

ON PROSODIC RELATIONS BETWEEN FIJIAN BASES
AND VERBAL SUFFIXES¹

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From the earliest days in the study of the Fijian (FI) language the origins, functions and the degree of predictability of its verbal suffixes have bewildered all those who have tried to understand Fijian grammar, and they continue to do so. The problem in question is a suggestive example of the interaction between synchronic and diachronic factors in language and of its consequence for linguistic analysis.

It will be remembered that a Fijian word-stem or base (the latter term being widely employed in the description of Austronesian languages to distinguish 'content words' from 'functors') subsumes both verbal and nominal word classes.² It may be disyllabic (CVCV), by far the most common statistically, or trisyllabic (CVCVCV). The vowel slots are always filled, but in disyllabic bases the initial and/or the medial consonant is optional. In trisyllabic bases the medial and/or the final consonant is optional.³ There is also a small number of bases of more than three syllables.⁴

When a base is a verb it may occur in any one of these three standard forms. It is then said to be stative or intransitive, according to certain syntactic criteria. When a verb is followed by a monosyllabic suffix (C)V or by a disyllabic suffix (C)VCV it is said to be transitive. Recent studies, however, have questioned the applicability of terms such as 'transitivity' to this feature of Fijian grammar⁵ (Hockett 1976: 192; Naylor 1978: 405; Schütz 1981: 197-203).

One of the most interesting problems in the comparative study of Austronesian languages is that on the one hand in Fijian, as in other Oceanic languages:

1. The occurrence or non-occurrence of transitive suffixes is subject to certain semantic and syntactic criteria which are not yet fully understood; and
2. The consonant of a monosyllabic suffix: (C)V,⁶ and the first consonant of a disyllabic suffix: (C)VCV, is selected from a limited series within the total inventory of consonants (cf. Pawley 1978: 113-40).

In many other members of the Austronesian family, on the other hand, and especially in Indonesian languages, cognate

verbs may occur which, in a fairly large number of cases, show regular sound correspondences between their (non-significant) stem-final consonants and the consonants of the verbal suffixes of Fijian and other Oceanic languages.

Thus, Proto-Indonesian *taŋit 'cry' corresponds to Fijian tagica⁷ /taŋiða/ 'cry for (i.e. so as to obtain) something'.

Proto-Indonesian *davat 'reach; obtain' corresponds to Fijian rawata 'get, obtain'.

Since the stem-final consonants of verbs like Proto-Indonesian *taŋit and *davat are not known to have had a grammatical function and the corresponding stem-final consonants of verbs in modern Indonesian languages do not have such a function, while corresponding consonants in Fijian and other Oceanic languages occur in suffixes entering into regular grammatical relations, intriguing questions arise regarding the origins, nature and the precise functions of these features. In particular, three immediate questions which arise are:

1. How can one account for the fact that these sound correspondences can be attested in a significant number, but by no means in a majority of cases?
2. Are the stem-final consonants of modern Indonesian verbs vestigial in the sense that they might be the extant reflexes of 'archaic' grammatical suffixes which have now disappeared but continue to function in Oceanic languages such as Fijian? (cf. Dahl 1973:11). This is a question which should be asked even if it cannot be answered in the present state of our knowledge.
3. Should the verbal suffixes of Fijian be regarded as an integral part of the bases to which they may or may not be attached? That is to say, is the choice of consonant determined:

(a) By the base and suffix considered as an articulated (and of course separable) but integral lexical entity,⁸ or:

(b) By semantic and syntactic factors, that is to say, by the independently variable relations which can obtain between a verb and its potential objects or complements?

In the earliest days of the study of the Fijian language, Hazlewood (1872: 32-3), in his work originally published in 1850, after listing 'The Definite-Transitive Terminations' in two classes, states that:

1. Those which consists of *one syllable*. These are, -a, -ca, -ga, -ka, -ma, -na, -ra, -ta, -va, -wa and -ya ...

Later he adds that:

2. There appears to be no certain rule to determine which termination a verb will take. This must be learned from the natives, or from the Dictionary.

3. But notwithstanding that there is no invariable rule, yet we are persuaded that they (sc. the terminations) are not always used arbitrarily ... (1.) It seems to amount to a rule, that *verbs formed from nouns without prefixing vaka-*, shall take na for their termination ... (2.) It appears also to be a rule, that *verbs of motion* will take va for their termination; as lakova, ciciva, kadava, drodrova, ... Va here means *to*. It is also true that many other verbs besides those of motion take va, but for these perhaps there is no rule. (3.) When verbs reject a termination of the first or monosyllabic class, and take one of the second, or disyllabic, they frequently have either a *more intensive sense*, or *take a different object*.

Nearly a century later, Churchward in *A new Fijian grammar* (1941: 17-8; 71-2) speaks of: 'definite-transitive verbs', and he states that:

different verbs take different suffixes and there seems to be no rule for determining which suffix any particular verb will take.

This is also the view taken by the present writer in his *Fijian grammar*:

There is no known rule to indicate which suffix is appropriate to what base. It is advisable therefore to learn each new base together with its correct suffix or suffixes. (Milner 1972: 27-8)⁹

These words, written nearly thirty years ago, must now be qualified, not only in the context of the result of subsequent study by the present writer and his colleagues which have become available in the meantime,¹⁰ but also in the light of recent attention given to the same problem in connection with the preparation of a new Fijian dictionary.¹¹

It is necessary first to refer to Dempwolff's (1934-9) *Vergleichende Lautlehre*, which has for over forty years been an indispensable text in comparative Austronesian linguistics. It will be remembered that in his first monograph (Dempwolff 1934:

27-8) he distinguishes five categories of word stems (*Wortstämme*). The first, which makes up 70% of his field of 1000 items, consists of those which conform to the pattern CVCVC (e.g. *larit). Next in frequency comes word-stems of the same pattern with the addition of an optional nasal 'connector' (*Nasal-verbindung*), hence of the pattern CV(C)CVC (*sunson, *guntin). They make up another 20% of the total. Another 5% consists of reduplicated items, followed by 3% made up of word-stems of more than two syllables. The remainder, approximately 1%, consists of monosyllabic word-stems,

In his second monograph (Dempwolff 1937: 125-66) he compares two Melanesian languages with his reconstructed Proto-Austronesian (PAN) word-stems, one of the two being Fijian, the vocabulary of which is examined in detail in order to arrive at regular correspondences (*ibid.*, 126-46). He is struck by the number of irregular, as well as regular, reflexes of his proposed reconstructions in Fijian. Of particular relevance to the problem under discussion here are the following passages:

Phonetic disagreements (lit. non-agreements of sound: *Lautunstimmigkeiten*) (occur) especially frequently with the final consonants of Fijian before a supporting suffix...

From these data we shall draw the conclusion here that these phonetic disagreements of Fijian must be interpreted as 'false' analogy... (*ibid.*, 133-4, para. 127(a) 6).¹²

It is interesting that perhaps in order not to give hostages to fortune, Dempwolff used inverted commas for 'false' in 'false analogy'. At the time when he was assembling his data, knowledge of the vocabulary of Fijian was much less advanced than it is now, half a century later. With hindsight, therefore, and the advantage of greater knowledge of Fijian grammar than Dempwolff had either the possibility or the opportunity of acquiring, it was useful for me to check his data where they bear directly on the correspondences between Fijian verbal suffixes and the reconstructed final consonants of PAN verbs.

Looking again at his PAN glossary in detail (Dempwolff 1938) with this particular end in view, I find 143 items which are suitable for comparison. Of these, 61 (i.e. two more than he was prepared to accept) show 'correct' (i.e. regular) correspondences, assuming, that is, that one accepts his own criteria for what is (and what is not) 'regular'.

67 are 'incorrect'. This total subsumes not only cases where the proposed correspondence is 'irregular' according to Dempwolff himself, but cases where there is another reason for rejection. Some of the non-admissible comparisons arise from an

incorrect interpretation of the Fijian data (in some instances because the information available to him was misleading or inadequate). Other pairs proposed for comparison seem to be semantically altogether too far-fetched to be acceptable.

15 correspondences are uncertain, in the sense that they are insufficiently supported, but there is no reason why, given additional evidence, they could not be confirmed and accepted; for example, PAN *palu 'beat, strike' and Fijian valu 'fight'; PAN tin[d]av 'consider accurately' and Fijian tirova 'look at one's reflection in water'.

Turning now to the regular correspondences, it is of interest to note that the following occur most frequently between stem-final consonants:

| PAN | FI | | PAN | FI |
|-----|------------------|--|-----|-----------------|
| *Ø | Ø (11 instances) | | *h | Ø (7 instances) |
| *t | t (9 instances) | | *k | k (7 instances) |
| *t' | c (8 instances) | | *p | v (5 instances) |

[It is important to note that in the above table, *t' in PAN represents a reconstructed palatal: c and v in Fijian represent two fricatives, a voiced interdental and a voiced bilabial respectively.]

The next important contribution to a better understanding of the problems under consideration appeared a decade after the publication of Dempwolff's third monograph. In *A study in the phonetics of Fijian*, Scott (1948: 737-52) presented the first detailed analysis of Fijian phonology by a modern professional linguist.¹³ In particular, he was the first to draw attention to the structural -- and incidentally remarkably symmetrical -- relationship between the classes of consonants. Though he was not primarily concerned with orthography, his analysis fully, if only implicitly, vindicates the consistent and economical alphabet devised by the pioneer missionaries Cargill and Cross.¹⁴

The table (see next page) reproduced from the article in question (Scott 1948: 743, Table 3: Correlations between consonantal phonemes and alphabetic script in Fijian) illustrates the quasi-complete one-to-one relationship between Fijian consonant phonemes and the letters used in that alphabet.

| | Bilabial | Dental | Alveolar | Velar |
|-----------------------|----------|--------|----------|-------|
| Nasalized plosive | b | d | dr | q |
| Non-nasalized plosive | v | t | r | k |
| Nasal | m | n | | g |
| Lateral | | l | | |
| Fricative | | c | s | |
| Semi-vowel | (w) | | | w |

Scott makes an important contribution to the problems under discussion here, pointing out that not only are the non-nasalized sounds (v, t, r, and k) 'articulated at corresponding points', (sc. to b, d, dr, and q) 'and except for v, in a corresponding manner', but 'v is linked with the t, r, k set functionally; for like them, it enters into "transitive suffixes" which b, d, dr, q never do.' In a footnote he adds that: 'It does not seem that anything in Fijian indicates that the consonant does not belong to the suffix, though the large number of forms serving apparently the same purpose suggests a problem' (*ibid.*, 742, n.4).

We come now to the most comprehensive contribution so far to the understanding of this problem, a doctoral dissertation by the Rev. David Arms (1975), a New Zealand missionary who had already spent several years in close contact with Fijian-speaking communities. Arms analyses the phonotactic constraints which govern the occurrence of the verbal suffixes.¹⁵ He shows (*ibid.*, 130-47) that, with very few exceptions, the place of articulation of any consonant in Fijian verb rules out the occurrence of a verbal suffix with a consonant (or first consonant in the case of disyllabic suffixes)¹⁶ with the same place of articulation.¹⁷

His data are significant, both from a diachronic and a synchronic point of view. It is likely, for instance, to suggest an explanation for at least some of the cases of non-correspondence between Dempwolff's PAN verbs and Fijian verbal suffixes.¹⁸

As Arms points out (1975:140), the general constraint operating on consonants in suffixes, also helps to account for the fact that the nasalized stops (b, d, dr, and q, phonetically [mb], [nd], [ndr], and [ŋg] respectively), do not occur in verbal suffixes; if they did, they would be unacceptable after verb bases which have a nasalized stop in the initial or the medial consonant position, and these are very numerous.

I have also made a detailed analysis of the synchronic system of these dissociations¹⁹ in order to discover to what extent it conforms with Scott's (1948:743) table of Fijian consonants reproduced above. This shows that except in one or two cases, it is also possible to classify places of articulation

if one treats dissociation as a sole criterion. In the table below, consonants which regularly dissociate from one another have been placed in the same column.

Table 1: Consonantal dissociation in Fijian

| | | | |
|----------|----------|----------|----------|
| b | d | dr | q |
| <u>v</u> | <u>t</u> | <u>r</u> | <u>k</u> |
| <u>m</u> | | <u>n</u> | <u>g</u> |
| | <u>l</u> | | |
| <u>c</u> | s | | |
| (w) | | | w |

The following observations can be made regarding the table above:

1. Consonants which occur in verbal suffixes are those underlined. l and s are entered in for the sake of completion, but since neither occurs in monosyllabic suffixes and l only occurs in the disyllabic suffix -laka (which is 'intensive' in its effect and apparently not subject to any phonotactic constraints), it is difficult to decide in which column to enter it.
2. In a monosyllabic suffix, zero consonant (\emptyset) (i.e. the absence of a consonant) occurs very frequently. A suffix is then reduced to -a after a front vowel and -ya after the open vowel or a back vowel.
3. -ta regularly dissociates from d or t in the base, apparently with the sole exception of (vaka)dinata 'bear out, confirm'.
4. r and n regularly dissociate from each other, apparently with the sole exception of karona 'take great care of, value greatly'.²⁰
5. It is necessary to give l a separate column from r, not only because the suffix -raka can occur after l (and conversely -laka after r; cf. Arms 1975: 141, n.4) but because l and n associate freely: e.g. lomana, lawana, etc. (cf. *ibid.*, 139).
6. Scott had regarded the interdental place of articulation of c [ð] as relatively less important from the point of view of classification, and entered it in the same column as the two dental consonants t and d. For the same reason he had regarded n, which is, in fact, alveolar, as being intermediate between the dental and alveolar places of articulation. In both cases, his decision was probably influenced by considerations of structural symmetry. It is worth noting, however, that the dissociation principle firmly confirms c [ð] as being distinct from d and t. Likewise n (alveolar) is distinct from d and t. This is consistent with the articulatory data, even though it entails a sacrifice of symmetry or 'elegance'.

Having recorded our debt to Arms, it is now necessary to register strong reservations about the remainder of his analysis, which I now summarize.

Because of his extensive knowledge of spoken Fijian, based on regular practice in the course of his activities, both pastoral and informal, his views merit to be treated with special attention, although still open to rigorous examination. He implies²¹ that, granted a reasonable competence in the language, if a speaker is given any one base, together with its approximate semantic reference, he should be able to predict with a fair degree of accuracy what the consonant of its transitive suffix (or suffixes) is likely to be. He suggests that, subject to the phonotactic constraints which have already been examined, the majority of bases which can be followed by the same suffix have common semantic characteristics.

As noted earlier, this is a view which Hazlewood had already hinted at and which, in the case at least of verbs of motion (without defining motion more precisely for the moment), is relatively easy to substantiate. What Arms posits, however, is that each of the consonants which occur in transitive suffixes is associated with one or more semantic notions or connotations. Thus, for instance:

- c- is associated with 'pliancy, gentle contact, bodily experience' (Arms 1975: 104)
- k- with 'hardness, force, opening out'.
- m- with 'insertion, going inside', ... 'the idea of one thing going inside another, whether it be in order to stay there or to draw it out' (*ibid.*, 107).
- t- is associated with the use of a limb or instrument, moderate force, performative' (*ibid.*, 110-12)
- v- has to do with 'motion to, motion for, motion over'.

Difficulties arise, however, when the consonant is zero (\emptyset). There is a large number of bases in this category and at first Arms considered them to represent a 'spill-over category'. Later on, he declares, he was able to identify a 'common denominator': 'mild force, miscellaneous': 'Thus the \emptyset ending is very common with verbs of rubbing, tapping, folding, plucking, taking off, separating'. It also embraces verbs for 'finding and buying' (*ibid.*, 113).

There are also complications with -g- and -n-. The former, in particular, (*ibid.*, 105-6) has 'no convincing semantic correlation', but appears to have exclusively grammatical functions, like -n-, which often has the function of forming verbs from nouns (*ibid.*, 107-8), a point already made by Hazlewood (1872: 32-3).

Now, in most cases, Arms has no great difficulty in providing plausible, if not invariably convincing, lists of examples in support of his view. In each case he only gives ten examples, and the more the examples that are produced, the greater the difficulty of finding a common semantic denominator. This weakens his argument and, at least arguably, it weakens it unnecessarily.

There are, in fact, two main difficulties. The first is that Arms seems to be under the impression that covert semantic connotations attach to the actual choice of certain sounds -- consonants in this case -- much as they do in most languages, including English.²² Yet cases like the suffixes with *-g-* and *-n-*, which point to grammatical rather than semantic functions, as well as the large number of bases with *-Ø-* consonant which do not have either a clear or an obvious common semantic denominator, should have alerted him to the possibility that the genuine semantic burden of verbal suffixes rests, not on their phonetic character, conferring on the preceding verb the membership badge, as it were, of a covert semantic category, but on a complex of grammatical relations which remain to be investigated.

The second difficulty is this: the phonotactic constraints which Arms discusses militate in many cases against the occurrence of a particular suffix when semantic considerations would seem to require it. Although he does consider such cases (for instance, Arms 1975: 151-4, esp. note to p.152), it does not seem that he has attempted to make a systematic study of what I shall call *replacement suffixes*, i.e. those which, for phonotactic reasons, are substituted for the suffixes which can normally be expected to occur, and of the effect of those substitutions on the synchronic system as a whole.

One could even argue that Arms seems to hedge his bets.²³ The phonotactic constraints which he has clearly set out are incontrovertible, but failing a more extensive investigation of their effect, it is very difficult to accept his thesis as to the correlation between individual suffixes and specific semantic notions. He might have chosen to sacrifice the latter to the former but, in actual fact, he appears to have spoilt his case by emphasizing the wrong argument.²⁴

Stated briefly, one could present the dilemma as follows: On the one hand, (a) the pattern of verbal suffixes in modern Fijian could be the result of interaction between diachronic phonology and synchronic syntactic and/or semantic constraints. On the other hand, (b) it could represent the effect of diachronic semantic factors which are inhibited by synchronic phonotactic constraints.

I should, therefore, like to propose a different approach to these problems. In view of their complexity, however,

one cannot hope to do more than to suggest lines of inquiry which seem to be more promising than others and to try to adumbrate a possible solution.

Let me then proceed from known and generally-accepted facts and examine the general distribution of monosyllabic verbal suffixes. I shall attempt to establish, first, what grammatical functions can be determined for a given suffix, and secondly, what effect phonotactic constraints have on the occurrence of that suffix, both when the constraints are present and absent.

On Arms' evidence (1975: 126) -t- and -Ø- are statistically by far the most commonly occurring suffixes. Together they account for 569 recorded endings from his total field of 1680. Not only does it seem unlikely that any two particular 'meanings' (i.e. semantic associations or connotations) would so greatly predominate over the rest, but those are evidently also the two suffixes to which Arms was hardest put to attach any particular 'meaning' (cf. *ibid.*, 110-12 for -t-; 113-4 for -Ø-).

Any attempt, it would appear, to find a common semantic denominator between all the verbs that take a verbal suffix in -t-, or between all those that take a verbal suffix in -Ø-, is likely to end inconclusively. If we are looking for a common 'meaning', it will not be a property of the suffix alone, but of the interplay of syntactic variables within the verb phrase, in which suffixes play a vital but not an exclusive role. We must, therefore, look elsewhere and we are given valuable guidance by two widely-accepted observations of Hazlewood (1872: 33), namely, that:

1. -n- is a 'denominal' suffix, i.e. it has the function of providing a method of forming verbs derived from nouns.
2. -v- is associated with verbs of motion; without defining this class more precisely for the moment.

I have argued elsewhere (Milner 1980: 1-4) that the slow development of Austronesian studies during the last 100 years is to some extent due to the geographical fragmentation of the work and also to the intellectual isolation of the scholars concerned, which can be ascribed to relative lack of communication and in general to relative ignorance of one another's problems and progress. There has also been a noticeable lack of comprehensive studies of individual languages as well as too great a concentration of effort on comparative studies, particularly on topics such as subgrouping and putative chronology at the expense, if not the exclusion of detailed description. For the greater part of the twentieth century, students of Austronesian languages, while paying lip service to their common origin and striving to make sense of an extensive common stock of words, have neglected comparative grammar. It is only in the last

decade, with the organization of international conferences on Austronesian linguistics, that the syntactic features of languages as diverse as those of Taiwan, the Philippines, and Madagascar, have begun to throw light on the solution of problems that have long baffled students of Oceanic and Indonesian languages (Dahl 1978; Naylor 1978).

As a case in point, it would appear that the focus and topic approach to the understanding of Fijian syntax (Naylor 1978) is likely to help us make significant progress. Let us then examine, if only provisionally and in order to discover if one can establish *prima facie* evidence, the hypothesis that Fijian too has a system of focus marked by verbal affixes.

I propose to use the term 'focus' in the sense that is widely, though by no means unanimously, accepted in Philippine linguistics, i.e. 'the syntactic relationship between the verb and the surface subject, signalled by the verb's focus affix in conjunction with the subject form of noun phrases and pronouns. For example, a sentence is in *instrumental focus* if the surface subject is in the role of instrument and the verb has an instrumental affix; the verb "focuses" on the subject as instrument' (Naylor 1975: 12-3).

On this hypothesis, by reason of their frequency of occurrence alone, the two suffixes *-t-* and *-Ø-* should be examined afresh in order to establish whether they represent the Fijian equivalent of what has been identified elsewhere, particularly in Taiwan and Philippine languages, as goal focus affixes.

A few years ago Dahl (1978) suggested that four types of focus were perhaps Pan-Austronesian in their distribution, namely: *actor focus*, *goal focus*, *referent focus* (the person in whose interest the action is carried out or the place where the action is performed) and *instrument focus* which he characterized as follows: 'The fourth focus, generally called *instrument focus* (IF) got its name because it focuses something for performing the action, for instance an instrument' (Dahl 1978: 384).

In elaborating his interpretation, Dahl (*ibid.*, 385-6) goes on to explain that one of the separate functions of the fourth focus has to do with the displacement of a moving object, either away from the actor (as in Minahasan languages) or in any direction (within the actor, towards him, or away from him (as in Malagasy).

In her contribution to the same volume, Naylor makes a similar point with reference to Tagalog:

What appears to be at play here is not a contrast between transitive and intransitive, rather it is whether the action is viewed as centrifugal or

centripetal. Like aspect, however, the contrast between centrifugal and centripetal is situational as well as a matter of perspective. When the action is viewed as going outward from the actor and ends outside of him, then it is centrifugal;... When the action itself is viewed as beginning and ending with the actor himself then it is centripetal. (Naylor 1978: 405)

One of her pairs of examples is suggestive from the point of view of Fijian. She mentions two Tagalog verbs in actor focus but with different affixes: magbili 'sell' (centrifugal) as opposed to bumili 'buy' (centripetal). Both are formed on the base -b--ili. There is a similar situation in Fijian where a similar pair is formed from the cognate base voli, namely, volia 'buy' and volitaka 'sell' (cf. veivoli 'buy and sell, market' (perhaps also 'exchange, barter' in a pre-contact economy)).

Earlier in the same article, Naylor (1978: 400-01) identifies, in the case of Tagalog, four types of focus (actor, goal, locative and instrumental) (*ibid.*, 396) and six kinds of role (actor, goal, locative, comitative, benefactive and instrumental).²⁵

It will be evident from the views quoted from Naylor and Dahl that there is, as yet, no consensus among the scholars interested in this approach, not only as to the exact nature of the syntactic relations subsumed by focus and topic but also as to the number to be distinguished and identified and the technical terms to be used to describe them. Nevertheless, there is abundant evidence that a rich and promising area of research lies before us in Austronesian studies (e.g. Dahl 1981; Ferrell and Stanley 1980; Lopez 1978; Naylor 1980).

It seems, therefore, that a good case can be made for a new approach to the problem of verbal suffixes in Fijian. Thus what Dahl calls the 'moving object focus' clearly has an equivalent marked by disyllabic suffixes such as -vaka and -taka (as in cicivaka 'run with something', or viritaka 'throw something (at a target)') but this moving object focus (which might be termed 'locomotive') will have to be defined rigorously with special reference to what has also been called 'comitative, benefactive and instrumental'. Likewise the -ra suffix shows evidence of being associated with a locative focus. Within the limited scope of the present article, however, one can hardly do more than point to the complexity of the problems and to the direction in which progress is likely to be made.

Let me first make a point of theory and consider for a moment the phonotactic constraints which restrict the occurrence of any one verbal suffix with any one verbal base. A thorough-going attempt to establish beyond doubt that Fijian does indeed have a topic and focus system will have to distinguish carefully

what might be called the 'canonical' suffixes from 'adventitious' or 'intrusive' suffixes, that is, those which are imposed by phonotactic constraints. For instance, it was Hazlewood who first stated that while verbs of motion take the suffix -va, so do many others. It follows that, before we can establish a firm correlation between any one suffix and any category of verbs, two factors must be taken into consideration:

(a) Assuming that the suffix -va can, under certain circumstances, mark a type of focus which we might call 'displacive' or 'locomotive', it cannot appear whenever a verb of motion includes a bilabial consonant. The suffix -va will then be replaced by another as the following examples show:

1. -ta instead of -va

| | | | |
|---------------|--------------------|---------------|--|
| <u>cabeta</u> | 'go up to' | <u>cumuta</u> | 'butt with the head against' |
| <u>kabata</u> | 'climb up to' | <u>ribata</u> | 'strike against (in springing back)' |
| <u>kevuta</u> | 'climb down along' | <u>lavota</u> | 'score a hit (with small object), cast into' |
| <u>sobuta</u> | 'go down along' | <u>livata</u> | (of lightning) 'flash on sth.' |
| <u>volita</u> | 'go round sth.' | <u>robota</u> | 'extend over, stretch over' |

2. -ca instead of -va

| | | | |
|---------------|----------------------------|----------------|-----------------------------|
| <u>kuvuca</u> | 'blow (smoke) against' | <u>dromuca</u> | 'sink below, go under sth.' |
| <u>vukaca</u> | 'fly towards' | <u>lomoca</u> | 'dip(sth.) into' |
| <u>yamoca</u> | 'grobe for sth.' | <u>mumuca</u> | 'swarm towards' |
| <u>vuloca</u> | 'roll (sennit) over thigh' | <u>luvuca</u> | 'flood over; plunge under' |

3. -ka instead of -va

| | | | |
|---------------|--|---------------|------------------------------------|
| <u>virika</u> | 'throw(sth.) at' | <u>dumuka</u> | 'raise, lift up (on end of stick)' |
| <u>tebeka</u> | (of stone etc.) 'skim on surface of water, ricochet' | <u>vodoka</u> | 'embark on, go aboard' |
| <u>vidika</u> | 'flip(finger etc.) against sth.' | <u>butuka</u> | 'step on, tread on' |

(b) Conversely, where a consonant (other than -v-) is constrained from occurring as a verbal suffix because a homorganic consonant occurs in the base, -v- may be adventitious, that is to say, it

may be substituted for a suffix that would otherwise have been used. Note, for instance, the following cases where -ta or -a might have been expected to occur if, that is, we assume that either of them can signal a goal focus affix:

-va instead of -ta or -a:

| | | | |
|----------------|---|---------------|--|
| <u>talova</u> | 'ladle, scoop (<u>yagona</u> etc.)' | <u>setiva</u> | 'cover' |
| <u>tagava</u> | 'use (two or more layers etc.)' | <u>dikeva</u> | 'study, scrutinize' |
| <u>todrava</u> | '(of sun)burn, scorch' | <u>tarava</u> | 'follow in succession, be next to' |
| <u>dolava</u> | 'open' | <u>nitiva</u> | 'slice off (crown of taro corm)' |

though, interestingly, -a does, in fact, occur after tara, but in a different sense: 'touch etc.'.

At this point, it is worth examining in some detail what Arms (1975: 106-7) has suggested with regard to the suffix -ka. He states that 'it is associated with verbs where the action is by nature a forceful one; verbs of "breaking, squeezing hard, striking violently" (sometimes involving a missile) are typical members of this class.'

When Hockett (1974) reviewed the general problem of these verbal suffixes in a paper presented at the First Conference on Comparative Austronesian linguistics in Honolulu, the occurrence of -ka was one of only two instances where he concluded that Arms' thesis could be upheld.²⁷ Indeed, if we look at the semantic distribution of verbs followed by this suffix, it is difficult at first flush to see how one can arrive at any other conclusion. A more recent article, however, (Milner and Nawadra 1981: 186-94) shows that of 81 verbs having to do with 'breaking, splitting, cutting and grating', only 18, i.e. 22.23%, have a suffix in -ka. Of these 18 verbs, 3 also have an alternant suffix in -a.

The other difficulty is that, in a large number of instances, -ka occurs in bases that seem to have little to do with force, violence or disruption. In addition to butuka and vodoka, the following three verbs represent instances where -ta or -a might have been expected to occur (if, that is, we assume that either of them can signal a goal focus affix):

| | | | |
|---------------|-------------------|---------------|----------------------------------|
| <u>tomika</u> | 'pick up' | <u>dodoka</u> | 'lift up, stretch out (hand)' |
| <u>tevuka</u> | 'unfold, open up' | | |

In actual fact, of course, all three bases include a t or d which

rules out -ta as a suffix. On the other hand t or d also occur in bases which do have a violent or disruptive connotation, which again suggests that phonotactic rather than semantic factors are relevant:

| | | | |
|---------------|-----------------|---------------|-------------------|
| <u>vidaka</u> | 'split, cleave' | <u>tunaka</u> | 'gut, disembowel' |
| <u>teveka</u> | 'circumcise' | <u>muduka</u> | 'cut off' |

Other verbal suffixes occur much less frequently than those which have been mentioned so far. They include -ra, -ma, -na, and -ga.

There is a clear association, it would seem, between the suffix -ra and what may be a locative focus, as the following examples show:

| | | | |
|---------------|--|---------------|-----------------------------|
| <u>cigira</u> | 'stick into, slip into a narrow place' | <u>tubura</u> | 'grow on' |
| <u>tagara</u> | 'place, lay (on top of)' | <u>tubera</u> | 'carry, hold (in the hand)' |
| <u>davora</u> | 'lie on' | <u>qisora</u> | 'poke (with stick etc.)' |

Not infrequently -ra occurs when the base is preceded by the prefix vaka-:

| | | | |
|-------------------|----------------------|-------------------|-------------------------|
| <u>vakasobura</u> | 'put sth. down' | <u>vakamocera</u> | 'put someone to sleep' |
| <u>vakayacora</u> | 'carry out, perform' | <u>vakadabera</u> | 'make someone sit down' |

If r, or one of the other two consonants subject to the same phonotactic constraint (i.e. dr or nr) occurs in the base, another consonant must be substituted for an (assumed) r in the suffix. It may be one of the following:

| | | | | | |
|-----------------|---------------|------------------|-----------------|---------------|---------------------------|
| <u>m</u> as in: | <u>darama</u> | 'slip into' | <u>t</u> as in: | <u>ravita</u> | 'lean on' |
| | <u>tanuma</u> | 'dip into' | | <u>suruta</u> | 'sneeze on' |
| <u>c</u> as in: | <u>miraca</u> | 'fall gently on' | <u>g</u> as in: | <u>ravoga</u> | 'warm (cold food) on' |
| | <u>rubeca</u> | 'hang sth. on' | | <u>raraga</u> | 'heat (banana leaves) on' |
| | | | <u>k</u> as in: | <u>tonoka</u> | 'dab on' |
| | | | | <u>ramaka</u> | 'cast (light) on' |

The remaining monosyllabic suffixes, namely, -ma, -na, and -ga, do not occur very frequently. Arms (1975:106)²⁸ is not able to correlate -ga with any special connotation and he considers it to be similar to -na. In his opinion, the latter has a grammatical function, that is to say (as Hazlewood had already suggested), it serves to form verbs from nominal bases. There is much evidence to support this view as the following examples show:

| | | | |
|-------------|--------------------------------|---------------|--------------------------------------|
| <u>baca</u> | 'bait' | <u>bacana</u> | 'bait, entice' |
| <u>kato</u> | 'box' | <u>katona</u> | 'put into a box' |
| <u>buka</u> | 'fuel, fire' | <u>bukana</u> | 'add fuel to' |
| <u>taga</u> | 'bag' | <u>tagana</u> | 'put into a bag' |
| <u>duva</u> | 'plant used as fish poison' | <u>duvana</u> | 'poison (fish) with <u>duva</u> ' |
| <u>sigu</u> | 'day; sun' | <u>sigana</u> | 'sun; dry in the sun' |

This is not to say, however, that all bases which can be followed by the suffix -na are formed from nouns. A relatively small number of them appear to be verbal bases 'in their own right'. It can hardly be a coincidence that, for most of them,²⁹ an expected suffix in -ta (assuming again that this is the normal or 'canonical' form of the goal focus affix unless phonotactic constraint rules it out) does not occur because t or d occurs in the base:

| | | | |
|---------------|--------------------|---------------|------------------------------------|
| <u>dabana</u> | 'do up in parcels' | <u>tukuna</u> | 'relate, tell announce' |
| <u>domona</u> | 'love, desire' | <u>tawana</u> | 'occupy, populate' |
| <u>dagina</u> | 'bathe (eyes)' | <u>tomana</u> | 'accompany; help' |
| <u>tavuna</u> | 'roast on embers' | <u>tuvana</u> | 'arrange in order, set in rows' |
| <u>tokona</u> | 'prop up; stay' | | |

Up to this point this article has dealt with the phonotactic constraints of consonants, and only with those associated with monosyllabic suffixes. One phenomenon remains to be mentioned briefly. There is evidence that not only consonants but vowel quality also is a factor relevant to the occurrence of the verbal suffixes we have examined.³⁰

Of the ten verbs mentioned by Arms (1975:107) which are followed by a suffix with m for instance, eight end with a back vowel (u or o) and two with the open vowel (a). He also (*ibid.*, 203-5) gives a fuller list of 35 bases followed by -m, of which 29 end with a back vowel, 1 with the open vowel and only 5 with a front vowel. Of the latter, only 2 (silima 'dive for' and sigema 'suddenly realize') are attested beyond all doubt.³¹

Likewise, a very high proportion of verb bases is followed by -ŋa (zero consonant: Arms (*ibid.*, 254-68) lists 30. Of those, the vast majority, 261, ends with a front vowel (i or e); only 43 (i.e. approximately 14%), end with a back vowel,

and many of those either need to be confirmed as correct, or admit the possibility of another suffix as an alternant.

In conclusion, I hope to have shown, if only by implication, first, that comparative studies in Austronesian languages will rest on a surer foundation (and therefore advance more rapidly), not only when the quality of the data for comparison, as well as the quantity, is more satisfactory, but also when more comprehensive studies of carefully selected languages are available. At present, much of our data can scarcely be said to be more abundant or more reliable than it was in Dempwolff's time. Recent studies (Geraghty 1983; Geraghty & Pawley 1981) show the wealth of hitherto unpublished and hitherto unknown evidence from a relatively well-known language area like Fiji.

Secondly, studies of individual languages will increasingly be assessed by the criterion of the extent to which the author shows that he is, if not familiar at first hand, at least aware of the whole field of Austronesian grammar and of recent progress made in areas other than his own and, moreover, that he has considered its relevance to his own work. In particular, serious consideration should now be given to the question of establishing whether the topic and focus approach to Austronesian syntax is relevant to the understanding of Oceanic languages.

Two other contributions which are especially relevant to the present article have been made since it was written (Schütz 1985; Milner 1986).

NOTES

1. A contribution to the solution of the old and refractory problem of the Fijian verbal suffixes from a phonological and prosodic point of view seems to be appropriate in this collection of articles. I should also like to express my thanks to a number of colleagues who have generously commented on, and suggested improvements to, the original draft of this article; especially to Professor Bruce G. Biggs of the University of Auckland, Professor Otto C. Dahl of the University of Oslo, Professor Charles F. Hockett of Cornell University, Professor Albert J. Schütz of the University of Hawaii, and Dr Paul Geraghty of the Fijian Dictionary Project in Suva, Fiji. My thanks are also due to the Rev. Dr David G. Arms of the Columban Fathers, Professor Robert Blust of the University of Hawaii, Professor Jack Carnochan of the University of London, Professor Viktor Krupa of the University of Bratislava, and

Professor Paz B. Naylor of the University of Michigan.

2. For a detailed analysis of the relationship between 'word', 'morpheme' and 'base' in Fijian, see Schütz 1975.
3. As, for example, in uca 'rain' or bā (CVV) 'fence'. (I am aware that in recent years the one-vowel-per-syllable analysis of Fijian phonology has been criticized, notably by Schütz and Biggs, though for reasons that will not be discussed here I remain unconvinced.) There are also rare instances of bases where both consonants are zero, as in ia 'proceed, take place' and ua-(ca) 'beat with a stick (laundry, etc.)'.
4. Only one instance is known to me of a trisyllabic base where the initial consonant is zero: Paul Geraghty has written to me that uea exists as a verb 'to fish trap'. This must be the base Hazlewood gives as wea 'a fish trap' and it could take its name from the island of Uvea (Wallis), a Polynesian-speaking community under French administration. The only other case I know of a trisyllabic base where both the medial and the final consonants are zero is biau 'wave' which is almost certainly a Polynesian loan (peau). Other instances, however, cannot be ruled out.
5. This statement must be qualified by adding that these suffixes are also found in combination with other affixes, in which case they may not be 'transitive'. This is not strictly relevant to the problem considered here.
6. The consonant in parentheses can either be zero, or -- following the open vowel a or the back vowels o and u -- the palatal approximant written y. In disyllabic suffixes, the second consonant is always -k- (cf. n.16 below).
7. Andy Pawley (1978:120 (also nn.17,179); 135, 136-9, esp.137) has put forward the view, which others have accepted, that from a comparative point of view the verbal suffixes in -Ca and -Caka of standard Fijian are 'irregular' or at least untypical of Fijian dialects in general, and that they represent a conflation of two vowels (i.e. *Ci-a to -Ca and *Caki-a to -Caka). David Arms (1975:28, 31-4) seems to have come to the same conclusion at about the same time and independently of Pawley. There is much evidence to support this view but, in order to avoid confusion with the so-called 'passive' suffixes in -Ci, I prefer not to quote examples in the 'canonical' *Ci form as Pawley and others do, but to give them with an 'active' -Ca suffix. Regarding Fijian spelling, see n.14.
8. This view is often associated with the phrase 'thematic consonant'. Charles Hockett, in a letter about his article

(1976, 1977) adds the following comments:

The behaviour of the Fijian thematic consonants was one of the real facts about languages that led me slowly but surely to abandon what I now refer to as the 'atomic morpheme theory', the theory of grammatico-lexical structure I helped develop in the 1940's and to which I clung for a long time. That theory proposes that every phonemically relevant piece in any utterance must be a part of one or another morpheme (or of the phonemic representation of one or another morpheme), and that morphemes are minimum meaningful elements in much the same sense in which we all assumed phonemes were minimum meaningless but differentiating elements. By that theory there would be only three possibilities for Fijian: (1) rai-ca, as with Churchward, so that the suffix has ten different alternants; (2) raic-a, as proposed by Bloomfield for Samoan, so that the stem has two different alternants (as do most verb stems); (3) rai-c-a, the thematic consonant being a separate morpheme.

9. Cf. *ibid.*, 67-8; 89-90; 105-6. This work was originally published in 1956.
10. See, especially, the references to Arms, Geraghty, Hockett, Naylor, Pawley, and Schütz.
11. Thanks to the sponsorship, first of Mr Raymond Burr, a well-known American television actor, and later of the Australian Government Cultural Fund as well as the support of the Government of Fiji, a monolingual dictionary of the Fijian language is being compiled and is now approaching completion. The Director of this Project was, until early 1986, Mr T.R. Nawadra; Dr Paul Geraghty currently holds the post.
12. 'Besonders häufig sind Lautunstimmigkeiten bei Auslauten des Fidji vor stützendem Suffix...'

'Aus diesen Tatsachen wird hier gefolgert, dass diese Lautunstimmigkeiten des Fidji als "irrige" Analogie zu deuten sind;...'
13. Earlier studies include a monograph by Kern (1886). Scott's data on Fijian were mainly derived from his study of the pronunciation of Josua Bogldrau, a Fijian civil servant who had been seconded to the School of Oriental and African Studies, London University (1946-48), and who also helped me to learn his language at first hand.
14. The orthography chosen for Fijian by the first two missionaries, David Cargill and William Cross, in the 1830s,

was remarkably advanced for its period and, in particular, almost anticipated phonemic theory, at least by implication, by about 75 years. Thus, with one exception (dr), each consonant phoneme is always represented by one, and only one, letter, despite the fact that Roman conventions (supplemented by the conventions of English orthography) require that digraphs should be used. So, there are three voiced stops, each preceded, at least in non-initial position, by a non-phonemic homorganic nasal: /mb/ (written b), /nd/ (written d), and /ng/ (written q). The voiced interdental fricative /ð/ is written c (instead of th) and the velar nasal is written g (instead of ng). A fourth nasalized voiced 'stop' is written dr (actually /ndr/).

Apart from using diacritics in a somewhat arbitrary and unpredictable manner, however, the orthography of Fijian does not take vowel length into account. Since the latter is phonemic, it is a serious defect in an otherwise elegant system. (Native speakers seldom use or require diacritics since to them the exact pronunciation is usually clear from the context.)

I am indebted to Professor Otto C. Dahl for drawing my attention to his article on the origins of Malagasy spelling (Dahl 1966). This shows that, although Fijian orthography was much in advance of its time in its economy and its disregard for non-significant sounds, it was neither entirely original, nor an isolated attempt to devise an alphabet based (1) on a one-for-one equivalence between letters and phonetic values and (2) on internal consistency without obligatory regard to the spelling conventions of English, or for that matter, of French orthography.

In actual fact, in the early 1820s, the same principles had been consciously observed by the three Welsh-speaking pioneers of the London Missionary Society in Madagascar: David Jones, Thomas Bevan, and David Griffiths, who devised the first system of Roman orthography for Malagasy. Their training in England, at a theological academy in Gosport presided over by Dr David Bogue, included a linguistic component which owed much to the well-known grammarian Lindley Murray (1745-1926). The latter had stated in his *English grammar* that:

a perfect alphabet... would contain a number of letters, precisely equal to the number of simple articulate sounds belonging to the language. Every simple sound would have its distinct character; and that character be the representation of no other sound. (Murray 1813:15)

Murray in his turn was directly indebted to Samuel Johnson's short 'Grammar of the English tongue' which precedes his *Dictionary of the English language*. In that short essay, Dr Johnson ends his remarks on orthography and pronunciation with references to various attempts made in the past 'to accommodate orthography better to the pronunciation' and he notes that some reformers

have endeavoured to proportion the number of letters to that of sounds, that every sound may have its own character, and every character a single sound. Such would be the orthography of a new language to be formed by a synod of grammarians upon principles of science. (Johnson 1828:33)

It is interesting to note also that, just as Fijian spelling (in accordance with the ideal system for a previously unwritten language recommended by Johnson and Murray) uses c, g and q, for example, without regard to the conventions of English spelling, the three Welsh-speaking pioneers in Madagascar proposed initially to use c for an affricate /ts/, q for the velar nasal, and most interestingly of all, w for the close back vowel as in Welsh, instead of oo as in English or ou as in French. Regrettably, however, this imaginative proposal was abandoned in the face of opposition from other Europeans whose first language was English or French and not Welsh.

This resistance in Madagascar has parallels in the Pacific. Thus, because it is an unconventional alphabet from a purely Western point of view, Fijian orthography has long been the target of well-meaning but uninformed criticism (often aggravated by patronizing ridicule) in English-speaking circles. At one point during the Colonial period, in the late 1930s, the desire to 'reform' Fijian spelling even led to a debate in the Legislative Council of Fiji (Schütz 1972: 14 ff., esp. 20-2). There is not much evidence, however, that the Fijian people have ever wanted to introduce spelling changes, though, undoubtedly, some Fijians are irritated when they hear the names of people and places mispronounced by ignorant expatriates or overseas news-readers.

15. Arms (1975:130-1) acknowledges an article (Krupa 1966) which had appeared eight years previously and mentions associative and dissociative tendencies between groups of consonants in Oceanic languages, including Fijian, according to their place, or their mode, of articulation. He states, however, that Krupa was concerned with '*groupings* of consonants according to their place of articulation or after their mode of articulation, not to the associative

and dissociative tendencies of *individual* consonants -- the item of particular interest here' (*ibid.*, 131). Albert Schütz informs me in a letter that Arms' dissertation was the first full analysis of these phenomena to be published, but Bruce Biggs was already discussing consonant restrictions in the early 1960s although he did not publish his findings. Moreover, Paul Geraghty's (1973) unpublished term paper on this subject had been heard by 1973, while Peter Lincoln had also studied the same problem. I am now indebted to Paul Geraghty for sending me a copy of the term paper in question. He reminds me that the problem is also discussed in his doctoral dissertation (now published as Geraghty 1983. See esp. 260-70).

16. The second consonant of a disyllabic suffix is always -k-: -caka, -kaka, -laka, -maka, -naka, -raka, -taka, -vaka, -yaka. Unlike the first consonant, it is not subject to any constraints of occurrence. (A comprehensive analysis of the distribution and function of disyllabic suffixes has not been possible within the scope of the present article.)
17. In addition to constraints governed by the place of articulation of consonants, Arms also points to one or two cases where the constraint seems to be linked with the mode of articulation. Thus, the occurrence of a velar nasal g in the initial or medial consonant of the base, rules out the nasal suffix -ma: e.g. gunuva 'drink', whereas the reconstructed PAN form *inum (as well as Polynesian reflexes such as Samoan inumia, not to mention Fijian dialectal variants) would have made one expect *gunuma (Arms 1975: 153); see also *ceguma. The occurrence of a close back vowel before a suffix in -m- is also considered in the discussion of vowel quality on p.74 above. The converse is also true: there is no recorded instance of a base with a bilabial nasal taking the velar nasal suffix -ga. Curiously, however, the alveolar nasal suffix -na can occur without restriction following a bilabial or a velar nasal in the base. The same observations apply to the labio-velar approximant w-, the occurrence of which in a base rules out the bilabial (with some exceptions. See liwava mentioned in n.26 below and the velar nasal suffixes -ma and -ga, but not the alveolar nasal suffix -na (cf. Arms 1975)).
18. Thus, for instance, one can see at first glance that at least six of Dempwolff's reconstructed word-stems: *dəŋəv, *giliŋ, *ləŋgak, *pədam, *pəg'ət and *təŋuk have final consonants which are deemed to be articulated in the same place as a medial or an initial consonant. This alone rules out the possibility of finding direct one-to-one reflexes in the suffixes of the Fijian verb bases which, in other respects, show regular correspondences with

reconstructed PAN forms: rogoca /roŋoða/, gilia /ŋgilia/, loqata /loŋqata/, moce(ra) /moðera/, vocota /βoðota/, digova /ndiŋoβa/ respectively (cf. Arms 1975:156).

19. The terms 'associative', and 'dissociative', with reference to consonants and vowels that may, or may not, respectively, occur within the same base, with or without a suffix, are used by both Krupa and Arms. In a letter, Professor Biggs points out that prenasalisation did not occur finally in PAN and that in his view this fact alone, even without dissociation, is enough to account for the absence of prenasalisation in the suffixes.
20. In a letter, Paul Geraghty informs me that karona is probably a modern form of karauna (cf. garauna with similar meaning) and that the restrictions may not be so strict at a distance of two vowels.
21. This statement is based on a conversation I had with David Arms some years ago. He was presumably thinking of an expatriate learner of Fijian like himself who had already acquired some knowledge of its covert categories. Yet, when he tried the experiment of making up imaginary bases (nonce words) and then of asking native speakers to suggest appropriate suffixes and 'meanings' for them, he got replies which sharply contradicted his expectations. (Arms 1973; 1975:147-8).
22. See especially Arms 1975:128-9). He mentions, for instance, the connotations linking words in English beginning with sl- as in: slick, slip, slime, slide, slouch, slut, etc.
23. See esp. Arms 1975:118, 150, 156-7.
24. As, for example, when he argues (Arms 1975:122 ff.) that, for each 'passive' ('spontaneous') prefix, there is a corresponding, specific and identifiable semantic content, and what is more, that there is a one-to-one relationship of identity between the occurrence of some of those consonants in spontaneous prefixes and their occurrence in suffixes. Thus: 'The meaning of -c was given as "pliancy, gentle contact, bodily experience". The meaning for ca- could be regarded as a semantic specialisation: a shift from bodily experience in general to the particular bodily experience of sound' (*ibid.*, 122). This view would seem to require much more supporting evidence than Arms provides if it is to be accepted.
25. This distinction has to do with the fact that, in Tagalog, the locative focus has to be analysed in relation to a number of subcategories: 'locative goal focus, locative proper, and locative beneficiary (directional or dative)'.

The instrumental role is, likewise, subclassified into: 'instrumental goal (portative or displative), instrumental proper, and instrumental benefactive'.

26. I am also reminded by Al Schütz that one aspect of the complexity of this problem is that most speakers of standard Fijian use it as a second language and that for them there is often an element of doubt as to which verbal suffix is 'correct' or 'appropriate'. Thus in 1953 even a very senior chief and distinguished Colonial civil servant from the Lau group of islands (in the south-eastern part of Fiji), the late Ratu Sir Lala Sukuna, asked his wife Lady Maraia in my hearing if liwa '(of the wind) blow' was followed by the suffix -ca (liwaca) or the suffix -va (liwava). She spoke Standard Fijian as a first language (unlike her husband) and she immediately replied with assurance: 'liwava'.
27. This paper appeared later as Hockett (1976,1977). In a recent letter, he adds:
- If thematic consonants are separate morphemes they *ought to have determinable meanings*. One of Pawley's students made an assessment ... of semantic associations of the thematic consonants. I did the same thing independently, and came out with this. Of a random set of 500 stems: Of 51 with thematic consonant k, 28 or 55% denoted breaking, splitting, or other such forceful operations. For this sort of meaning no other thematic consonant scored so high. Of 74 stems in y, 24 denoted motions or positions; again stems with this meaning but with other thematic consonants scored much lower. Also, I found some dissimilative tendencies -- after certain first and second consonants, certain thematic consonants are disfavored (this thing having to do with sound, of course, not sense).
28. He (*loc.cit.*) identifies a subclass of verbs having to do with 'opening out, unfolding, extending', which regularly take the -k- ending. He claims, nevertheless, to see a semantic connection with the rest on the ground that "*smashing, breaking, cleaving*" all involve *disintegration of some entity*'. I do not accept this view and consider that it is just as likely that the process of prosodic constraint is involved here too. Thus, -t- is ruled out in tevuka and dodoka.
29. Some verbs with the suffix -n- do not seem to be formed on nouns and yet the occurrence of this suffix cannot be accounted for on the ground of prosodic constraint: cugena 'support', kumuna 'gather, collect', soqona 'assemble'.

30. Arms, following Krupa, uses the term 'dissociative'; Hockett speaks of 'dissimilative tendencies', while I have spoken in this article of 'phonotactic constraints' and of 'prosodic constraint'. The preferential association of certain suffixes with certain vowels in the base which is discussed here is the opposite of a constraint. Hence the title of the article which attempts to subsume both phenomena under the term 'prosodic' in the sense first used by J.R. Firth and the London school of linguists with which he is associated (cf. Firth 1948).

31. In a letter, Al Schütz writes as follows:

See my article on borrowings (Fiji Museum Publication), 1978 especially on 'natural syllables'... The point was that there are phonetic (articulatory, that is) reasons for certain C + V associations. I was looking at it from the point of view of the C being fixed and the V open to choice; your observation ... approaches the matter from the opposite direction. (cf. Schütz 1978).

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