VERB SERIALIZATION AND "VERBAL-PREPOSITIONS" IN OCEANIC LANGUAGES[1]

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Lexical categories intermediate between verb and preposition are a common feature of Oceanic languages, well known to Oceanicists for over one hundred years (see Codrington 1885). The complex typology of these categories can be given a coherent account if they are assumed to arise in the context of a diachronic drift from serial verb to preposition. An explicit model of the diachronic development, including several inhibiting factors, provides a means of interpreting the considerable complexity of intermediate synchronic states.

1. INTRODUCTION. It is a curious feature of several Oceanic languages that they have a small word class or classes which in their syntactic and morphological characteristics fall somewhere between verbs and prepositions. This phenomenon is well known to Oceanicists: it was long ago reported by Codrington (1885), who used the term *prepositional verb* to refer to its manifestations. These small, closed word classes present an obvious descriptive problem, for they do not fit easily into any of the well-known lexical categories. The resistance of these classes to a part of speech analysis along traditional lines is apparent from the double-barrelled terms which linguists choose for referring to them, such as *prepositional verb* or *verbal preposition,* as in the grammars of Big Nambas (Fox 1979), Puluwat (Elbert 1974), Jabêm (Dempwolff 1939), and Nakanai (Johnston 1978). Sohn and Bender in their 1973 grammar of Ulithian even distinguish four such in-between categories: *directional particle, directional adverb, verbal preposition,* and *pseudo-preposition.* Guy, in his 1974 grammar of Sakao, uses *verboid* instead of the double terms of other grammarians. Pawley (1973:142–7) briefly discusses the distribution of such forms in Oceanic languages, and reconstructs a handful of *prepositional verbs* for Proto-Oceanic.

These special classes typically include some forms which bear no rela-

tion to any independently occurring verbs, and others which can occur independently as verbs. For example, the *directional particles* of Sohn and Bender's Ulithian grammar include *loxo* 'motion toward the speaker', which also occurs as an independent verb, and *doxo,* which does not.

Also characteristic is that, if a language has transitive verbal morphology, either in the form of suffixal Object[2] cross-referencing or a transitive suffix, then the special class may also take this transitive morphology. This is the case in Nakanai (Johnston 1978), where a third singular Object is cross-referenced on the verb (1a), and also on the prepositional directional verb *tavu* 'towards' (1b):[3]

(1) NAKANAI
a. E masta vi-valiburi-a la pepa lo-ata te
the white man cause-scatter-3sg the paper come-down LOC
balus
plane
'The white man scattered papers from a plane.'
b. Eau mata tavu-a la paia
I look towards-3sg the dog
'I look at the dog.'

In Paama (Crowley 1982) the prepositions all include in their form the transitive suffix *-ni,* otherwise used to mark a verb as transitive:

teni	'purpose: for'
eni	'location: at'
rani	'ablative: from'
mini	'goal: to'
veni	'cause: because of' (also 'comitative: with')

This paper is an investigation of some aspects of these special word categories. Foley and Van Valin (1984:207–8) write:

> It is also a well-known fact about language change that serialized verbs like 'give' and 'take' are often gradually re-analyzed into adpositions or case markers.

Those who have argued for such a category change in languages from other parts of the world include Lord (1973), Li and Thompson (1974), Givón (1975), and Clark (1979).

I shall assume that the special verb-preposition word categories of Oceanic are manifestations of a widespread typological diachronic drift at work there, whereby verbs in serial verb structures can develop into prepositions. Pawley (1973:142–7) has suggested that particular prepositions in Oceanic languages have derived from Proto-Oceanic verbs,[4] and Lichtenberk (1985) has argued the case persuasively for POC **pa(nn̄)i*

'give'.[5] My purpose is not to add to their reconstructions but to present a (tentative) typology of verbal-preposition phenomena in Oceanic languages by appealing to the diachronic interpretation. It need not be the case that every word of intermediate status has derived directly from a serial verb: I am just assuming that the phenomenon of special categories, part verb, part preposition, arise in the context of a diachronic drift.

1.1 DEFINITION OF SERIALIZATION. In simple descriptive terms,[6] serialization is what happens when two or more verbs are juxtaposed in such a way that they act as a single predicate, taking a unitary complex of direct arguments. The verbs are bound together syntactically and/or morphologically on the basis of sharing one or more core[7] arguments, and neither verb is subordinate to the other. Typically in a serial construction there is no marker of subordination or coordination, no dividing intonational or morphological mark of a clause boundary, and the verbs cannot have separate scope for tense, mood, aspect, illocutionary force, and negation. These features of serialization are not discussed here: what is of interest to us is the argument-sharing property of serialization.

Verb serialization has only recently been identified as a common phenomenon in the world's languages. Its significance for general linguistic theory is as yet little understood. Formal theories have as yet little to say about serialization, although it is not uncommon in the languages of the world as a whole. It is especially characteristic of the languages of West Africa; South, East, and Southeast Asia; and Papua New Guinea.

2. THE DIACHRONIC INSTABILITY OF SERIALIZATION. Verb serialization tends to occur with certain recurring types of verb combinations, some of which prove diachronically unstable, and of these some lead to the development of adpositions. When certain serial constructions prove unstable, a particular class or type of serial verb used in a particular context is gradually reanalyzed, en masse, into either a category of verbal affix or formative, or into adpositions. These may be termed the centripetal and centrifugal tendencies. The centripetal tendency is for one verb to pull in and become bound to the other, typically turning into an affix encoding type of cause, type of result, manner of action, type of instrument, direction, or noun class of the Undergoer, often with heavy lexicalization. The centrifugal tendency is for one verb to pull away and attach to a more peripheral constituent in the clause, becoming an adposition. Both tendencies have been discussed in the literature. Thompson (1973), Bradshaw (1982), DeLancey (1985), and Seiler (1986) discuss centripetal effects in Chinese, Oceanic, Tibeto-

Burman, and Papuan languages. Lord (1973), Li and Thompson (1974), Givón (1975), Clark (1978, 1979), Pawley (1973) and Lichtenberk (1985) discuss centrifugal developments in African languages, Chinese, Vietnamese, and Oceanic languages.

The centrifugal development of verbs to adpositions, with which I am concerned here, occurs when one verb in a serial complex independently contributes an argument role which has oblique status for the whole complex, such as an instrument, benefactive, or goal. The other verb contributes an Actor or Undergoer,[8] or both, and one of these will be the shared argument. For example in sentence (2), the two verbs *sôm* 'speak' and *ndêng* 'towards, go to' share the argument *bing* 'word', the Undergoer of 'speak' and Undergoer of 'go to'; the Actor of the compound, 'I' is contributed by 'speak', and the goal *lau* 'the people', is contributed by 'go to'.

(2) JABÊM
ja-sôm bing ê-ndêng lau
1sg-speak word 3sg-go to (tr.) people
'I address word(s) to the people.'

In what follows I will focus on three types of oblique role: instrumental, comitative, and directional (source/goal), which tend to be prepositional to rather varying extents in Oceanic languages. I will give an account of constraints on the development of prepositions encoding these roles.

2.1 THE MODEL OF CHANGE. In explicating a typology of transitional states, I will rely on the following model of change, which in various respects needs further confirmation, more than is possible here. However I shall assume that the success of the model in contributing order to the very heterogeneous verb-preposition phenomena is a measure of its correctness.

In this model I assume that part of speech category distinctions derive from distinct significant patterns of discourse, that a user of a language maintains its categories through time largely as a cognitive response to the perceived ongoing regularities of usage in discourse (see Hopper and Thompson 1984).

The model:

> When verb serialization is used consistently in a language to encode oblique roles, verbs which contribute an oblique role will form a very restricted class, since the distinct types of role are limited in number. Moreover these verbs will tend to be more frequently serialized than used as independent verbs, because the need to code basic

oblique roles in discourse tends to occur particularly frequently. A principal 'center of gravity' of the verb's use in discourse will be as an oblique coding strategy.

If a verb's use alone, without any serialization, is lost or further restricted, or if one use of the verb develops a distinct phonological form, then the independent status of the argument shared in serialization is no longer attested in discourse, so the serialized use is open to be reinterpreted. Without the pattern provided by an independent use, the serial verb is bleached of meaning and reinterpreted as just contributing the oblique role—its argument which is not shared—to the compound. It is reduced from a valency of two to a valency of one. The other verb is reanalyzed as independently contributing both Actor and Undergoer. This means there is no longer any argument-sharing, and the verb contributing the oblique becomes in effect a preposition, contributing only its oblique role. This function is often extended to include other oblique roles, further strengthening its prepositional status.

To the above account the following inhibiting factors may be added. These are factors which would be expected to inhibit a speaker's reinterpretation of serial verbs as prepositions, given the basic model of change outlined above. Their validity both rests upon and reinforces the validity of the basic model.

1. To the extent that an oblique role is linked into the main verb's argument structure (e.g. through subcategorization by the main verb), this will inhibit the centrifugal drift to preposition.
2. To the extent that the oblique-coding verb is used independently, this will inhibit semantic bleaching and subsequent reanalysis. This means that if a very common verb is used in serialization to code an oblique role, the verbal status of the serial usage will endure longer.
3. To the extent that the oblique coding verb bears overt morphological marking of its verbal status when serialized, this will inhibit the drift to preposition.
4. To the extent that serialization is a common process in the language, this will provide motivation for interpreting an oblique coding verb as a proper verb, and will inhibit the drift to preposition.

3. THE ROLE TYPES. In this paper I discuss three role types: instrumental, benefactive, and directional (source/goal). My data is limited to written sources, and these roles provided to be those for which I was able to collect sufficient data for investgation. Not every language description provided appropriate data for each of the three roles, so there are some gaps in the discussion below. The directional role will occupy

the most attention because it tends to receive the most attention in grammars, and it is the most transitional: the instrumental and comitative both tend to be more strongly prepositional.

The languages referred to below are: Ambrym (Paton 1970), Big Nambas (Fox 1979), Jabêm (Dempwolff 1939), Lenakel (Lynch 1978), Mokilese (Harrison 1976), Nakanai (Johnston 1978), Paama (Crowley 1982), Patep (Lauck 1976), Puluwat (Elbert 1974), Sakao (Guy 1974), and Ulithian (Sohn and Bender 1973). When statements are made about these languages, it may be assumed that it is based on the authority of the author cited here.

4. INSTRUMENTAL. Here is a list of languages and their reported strategies for coding the instrumental role. I indicate the lexical categories into which the writers of descriptions have put the word which codes instrumental.

Ambrym	nɛ	Preposition. It is also the transitive verbal suffix.
Big Nambas	a(n)	Preposition. Inflected for Object. Also marks goal.
Jabêm	nga	Preposition. Exclusively marks instrumental.
Lenakel	lɛ	Preposition. Marks other oblique cases also.
Mokilese	(-)ki	Verbal suffix. It can also be separated from the verb and precede the instrument NP as a preposition. This seems to occur when the patient, which precedes the instrument, is a heavy phrase. It can also be used to mark the cause, and the Object of verbs of liking.
Nakanai	le	Preposition. Marks a wide variety of oblique cases.
Paama	eni	Preposition. Marks a wide variety of oblique cases. This appears to be a free form of the transitive Paamese verbal suffix *-ni*.
Puluwat	ngan	Preposition-verb. Takes the transitive suffix and is inflected for Object. As an independent verb it means 'give'. In serialization it also marks the goal.
Sakao	-i̇n	Verbal affix. Also used to code the cause.
Ulithian	gali	Verbal preposition. Inflected for Object. Also marks goal. Perhaps related to the independent verb *galle* 'give'.

Instrumental coding is strongly prepositional in these languages: in Jabêm, Lenakel, and Nakanai, the prepositions used for instrumental have no recorded verbal characteristics, and show no signs of having developed from verbs. In other languages the coding device tends to have prepositional characteristics. This is understandable since it is a role which tends not to be subcategorized for by the main verb.

In several languages the instrument marker has verbal characteristics. In Ambrym and Paama the preposition seems to be the transitive verbal suffix, just a formal case-marking device with no semantic content, but this is evidence of a formal link with the category verb. In two languages—Big Nambas and Ulithian—the instrument marker is inflected for Object, and in Puluwat it takes the transitive suffix and Object inflection.

Semantic bleaching is apparent in that the term used for instrument coding tends to have other argument-coding functions as well, such as goal (Big Nambas, Lenakel, Nakanai, Paama, Puluwat, Ulithian), and, understandably, cause (Mokilese, Sakao). Deverbalization is accompanied by an extension of function to mark roles not semantically related to the original meaning of the verb.

In only one of these languages can the instrumental marker also be used independently as a verb. This is Puluwat, which makes relatively extensive use of serialization, and the verb *ngan* 'give'[9] (3a) is extremely common: these are both inhibiting factors to a development to preposition. The instrumental use of *ngan* (3b) is clearly a secondary extension of its goal-marking function (3c).

(3) PULUWAT

a. wo pwe ngan-iy-áy efór suupwa
you hortative give-TR-1sg cigarette
'Give me a cigarette.'

b. yi pwe yatipa ngan-i laayif
I future slice give-TR knife
'I will slice (it) with a knife.'

c. ya a fáyì-to ngan-ey-áy
he perfect move-to speaker give-TR-1sg
'He came to me.'

As a serial verb, *ngan* has been generalized to a valency-increasing device, but its verbal character is preserved by the fact that it bears the transitive verbal suffix *-i(y)* (glossed *TR*) and can take Object inflection (3a, 3c).

Mokilese *(-)ki* provides a valuable key to understanding the development from serial verb to preposition. In Mokilese, verbs with *(-)ki* typically occur in the sentence type:

Subject VERB-*ki* (Object) INSTRUMENT

with an Object optionally placed between the verb and the instrument (4a), however, *ki* may be placed prepositionally before the instrument if the Object is a relatively heavy phrase (4b):

(4) MOKILESE
a. Ngoah insingeh- ki kijinlikkoano nah pehno
I write -with letter his pen
'I wrote the letter with his pen.'
b. Jerimweim koalikko pokihdi jerimweim siksikko ki
boy big hit boy little with
suhkoahpas
stick
'The big boy hit the little boy with a stick.'

Assuming Mokilese *ki* has developed from a serial verb,[10] one can understand why it tends to hang onto the verb, since serialized verbs tend to be grouped together. The fact that *-ki* is well on its way to becoming a preposition can be seen from its ability to separate from the verb and be placed in front of the oblique NP whose function it is marking. This would happen most (and first) when it is most necessary: when the Object is such a heavy phrase that the connection between *-ki* and its Object, the instrument, is obscured. Mokilese represents an intervening stage of development where what was once a serial verb still sometimes can be attached to the verb, as if in series, and sometimes can be preposed before the NP whose function it marks, like a preposition.

5. COMITATIVE. Below is a list of comitative-marking strategies:

Ambrym	t-	Preposition. Inflected for Object.
Big Nambas	m'a	Verbal preposition. Inflected for Object.
Jabêm	wìng	Verb. As an independent verb it means 'to be with'.
Lenakel	?	
Mokilese	(-)pene	Verbal suffix. It can separate from the verb like instrumental *-ki* and function as a preposition.
Nakanai	vikapopo	Prepositional verb. As an independent verb it means 'to be with'.
Paama	mini, veni	Prepositions. Note that *-ni* is a transitive verbal suffix in Paama.
Puluwat	mE	Preposition.
Sakao	?	
Ulithian	fagali	Directional adverbial. Transitive or intransitive. Not used as an independent verb.

Comitative-coding strategies tend to be more verbal than the instrumental strategies. For example, for Ambrym the coding device for both roles is described as a preposition, but only the comitative 'preposition' inflects for Object; and in Jabêm the instrumental marker is a preposition, but the comitative marker a verb.

Where the form used to code the comitative can be used independently as a verb (Jabêm and Nakanai) it has the meaning 'to be with', with no semantic bleaching in evidence. In general, terms used to code the comitative are used exclusively for this role—in sharp contrast to terms coding the instrumental, which show much more semantic bleaching and generalized coding functions.

The greater verbalness of comitative expressions compared to the instrumental is not inconsistent with the model of change outlined above. Comitative expressions link into the argument structure of the main verb—often they code a co-Actor—so the serial argument-sharing remains explicit. Contributing factors are that if a verb meaning 'be with' is conventionalized in its serial use to coding the comitative role (as in Jabêm and Nakanai), the semantic bleaching involved is clearly minimal, and the independent, nonserialized use of the verb in discourse would most likely be quite frequent.

6. DIRECTION (GOAL/SOURCE). The coding of directional roles is particularly variable in Oceanic languages, both within and across the languages surveyed. Directional terms provide a rather rich source of relevant data, and involve some considerable complexity, so it is valuable to investigate them in some detail here. Mixed terms like 'prepositional verb' or 'verbal preposition' are particularly common in descriptions. Sometimes when a rather different term like 'verbal affix' is used, as in Harrison's (1976) grammar of Mokilese, a closer examination reveals that this affix has the habit of detaching itself from its host verb and behaving like a preposition.

It is convenient to define two features which are important for all motion verbs and directional prepositions in Oceanic languages. The first is a semantic feature, *intrinsic orientation.* English *come* is intrinsically oriented towards the speaker, or towards the addressee when it is the speaker who is moving. Some examples of English intrinsically oriented verbs are *rise, descend, come, go, bring, take, enter, exit, cross,* and *return.* The meaning of these verbs includes an orientation for the motion they describe, unlike verbs such as *run, walk, carry,* and *crawl.*

The second feature is syntactic, *extrinsic orientation.* An extrinsically oriented motion verb or preposition takes an object which specifies the spatial reference of the motion. English *to* is extrinsically oriented since it takes a specified object, the goal of motion. *Enter* is both intrinsically

and extrinsically oriented, since it necessarily involves motion oriented into something, and can take an Object, the thing entered.

Extrinsic orientation is more often expressed in English by means of prepositions, but in Oceanic languages it is expressed variously by transitive verbs, verb-prepositions, and prepositions, with a wide range of intermediate caregories between verb and preposition. It is thus the coding of extrinsic orientation which is the principal focus of this section.

In Oceanic languages, extrinsically oriented terms are typically used in conjunction with a small set of distinct classes of motion verbs: [i] intransitive manner-of-motion verbs, [ii] transitive motion-causative verbs, and [iii] intransitive intrinsically oriented verbs. The verbs of all three classes typically do not of themselves take an extrinsic orientation.

Intransitive manner-of-motion verbs encode meanings like 'crawl', 'fly', 'run'. These verbs characteristically do not encode any intrinsic or extrinsic orientation.

Transitive motion-causative verbs encode meanings like: 'carry', 'give', 'pluck', 'throw', 'send'. For these verbs the Undergoer is moved by the Actor, which itself may or may not move. Like the intransitive manner-of-motion verbs, these verbs do not encode intrinsic or extrinsic orientation: no contrasting monomorphemic oriented pairs like *bring:take* were observed in the Oceanic languages surveyed. In motion serialization, where the shared argument role is a moving participant, the possibility of having two moving arguments with these verbs produces a potential for ambiguity. If the Actor categorically does not move (e.g. for *send*) there is no problem; only the Object of the verb can be interpreted as the moving, shared argument. However if the Actor may also be interpreted as moving, as with *bring, take, carry,* and *lead* there are two moving arguments, and either could be shared with an additional verb in series. In such cases as a general rule it is the Undergoer argument of the first verb which becomes the shared argument. The only language investigated which appeared to have the option of sharing the Actor of such verbs was Sakao, illustrated in (5), where the infix *-r(i)-* in (5a) codes moving-Undergoer-sharing; its absence (5b) codes moving-Actor-sharing. Note the use of the intransitive intrinsically oriented verb *lam* 'come' with the transitive motion-causative verb *ke* 'take', which itself implies no orientation.

(5) SAKAO

a. me-ke-r-lam
3sg-take-r-come
'He handed it hither.' (He took it and it came.)

b. me-ke-lam
3sg-take-come
'He brought it.' (He took it and he came.)

All the Oceanic languages surveyed have a particularly well-defined, closed class of intransitive, intrinsically oriented verbs, which are used in series with nonoriented verbs, and which can also appear as independent verbs.[11] These verbs, which range in number from about half a dozen (e.g. Jabêm and Ulithian) to more than a dozen (e.g. Nakanai), are never in danger of developing into prepositions. These intrinsically oriented verbs can always, as far as I have been able to determine, take locative complements with no intervening preposition. These complements are not Direct Objects: there is no verbal transitive morphology in such cases, and the locative expression is always a locational deictic (e.g. here, there) or spatial reference point in the lives of the speakers (e.g. home, village, the sea).

It is common for intrinsic speaker/addressee orientation to be distinguished in some systematic way from intrinsic spatial orientation. The two types of orientation are complementary and can be combined. For example in Nakanai intrinsically oriented expressions have the structure: *go*-X 'motion from me, to X'; *so*-X 'motion not to me or from me, to X'; or *lo*-X 'motion towards me, away from X', where X is one of 15 spatial terms. Jabêm and Mokilese normally require the opposite order: a spatially oriented verb precedes a speaker/addressee-oriented verb.

6.1 FOUR LANGUAGES. In the following sections, detailed descriptions are provided of the strategies employed by four languages to expressing extrinsic orientation in motion. These four languages, Jabêm, Sakao, Ulithian, and Nakanai, are intended to be representative of certain basic patterns. Each language is described according to [i] the presence or absence of transitive morphology, [ii] its strategies for expressing orientation, and [iii] its strategies for expressing extrinsic orientation.

6.1.1 JABÊM.

[i] Jabêm has no morphology distinguishing transitive from intransitive verbs: there is no transitive suffix or Object inflection.

[ii] There are 7 intrinsically oriented verbs:

mêng	'motion towards me'
wac	'motion towards you'
na, ja	'motion, not towards me or you'
sô	'motion inwards'
sa	'motion outwards'
pi	'motion up'
sêp	'motion down'

[iii] Jabêm has a range of extrinsically oriented terms. An obligatorily transitive verb, *(n) dêng,* takes a goal as Object. This goal is typically animate. This verb is most often serialized, but it can function independently, in which case it means 'facing in the direction of', as in (6):

(6) JABÊM
gê-dêng nuc
3sg-towards island
'He set a course for the island.'

(N)dêng does not in itself convey the idea of motion. For this *(n)dêng* must be serialized with one or more motion verbs. (7a) illustrates serialization with an intrinsically oriented verb *ja* 'go, not to you or me', (7b) with a transitive motion-causative verb *sôm* 'speak' (where the words are what move), and (7c) with a combination of the two types. Note that in these serializations (but not always in Jabêm, see (9b) below), each verb bears a distinct Subject inflection:

(7) JABÊM
a. lau dê-dêng apômta sê-ja
people 3pl-to headman 3pl-go, not to you or me
'The people went to the headman.'
b. ja-sôm bing ê-ndêng lau
1s-speak word 3sg-to people
'I address word(s) to the people.' (I speak a word and it goes to the people.)
c. a-kêng òbo gê-dêng napalê gê-jà
we incl.-give cloth 3sg-to boys 3sg-go, not to you or me
'We give cloth(s) to the boys.' (We give cloths, they go to the boys, and they go, not to you or me.)

To express the source role, Jabêm has what Dempwolff calls a preposition, *àngga.* Its prepositional status is clear from the fact that it does not take Subject inflection, in contrast to the intrinsically oriented verbs and *(n)dêng:*

(8) JABÊM
a. à-ndong ngakekop àngga êmkaing su[12]
2pl-shake dust from feet [?]
'Shake the dust from your feet.'
b. tino-c àngga àndu kê-sa gê-ja
mother-my from house 3sg-out 3sg-go, not to you or me
'My mother went out of the house.'
c. lau sê-wang àngga saleng kê-sa gê-mêng
people 3pl-draw canoe from forest 3sg-go out 3sg-go to me
'The people drew the canoe hither out of the forest.'

In addition Jabêm has three 'verb-like prepositions' which code extrinsic orientations: *taming* 'against', *bang* 'up to, not touching', and *pang* 'up to, touching'. They are like prepositions in that they do not take Subject inflection, and like verbs in that they can occur within a verb series. In (9a) the speaker/addressee-oriented verb *wac* 'go to you' occurs before the 'verb-like preposition' *bang* without Subject inflection, something which otherwise is only possible when *wac* precedes a verb, as in (9b):

(9) JABÊM

a. aê ja-kô wàc -bang amàc
I 1sg-stand go to you-up to, not touching you, pl
'I will come and stand next to you.'

b. wac-a-pi
to you-we, excl.-go up
'We went up (to your house).'

Dempwolff (1938:37) recognized the probable diachronic origins of these verb-propositions:

> There are moreover some words which may well have been verbal stems originally, but which now are used without Subject prefixes almost like prepositions.[13]

6.1.2 SAKAO.

[i] Like Jabêm, Sakao has no overt transitive morphology.

[ii] There is a relatively large set of intrinsically oriented verbs:

hatoer	'motion north'
moel	'motion south'
haβyl	'motion west'
hu	'motion east'
jan, ku	'motion away, go'
lam	'motion towards, come'
kersa, sa	'motion up'
sanoer, su	'motion down'
tatoer, toer	'motion out'
tari	'motion in'
talpoer	'motion back'
γe	'motion past, or motion where?'
joe	'motion-near'

[iii] Extrinsic orientation is achieved by the preposition *l (oe)-* (the form of the vowel is determined by phonological rules), which is prefixed to its

object, as in (10a), and by a 'directional preposition' *(-)k(oe)-* (Guy 1974) which, like a serialized transitive verb in Sakao, bears transitive Object cross-referencing (10b), or incorporates its object in places of the cross-referencing (10c), and is suffixed in series to the main verb (10b, 10c). The form *(-)k(oe)-* is used in compound expressions with verbs like 'take' and 'show', as in (10b,c), where it codes the Indirect Object argument of the resulting ditransitive compound. The infix *-r (ɨ)-* in (10a, 10b) has been discussed above, in connection with (5). It codes moving-Undergoer-sharing in verb serialization; and in taking *-r(ɨ)-, (-)k(oe)-* acts like a verb. In (10c) there is no motion, so *-r (ɨ)-* is inapplicable.

(10) SAKAO
a. γa-βoét-noeð-p-rɨlam l-aðay
3pl-pluck-coconut-perfect-rɨ-come to-baskets
'They plucked coconuts, (throwing them down) hither into baskets.'
b. me-ke-r-ky-n eseβyr
3sg-take-rɨ-to-him sorcerer
'He gave it to the sorcerer.'
c. joek-ky-γ ahal
show-to-me road
'Show me the road.'

Guy (1974) reports a reason why he terms *(-)k(oe)-* a preposition: it can occur purely prepositionally, separated from the verb. But this is a rare usage, occurring under conditions which are unclear.

Note that in Sakao, unlike Jabêm, intrinsically oriented verbs characteristically lose their Subject inflection in serial constructions (e.g. in (5) and (10a) above). Also compare (11a), where *jan* 'motion away, go' is used alone, with (11b):

(11) SAKAO
a. ma-jan
3sg-motion away
'She went.'
b. mo-koβré-p-r-jan
3sg-throw-perfect-rɨ-away
'He threw it away.'

6.1.3 ULITHIAN

[i] Ulithian has overt transitive morphology: transitive verbs take pronominal suffixes cross-referencing their Objects, and the final syllables of transitive verbs have a characteristic structure.

[ii] The intrinsically oriented verbs are:

doxo 'motion towards me'
loxo 'motion away from me'
diye 'motion down, west'
logo 'motion in'
daxe 'motion up, east'
weya 'motion away from some point of reference, not me'

Sohn and Bender (1973) call these 'directional particles'. The form *loxo* can function as an independent verb (12a); the others apparently only occur serialized, immediately following the other verb, but before any argument NPs (12b). When the other verb is transitive the whole serial complex is transitive. In this case the Object inflection may attach to the right of the verb complex (12c), or it may attach to the transitive verb (12d).

(12) ULITHIAN
a. xo be loxo yiiyaa
you future motion away from me where?
'Where are you going?'
b. ye sa xaraxa weya wolo wee
3sg perf crawl motion away turtle
'The turtle crawled seaward.'
c. ye sa xa-mobu-diye-xo
3sg perf cause-duck-motion down-2sg
'He ducked you down.'
d. re xafaga-yVre doxo yiir
3sg send-3pl motion to me they
'He sent them hither.'

These intrinsically oriented verbs can be followed directly by a locative complement, provided it is headed by one of a closed category of fourteen locational deictics, which Sohn and Bender call 'pseudo-prepositionals' (pseudo because of their nominal characteristics), of which *siyaa* 'boundary' (13a) is one. (13b) is ungrammatical because *yima* 'house' is not one of the pseudo-prepositionals.

(13) ULITHIAN
a. ye buu logo yila-li yima
3sg perfect motion in inside-3sg house
'He went into the house.'
b. *ye buu logo yima
3sg perfect motion in house
'He went into the house.'

[iii] The extrinsically oriented terms include a 'preposition' *me* 'to, from' (14) (glossed *LOC* below) and two 'verbal prepositions' *gali* 'motion towards' and *tagi* 'motion away from'. Like verbs, *gali* and *tagi* take

Object suffixes, and the phonological form of their final syllable is that of a transitive verb.

The preposition is used with locational deictics ('here', 'there'), geographical locations, and place names, whereas the verbal prepositions are used with movable things, especially people: in other words with things having no inherent fixed location. The verbal preposition *gali* is perhaps related historically to the independent verb *galle* 'give'. It is also used to code the instrumental role (see section 4 above).

6.1.4 NAKANAI

[i] Nakanai, like Ulithian, has transitive morphology in the form of pronominal cross-referencing of the Object, but in Nakanai there is cross-referencing only for the third person singular.

[ii] In Nakanai intransitive, intrinsically oriented verbs all have a locational deictic suffixed to them. These deictics form a restricted category. The verbs are:

go -X 'motion from me to X'
so -X 'motion, not to me or from me, to X'
lo -X 'motion towards me, away from X'

For example the locational deictic *ata* 'up' gives:

go-ata 'go up'
so-ata 'proceed up'
lo-ata 'come down'

The oriented verbs can appear in series (14a), or independently (14b).

(14) NAKANAI
a. eia puli-a so-luma la mautu
3sg take-3sg go-home the village
'He took her back to the village.'
b. la vareki so-ata la uele
the goanna go-up the canarium tree
'The goanna went up the canarium tree.'

The intrinsically oriented verbs can be followed directly by a locative complement, e.g. 'the village' in (14b), provided it is a fixed place: animate expressions and movable things are coded by means of an extrinsically oriented term (see e.g. (15), below).

[iii] The extrinsically oriented terms include a locative preposition *te* (glossed *LOC* here):

(15) NAKANAI
a. egite ge go-muli te Kansel
they irrealis motion from me-east LOC councillor
'They are going east to see the councillor.'
b. e masta vi-valiburi-a la pepa lo-ata
the white man cause-scatter-3sg the paper come from up
te balus
the plane
'The white man scattered papers from a plane.'

In addition to *te,* there are transitive verbs, termed 'directional verbs' (Johnston 1978):

tavu 'motion towards'
taro 'motion from'
muli 'motion following'
polo 'motion across'

As transitive verbs they take Object cross-referencing inflection:

(16) NAKANAI
a. e gulilike hari taro-a e tila-la
the child run go away from-3sg the mother-3sg
'The child ran away from his mother.'
b. eau mata tavu-a la paia
I look towards-3sg the dog
'I look at the dog.'

6.2 SUMMARY OF STRATEGIES FOR CODING EXTRINSIC ORIENTATION. For most of the languages investigated, like Jabêm, Sakao, Ulithian, and Nakanai, some expression of extrinsic orientation is fairly verbal, some is more prepositional. Generalizations can be made, despite the considerable variation.

Extrinsically oriented terms, even when they are very verbal, encode no intrinsic orientation: they have no deictic orientation with respect to the speaker or addressee, nor spatial reference like 'up' or 'down'. They also encode no manner of motion semantics, like 'walk', 'run', or 'paddle', a characteristic they have in common with intransitive intrinsically oriented verbs. Their semantic function is exclusively devoted to coding an overt locative role.

The more verbal of the extrinsically oriented terms are most typically

used for coding expressions that are not inherently locative, e.g. people and movable things. Inherently locative expressions tend to be coded with more prepositional categories (e.g. in Sakao and Ulithian), or as locative complements, with no preposition. Animate goals would occur more frequently than inherently locative goals in 'ditransitive' verbal argument structures,[14] and more frequently in such structures than as goals of motion. They would tend to be linked into the verbal argument structure much more than inherently locative goals. So, as predicted by inhibiting factor 1 (1.1 above), in a serial complex one would expect that a coding strategy devoted to animate, nonlocative expressions would be more verbal than one devoted to coding inherently locative expressions.

It should also follow that strategies devoted to coding a goal would tend to be more verbal than those devoted to coding a source, since rather more verbs (in English and many other languages) select a goal than a source. And indeed, in Jabêm the term used for coding a goal, *(n)dêng* 'to', is more verbal than that for coding a source, *ànga* 'from'.

It seems a true generalization that, where languages have distinct means of coding different types of extrinsic orientation (e.g. source, goal, motion across, motion around), the more verbal means will make finer distinctions. So for example, in Nakanai the sole locative preposition codes both source and goal, but there are four extrinsically oriented verbs. Again this is what one would expect: the more prepositional a term is, the more its meaning is bleached, and the less specifically it selects for semantic features of its object. A nice example is Ambrym, where the most bleached preposition, *n* 'with, at, from, to' is identical in form with the transitive suffix: it is syntactically transitive, taking an object, but semantically empty.

6.3 A COMPARISON OF TYPOLOGICAL PROPERTIES. In the following table, nine languages are characterized in terms of whether they express extrinsic orientation (especially with respect to animate or movable expressions) prepositionally or verbally, whether they have transitive verbal morphology in the form of a transitive suffix or Object agreement, and whether they have extensive serialization of verbs apart from the serialization of motion verbs. The languages are Sak(ao), Jab(êm), Pat(ep), Mok(ilese), Len(akel), Amb(rym), Pul(uwat), Nak(anai), and Uli(thian). A plus in brackets indicates a secondary pattern.

Clearly the presence of transitive verbal morphology is closely related to how extrinsic orientation is expressed. There is a complementary distribution. Languages with transitive morphology use transitive verbs to code extrinsic orientation. The absence of transitive morphology implies the use of prepositions for the same function. This is as one would expect, from inhibiting factor 3 (2.1) above: overt morphological coding of verbal status inhibits the drift to preposition.

TABLE 1: THE EXPRESSION OF EXTRINSIC ORIENTATION

	Sak	Jab	Pat	Mok	Len	Amb	Pul	Nak	Uli
extrinsic orientation prepositionally coded	+	+	+	+	+	(+)	−	(+)	(+)
extrinsic orientation verbally coded	−	+	−	−	−	+	+	+	+
transitive morphology	−	−	−	−	−	+	+	+	+
extensive serialization	+	+	+	−	−	+	+	+	−

Jabêm is somewhat of an exception because, in addition to a preposition, there are three 'verb-like prepositions' and a transitive verb used for coding directional roles. This exception is not arbitrary. In the Oceanic languages surveyed, Subject cross-referencing, where it occurs, tends to be prefixal, and Object cross-referencing suffixal. In serialization the universal tendency is to conform a serial complex to the morphological template of a single verb, so that the first verb would lose its suffixal Object morphology, and the second its prefixal Subject morphology, leaving only the external affixes. Since serial verbs which code extrinsic orientation tend to occur second, they will typically lose their Subject prefixes in serial constructions, therefore the availability in a language of Subject cross-referencing morphology is not usually an inhibiting factor of the centrifugal drift from verb to preposition. However the availability of Object inflection is an inhibiting factor because it remains as a mark of verbal status on the second verb in a serial complex. Jabêm is an exception which proves the rule, since it has Subject cross-referencing which is preserved in serialization, so its Subject cross-referencing can inhibit reanalysis of verbs as prepositions. Note that in Sakao, discussed above, Subject cross-referencing is dropped from the second verb in serialization, and Sakao is correspondingly more prepositional than Jabêm in coding extrinsic orientation.

Of the languages with transitive verbal morphology, Ambrym, Nakanai and Ulithian, in addition to having a set of transitive verbs for coding extrinsic orientation, each has a single monosyllabic preposition, respectively *nɛ, te,* and *mè.*[15] These prepositions have no verbal characteristics at all, they are not able to attach to the verbal string, and they can all be used to code goals, sources, and other roles. *Nɛ* and *te* are also used for static location.

If a language uses verbs to code extrinsic orientation, then the presence of extensive serialization seems to correlate with the ability of such verbs to appear independently as well as in series. For example, in Jabêm the verb *(n)dêng* 'to' is used both in series and independently. The directed transitive verbs of Ambrym, Puluwat, and Nakanai all can be used independently, but in Ulithian, which does not have extensive

serialization, the directed transitive verbs *gali* 'motion towards' and *tagi* 'motion from' are only used in serial verb complexes.

7. CONCLUSION. In this article the verbal-preposition phenomena of Oceanic languages have been interpreted as occurring in the context of a diachronic drift from serial verb to preposition. An explicit model of the diachronic development, which makes explicit a number of inhibiting factors, seems adequate to account for a wide range of complexities in actual systems of intermediate verb-preposition categories.

Although the development of prepositions from verbs is attested in other language areas where verb serialization occurs and has attracted attention in the literature, the model of change offered here gives several new insights into the detailed mechanisms of this change. It attempts to make explicit a multiplicity of constraints that produce the very diverse array of intermediate categories typical of verb-preposition phenomena. To the extent that the data surveyed are representative of Oceanic languages, the model has proved successful in rendering more coherent the bewildering range of intermediate categories that occur in this language family.

In this model the development of verbs from prepositions is not just a 'spontaneous', inevitable consequence of more general diachronic changes (as Givón (1975) and others have suggested), but is constrained by number of independent, and very distinct factors, including:

a. The type of oblique role involved (for example a comitative role is more likely to be verbally coded than an instrumental role).
b. The nature of the oblique NP coded by the verb (e.g. whether it is animate or inherently locative).
c. Whether a language has overt transitive verbal morphology.
d. The productiveness of serialization in the language.
e. The frequency with which a verb occurs independently in discourse.

Although the range of data examined here confirms the validity of the model, the sample of languages is not large, and more work needs to be done. The findings presented remain tentative. The various components of this model are eminently disconfirmable, so further research along these lines is likely to yield very concrete results.

One interesting consequence of the model is that a study of the rich data of marginal, intermediate categories can offer insight into why particular semantic roles universally tend to be coded as oblique arguments, and others as direct arguments. If the discourse-inspired model of diachronic change offered here is an appropriate one, then a number of fruitful avenues have been opened for research into this important question.

NOTES

1. I am indebted to Bill Foley for first suggesting this to me as a topic of investigation, and to Johanna Nichols and Ian Green for their clarifying comments on earlier drafts. For this paper's faults I alone am responsible.
2. I use the terms Subject and Object for grammatical relations of a verb. Transitive verbs take Objects, prepositions take Objects.
3. I use the original orthographies, except that ŋ is here written as *ng*.
4. Pawley reconstructs several POC prepositional verbs bearing the transitive verbal suffix. If Pawley is right then even in POC the typological context for a development from serial verb to preposition was well established. It is of course true that a typological context in Oceanic favoring a drift from serial verb to preposition could, given the predictable line of development for such a drift, lead one to reconstruct features of POC which are in fact just shared innovations in the daughter languages.
5. Lichtenberk shows conclusively that **pa(nñ)i* had the CATEGORIAL STATUS verb in POC, however it remains unclear whether this verb also had the FUNCTION of coding oblique arguments in POC. It is characteristic of a verb-serializing language that it allows a verb to have such a function. Although Lichtenberk concludes that it did not have such a function in POC, all his arguments concern categorial status, and it seems perfectly conceivable that a verb might effectively function as a case marker in serialization and still be categorially a verb.
6. For a recent attempt to give a systematic account of verb serialization within a general theory of the clause, see Foley and Van Valin (1984).
7. For explication of the term *core,* see Foley and Van Valin (1984:77–8). In very general terms, the core arguments of a verb are its direct arguments.
8. The terms *Actor* and *Undergoer* are used here in the sense of Foley and Van Valin (1984:29):

> we may characterize the actor as the argument of a predicate which expresses the participant which performs, effects, instigates or controls the situation denoted by the predicate, and the undergoer as the argument which expresses the participant which does not perform, initiate or control any situation but rather is affected by it in some way.

   It is an important feature of the analysis of serialization proposed here that an intransitive verb of motion may typically take either an Actor or an Undergoer. *John* in *John went to town* is an Actor because he is controlling what is happening. *The letter* in *The letter went to John* is an Undergoer, because it is not controlling its own motion.
9. Givón's (1975:93) typology of verb-preposition changes would predict, wrongly, that 'give' could develop to marking dative or benefactive, but not instrumental. A number of such exceptions to his typology occur in the Oceanic data, where the tendency to bleach verbal meaning is so strong that resulting prepositions may have little or no semantic relation to the verb they come from.
10. It is possible that POC **kini* (Pawley 1973) may have also occurred prepositionally, that is, separated from the main verb, as early as proto-Oceanic, and Mokilese may have just preserved the status quo. This makes no difference to the point I am making, which is that Mokilese represents a transitional state.
11. The only exceptions known to me are the oriented-motion verbs of

Ulithian. Only one, *loxo* 'motion away from speaker', of the six can function independently.

12. I don't know what this is.
13. Es gibt ferniger einiger Wörter, die wohl ursprünglich Verbalstämme gewesen sein mögen, jetzt aber ohne Subjekt-Präfixe fast wie Präpositionen gebraucht werden.
14. This point is also made by Lichtenberk (1985).
15. It is an interesting fact, perhaps true of Austronesian languages in general, but certainly true of the Oceanic languages surveyed, that true prepositions are typically monosyllabic, but verbs are di- or poly-syllabic.

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