki and -Ci suffixes appear. When a -Ci suffix is possible, it reflects the intensity suffix (e.g. kisi-taki ‘to kiss repeatedly’ from kisi-vi ‘to kiss’).
Appendix B: Thematic consonants and meaning

 Could thematic consonants represent contentful morphemes?

- Arms (1973) identifies a number of semantic generalizations that go together with the choice of thematic consonant.
- Motion verbs commonly appear with a -ν suffix (qasi-νi ‘crawl along’, kada-νi ‘run to’), and verbs that express forceful contact often surface with -k (saba-ki ‘slap’, viri-ki ‘throw’).
- The full list of semantic associations proposed by Arms is in (42).

(42) Semantic associations suggested by Arms (1973):
- c ‘pliancy, gentle contact, bodily experience’
- g ‘X-ify, form, support’
- k ‘hardness, force, opening out’
- m ‘insertion, going inside’
- n ‘X-ify, form, support’
- r ‘location, posture, change of state’
- t ‘use of limb or instrument, moderately force, performative’
- v ‘motion to, motion for, motion over’
- ∅ ‘mild force, miscellaneous’

- A first objection is that there are many exceptions (e.g. viri-ki vs. kolo-νi ‘throw’ or qalo-νi vs. ova-ci ‘swim to’). Arms points out that only 60% of the 1009 endings fit these semantic classes (p. 522).
- Second, some of the categories identified by Arms are relatively broad (e.g. ‘mild force’, ‘pliancy’), and do not obviously correspond to differences in argument structure.
- Finally, Arms notes that native speakers do not seem to generalize these patterns to nonce forms or loanwords (sec. 2.4) and also the discussion above).

⇒ There may have been a stage of the language at which this system was productive, but I take this picture to suggest that thematic consonants are best treated as lexically arbitrary in principle.14

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14There may be some syntactic or semantic features, however, that are picked out by some of these allomorphy rules, such as motion. Similarly, Arms notes that -n and -g often form denominal verbs.