From Proto Oceanic to contemporary Southeast Solomonic: Changes in patterns of distribution of transitive morphology

1 Introduction

Whilst the Southeast Solomonic languages are generally considered to be quite conservative (Evans, 2003; Lynch, Ross, & Crowley, 2002; Pawley, 2011), and therefore have played an important role in reconstructions of Proto Oceanic (POc), data from the contemporary languages in this subgroup indicate significant shifts in the patterns of distribution of transitive morphology. In this paper, the changes are illustrated with causative derivations. Whilst the Southeast Solomonic (SES) languages inherited the same pool of valency-increasing devices, all of which seem to have been used causatively in Proto Oceanic, the ways in which these are employed in causative derivations in SES languages often differ from the reconstructed pattern. Moreover, with respect to marking causative derivations, the SES languages show a conservative behaviour with some types of verbs but innovative behaviour with others.

Data from the contemporary SES languages indicate that in both branches of the subgroup the causative function of different valency-increasing devices has been extended to types of verbs with which it does not appear to have occurred in Proto Oceanic. I will suggest that this extension of use of some of the morphemes marking a verb as causative has led to a complete loss of another causativising morpheme in some languages.

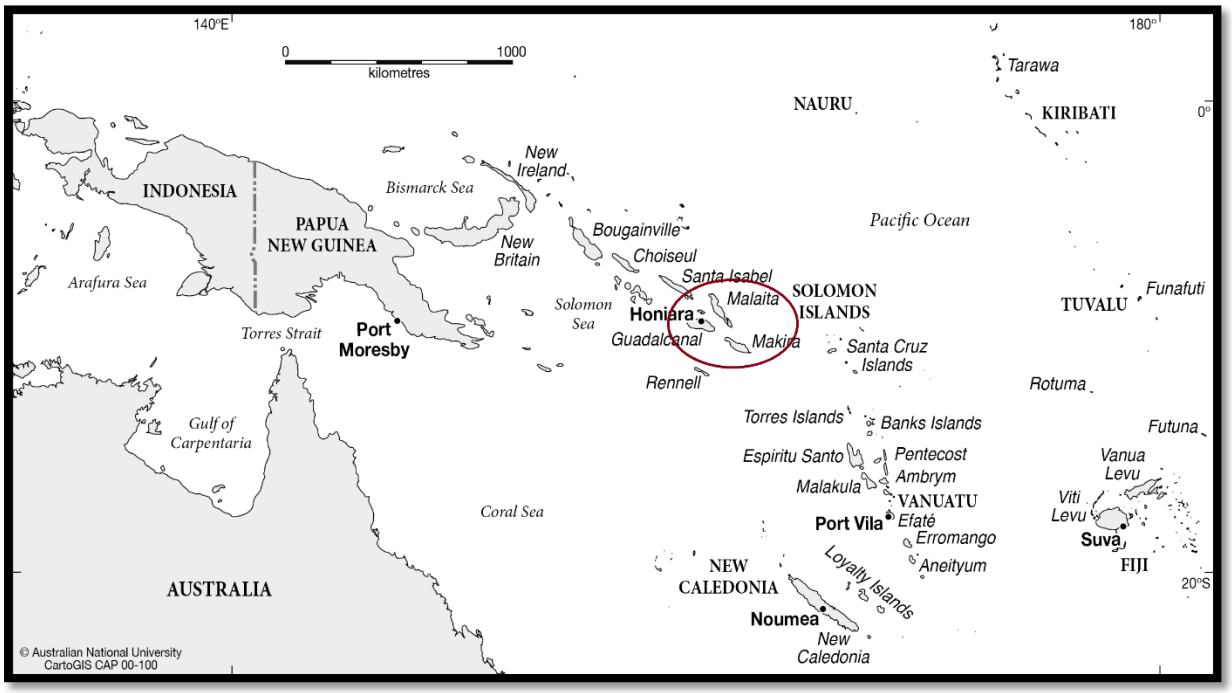
This comparative study examines data synchronically as well as diachronically. It highlights the need for understanding the history of morphological systems from two perspectives: (i) the behaviour of particular lexemes across time, and (ii) the way the inherited morphology patterns in contemporary languages. The findings reported here should be interpreted as preliminary, but they nonetheless provide interesting insights not only into the current patterns of causative derivations in the Southeast Solomonic languages but also the changes that have taken place in the history of these languages with regard to distribution of transitive morphology.

1.1 The Southeast Solomonic languages

As the name suggests, the Southeast Solomonic (SES) languages are spoken in the south-eastern part of the Solomon Islands, as shown on

Map 1. The speakers reside predominantly on three main islands of Guadalcanal, Malaita and Makira (plus the smaller islands of Uki and Ulawa located between Malaita and Makira, and Santa Anna and Santa Catalina located east of Makira), Gela, and the eastern tip of Santa Isabel. This subgroup of Oceanic languages is well-defined, mostly by shared phonological innovations. As the arguments and supporting evidence for placing the SES languages in the Oceanic family have been given in detail elsewhere, this matter not discussed here (Lynch et al., 2002; Pawley, 1972; Tryon & Hackman, 1983).

Map 1 Position of Southeast Solomonic in the Pacific (CartoGIS CAP, ANU)



There is a general consensus that the Southeast Solomonic languages divide into two branches: Makira/Malaita (MM, formerly Cristobal/Malaita) and Guadalcanal/Gela (GG). The Makira/Malaita branch includes all the languages spoken on these two islands, including the surrounding smaller islands of Ulawa, Uki, Santa Anna and Santa Catalina, plus two languages spoken on Guadalcanal. The Guadalcanal/Gela branch includes the remaining languages of Guadalcanal plus Gela and Bugotu (Map 2).

Whilst it is widely accepted that the Southeast Solomonic languages form a genetic group, the internal structure of each branch has been a matter of debate (Blust, 1984; Levy, 1980; Lichtenberk, 1988; Pawley, 2011). For an in-depth discussion on the internal divisions within the individual branches see Lichtenberk (1988) and Pawley (2011). No proposals are made here regarding the internal divisions within the branches.

Only a subset of the Southeast Solomonic languages has been used in this study. This paper focusses mostly on those languages for which a sufficient amount of comparable data is available whilst aiming to form a sample representative of the two branches. Some languages, such as Inakona and Vaturanga, have been included in the discussion despite very little information about them being available. Whilst not contributing significant amounts of data, the brief descriptions of Vaturanga (Ivens, 1934) and Inakona (Capell, 1930) nonetheless provide valuable observations about the transitive morphology of these languages. The languages and dialects discussed in the study are listed in Table 1, together with their locations and classification.

Map 2 Southeast Solomonic languages represented in the study and their major branches

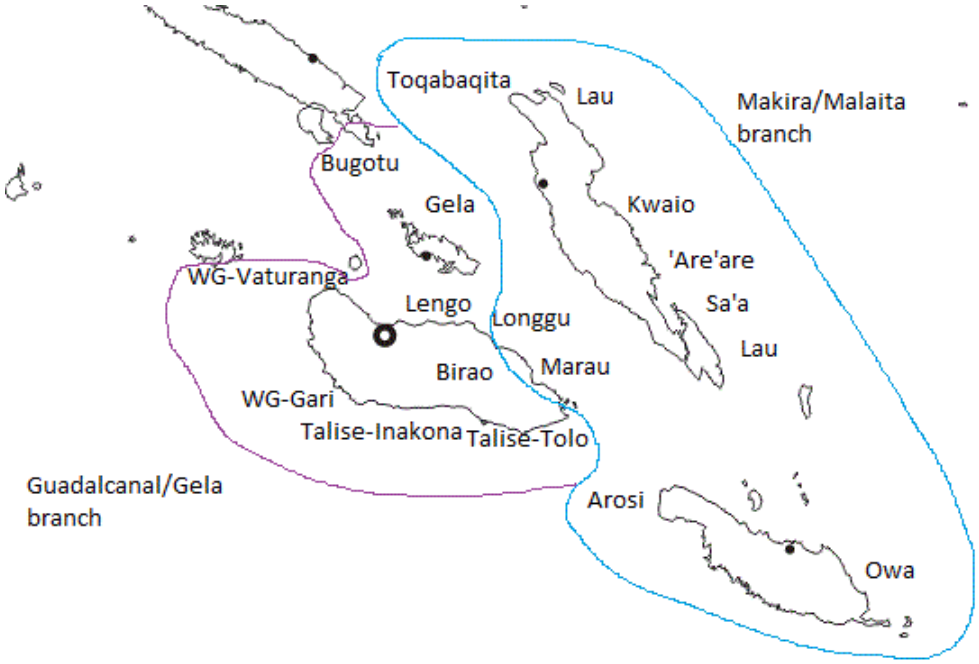


Table 1 Southeast Solomonic languages mentioned in the study

Name	Location	Branch
Toqabaqita	North Malaita	MM
Lau	North and South Malaita	MM
Kwaio	Central Malaita	MM
'Are'are	Central Malaita	MM
Sa'a	South Malaita	MM
Arosi	West Makira	MM
Owa	East Makira, Santa Anna, Santa Catalina	MM
Longgu	Northeast Guadalcanal	MM
Marau	East Guadalcanal	MM
Lengo	Northeast Guadalcanal	GG
Birao	Inland east Guadalcanal	GG
Tolo - dialect of Talise	South Guadalcanal	GG
Inakona - dialect of Talise	South Guadalcanal	GG
Gari - dialect of West Guadalcanal	South Guadalcanal	GG
Vaturanga - dialect of West Guadalcanal	Northwest Guadalcanal	GG
Bugotu	Santa Isabel	GG
Gela	Gela	GG

1.2 The data and its limitations

The analysis in this paper is based on about 30 verbal cognate sets with reconstructions up to the Proto Oceanic level, supplemented by additional sets of verbs and their derived forms from individual languages. This is because whilst examination of cognate sets reveals valuable evidence about the development of a particular lexeme through time, it may not necessarily provide much information about overall patterns present in a given language. The dataset includes verbs from different semantic domains and different verb classes, participating in different types of derivations. To reveal the patterns in contemporary languages, the inclusion of verbs in the study has been based primarily on their meaning even if the forms are non-cognate, although cognate forms have been used where possible.

As the published materials do not always list all word-forms actually present in the language, including derived forms, there are some limitations as to how accurately the data represents the true patterns used by speakers. Furthermore, even when the relevant derived forms are listed, it is only infrequently that the dictionary contains example sentence(s) to illustrate their use (this is especially the case with older materials). More often a simple comment "transitive" or "causative" is all that is offered in terms of explanation, which does not always fully clarify the use of the derived form or how it differs from the base form or another derived form. In some cases the forms listed may be somewhat archaic as many of the materials have been published decades ago, and therefore it is not unreasonable to expect that some forms in a given language may have been a subject to change since they were collected. Another caveat is the amount of variation found in the data which is difficult to explain without a thorough knowledge of the dialectal or inter-generational differences in each language. However, these are inevitable issues faced by anyone working with data collected at different times and with different aims in mind. For the purpose of this study, I treat all the data as being representative of the forms used by the speakers in a given language, either at present or in the recent past.

Whilst these limitations pose a possible risk of forming a somewhat incomplete picture of the present state of the languages, the major changes that the transitive morphology has undergone since the Proto Oceanic stage are clearly observable, as are the overarching patterns of the distribution of the morphemes and valency-increasing derivations across the two branches of the Southeast Solomonic languages.

The data used in this paper comes from a variety of sources and draws on published materials as well as on data collected by the author. The bulk of data from 'Are'are, Lau, Kwaio, Marau, Birao and Gari presented here was collected in the field by the author. Where the forms produced by the language consultants differ from those listed in the dictionary, the source is clarified in the tables by (f) for field data and (d) for data from a dictionary. For the other languages the sources of data are chiefly published and unpublished materials of others. Sources of data are listed in the Appendix. As the orthography differs among the sources, this paper uses the following orthographic conventions: the straight apostrophe < ' > is used for /ʔ/, as this appears to be the symbol most favoured in the sources, <gh> for /ɣ/, <ng> for /ŋ/. In languages of the Guadalcanal/Gela branch all stops are normally prenasalised; this is shown in spelling only for the voiced velar stop by < ngg>.

2 Causative constructions/derivations

In this paper, I follow Dixon's (2000:30) basic definition of a causative construction: it "involves the specification of an additional argument, a causer, onto a basic clause". Therefore

causative derivations introduce a new argument[1] in A function, that has the semantic role of the causer. Causative constructions may be formed from intransitive clauses, in which case the original S argument (the causee) is expressed as the O argument of the derived transitive clause. When the causative construction is derived from a transitive clause, the added argument is always placed in the A function, and the original A and O arguments have their functions reassigned (Dixon, 2000:31). In Dixon's view, prototypical causative constructions are those which i) are formed by a morphological process, or ii) involve a verb which occurs only with an abstract, causative meaning, or iii) constructions with a lexical pair where the members of the pair are in a causative relation. Some languages employ two or more different mechanisms to form causative constructions, and in such cases the different mechanisms tend to produce causatives with different meanings. Dixon (2000) establishes a correlation between nine semantic parameters and types of causative mechanism.

The following sections provide a brief overview of those aspects of Dixon's (2000) typology of causatives that are relevant to the causative constructions in Proto Oceanic and Southeast Solomonic.

2.1 Formal mechanisms

Dixon (2000) describes a range of formal mechanisms used to form causatives. Those attested in the Southeast Solomonic languages are:

i) morphological processes
ii) lexical causatives
iii) periphrastic causatives
iv) serial verb constructions

Morphological processes for marking causative constructions described in this paper involve affixation, by both prefix and suffix. Lexical causatives are, in Dixon's (2000:38) view, causatives which do not involve a morphological process, nor are they formed by a separate causative verb. Lexical causatives are further divided into those involving one lexeme, and those involving a pair of lexemes. Lexical causatives involving one lexeme include verbs which are ambitransitive and can be used intransitively and transitively. The S argument of the intransitive clause moves to the O function when the verb is used transitively. Examples given by Dixon (2000:38) are the English verbs *trip* and *spill*:

1) John (S) tripped. Mary (A) tripped John (O).
2) The milk (S) spilled. John (A) spilled the milk (O).

Lexical causatives involving two lexemes are found in languages which have pairs of verbs which are different in form, and there is a causative relation between them. English examples given by Dixon (2000:39) are verbs like:

3) be dead kill
4) lie lay

Periphrastic causatives involve two verbs in separate clauses, the main clause typically containing the causative verb and the lexical verb appearing in the subordinate clause. Serial

[1] The arguments are described in terms of their grammatical functions: S is the sole argument of an intransitive verb, A is the subject argument of a transitive verb and O is the object argument of a transitive verb.

verb constructions (SVC) involve situations where two or more verbs with the properties of a single predicate appear in one clause.

There is one point on which I diverge from Dixon's (2000) classification of causative constructions. The majority of causative constructions discussed in this paper are formed by affixation. They would be therefore be expected to fall into Dixon's category of causatives formed by morphological processes. However, in his discussion of lexical causatives, Dixon (2000:38) includes causatives from Fijian. In this language, the majority of verb roots are ambitransitive: they can be used intransitively or transitively, the only difference being that the transitive forms appear with a suffix marking them for increased valency.

5) loʔi 'be bent' loʔi-va 'bend'

Dixon (2000:39) reports that a little bit less than a half of Fijian ambitransitive verbs pattern S=O, where the S argument of the intransitive clause corresponds with the O argument of the transitive clause. Therefore this process of suffixation forms causative constructions. As Dixon (2000:39) notes, this is a pattern shared by a number of other Oceanic languages. Whilst Dixon (Dixon, 2000:38-39) discusses the Fijian causatives formed by the suffix under lexical causatives, I consider verbs such as the one in 5) to be morphological causatives, since they are formed by a morphological process of affixation.

2.2 Semantics

Dixon (2000:61) observes that it is relatively common across languages to have more than one type of causative construction. Causatives formed by different formal mechanisms typically differ in meaning. Dixon (2000) sets out nine semantic parameters of the variation in meaning:

a) Relating to the verb: State / Action
Transitivity

b) Relating to the causee (the original S or A): Control
Volition
Affectedness

c) Relating to causer (the A of the causative construction): Directness
Intention
Naturalness
Involvement

Whilst Dixon admits that his study of causative constructions is a preliminary one, he nonetheless points out that there appears to be a kind of correlation between what he calls "more compact" mechanism (Dixon, 2000:74) and the type of causative.

Figure 1 Scale of compactness (after Dixon, 2000:74)

	Type of mechanism
more compact	Lexical
↕	Morphological
	Complex predicate (two verbs in predicate, including serial verb constructions)
less compact	Periphrastic constrictions with two verbs in separate clauses

The more "compact" mechanisms such as lexical and morphological tend to correlate with certain parameter values. Thus lexical and morphological causatives are more likely to mark causative constructions where the causation occurs naturally (rather than with effort), intentionally (rather than accidentally), directly (rather than indirectly), and where the causee is partially affected, willing, and lacking control. These compact mechanisms also appear to apply only to some verbs in a language, most likely only state verbs or only intransitive verbs.

Data from contemporary Southeast Solomonic languages show that often, but apparently not always, there is a semantic difference between causatives formed by different devices in a given language. Here the distinction is not so much in the mechanisms as such, as most of the causative constructions attested in the data involve the first two types; that is lexical causatives and causatives formed by morphological processes. Rather, causative constructions (often involving the same verb stem) may have different semantic readings depending on i) the class of the verb and ii) the affix(es) used to derive the causative form. In this respect the mechanisms of marking causatives in contemporary Southeast Solomonic languages closely resemble the reconstructed Proto Oceanic system.

3 The Proto Oceanic system

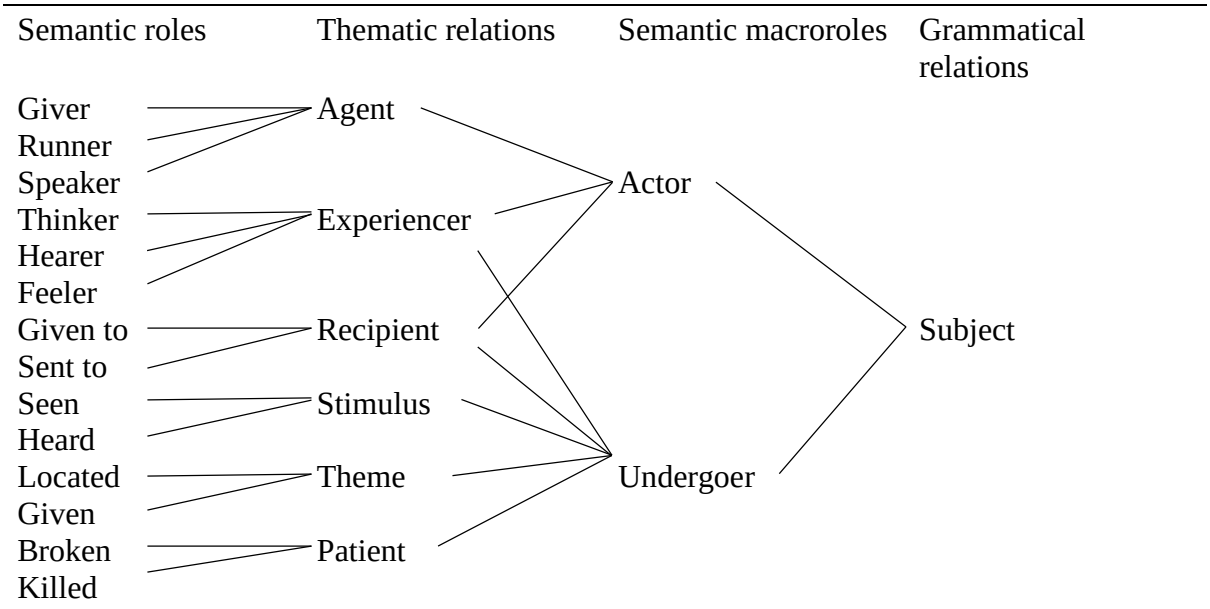
3.1 Verbs in Proto Oceanic

Proto Oceanic is reconstructed as having a system of morphosyntactic classes of verb roots, which were defined by i) the semantic macrorole of the intransitive subject and ii) the valency-changing devices with which the verb occurred. The morphosyntactic classes tend to correlate with semantic classes of verbs (Evans, 2003; Pawley, 1974; Ross, 1998).

One of the basic criteria for classification of verbs in Oceanic languages is the stative versus dynamic distinction. In Chafe's (1970) classification, events are either states or non-states. States denote the state or condition of the subject, which is expressed as patient. Non-states further distinguish between process, action or process-action. Process verbs denote that the subject has changed its condition or state, action verbs denote that the subject, an agent, performs an activity and process-action verbs in some ways combine the two preceding types as they denote an action performed by an agent that results in the change of condition of the patient at the same time.

The second feature is the role of the subject of the intransitive verb, and the relationship between the intransitive and transitive forms of the verb. Some verbs have subjects with the macrorole of Actor, other verbs have subjects with the macrorole of Undergoer. These semantic macroroles are based on the opposition between the agent-like and patient-like roles of verb arguments. They are a kind of generalisation across thematic relations rather than representing semantic roles as such (Foley & Van Valin, 1984; Van Valin, 2002). As Evans (2003:25) notes in her survey of Oceanic languages, these macroroles "are a conglomeration of semantic roles into two categories, each category behaving differently in terms of morphosyntax".

Figure 2 Semantic macroroles (after Van Valin, 2002)



There are some differences as to how some of the semantic roles are treated grammatically across the languages. Whilst agents and patients tend to be consistently grammaticised as Actors and Undergoers respectively, semantic roles such as possessors, experiencers or recipients are treated as Actors in some languages but as Undergoers in others. Typically, verbs that have Undergoer subjects tend to express states and processes, and verbs that take Actors as their subjects denote actions. Verbs which belong to the process-action category are found among both Actor and Undergoer verbs. Following the tradition in the Oceanic literature, I use the terms Undergoer verbs or U-verbs and Actor verbs or A-verbs. When making the distinction between states and processes, I use the terms U-state or U-process verbs.

As mentioned above, there is a tendency for the morphosyntactic classes to correlate with semantic classes. Whilst there are differences among the contemporary Oceanic languages in terms of treatment of individual verbs, some verbs tend to be treated as U-verbs or A-verbs relatively consistently. It is presumed that similar correlations existed in Proto Oceanic.

Table 2 Correlation between morphosyntactic and semantic classes of verbs

Morphosyntactic class	Semantic class
Undergoer subject	
U-stative	property (big, straight, full, hot, wet, dead, clever)
U-process	opening, closing, motion (non-volitional, inanimate subject)
U-process-action	affect (break)
Actor subject	mode of motion (run, swim, crawl), affect (hit), speaking, throwing

The distinctions between state and action verbs, and between Actor and Undergoer verbs attested in Oceanic languages give a firm base for reconstructing a very similar system for Proto Oceanic. Different types of verbs had different patterns of behaviour in terms of morphosyntax; verb roots could be assigned into morphosyntactic classes based on their occurrence and behaviour with valency-changing devices. It appears that Proto Oceanic

valency-increasing devices tended to occur with particular types of verbs, and were used differently with different types of verbs (Evans, 2003; Pawley, 1974; Ross, 1998).

3.2 Types of valency-increasing derivations

It seems that the majority of verb stems in Proto Oceanic could be used intransitively as well as transitively. When used transitively, the increase in valency was marked in several different ways: i) by an object marker alone, ii) by the valency-increasing suffix[2] **-i* or **-akin[i]*, followed by the object marker, or iii) by the prefix **pa[ka]-*, with the verb also followed by the object marker or **-i*. (Evans, 2003; Pawley, 1974). Pawley (1974) notes that the group of verbs occurring only with the object marker was probably a small one in Proto Oceanic, and that most verbs occurred with a transitive suffix. Some verbs occurred with a combination of the affixes.

Proto Oceanic is reconstructed as having both valency-increasing and valency-decreasing derivations. Here, the focus is chiefly on the valency-increasing derivations. There are two kinds of transitivising derivations that are determined by the relationship between the arguments of the intransitive and transitive forms of a given verb; an applicative one, and a causative one. In applicative derivations the S argument of the intransitive verb corresponds with the A argument of the transitive verb, and the derivation supplies a new O argument. This new argument can have different semantic roles, depending on the verb. The causative derivation, on the other hand, supplies a new participant with the role of agent, as the A argument of the transitive verb. The S argument of the intransitive verb corresponds with the O argument of the transitive verb.

Figure 3 Types of derivation

Type of derivation	Correspondence of arguments
applicative	**S**$_{\mathbf{x}}$ V_{INTR} **A**$_{\mathbf{x}}$ V_{TR} O_Y
causative	**S**$_{\mathbf{x}}$ V_{INTR} A_Y V_{TR} **O**$_{\mathbf{x}}$

Whilst the transitive suffixes in Proto Oceanic participated in both applicative and causative derivations, the prefix appears to have occurred only with causative derivations.

Figure 4 Valency-increasing devices and derivations (after Evans, 2003)

Valency-increasing device				Derivation
**-i, *-akin[i]*	**S**$_{\mathbf{x}}$	V_{INTR}		
	A$_{\mathbf{x}}$	V_{TR}	O_Y	Applicative
**pa[ka]-, *-i, *-akin[i]*	**S**$_{\mathbf{x}}$	V_{INTR}		
	A_Y	V_{TR}	**O**$_{\mathbf{x}}$	Causative

[2] In the literature these have been termed the short/close and the long/remote suffix, respectively.

Evans (2003) concludes that the distribution of the *-*i* suffix was phonologically conditioned as it occurred with verbs whose stem was either consonant-final or ended in the vowel **a*, but not with verbs whose stems ended in a vowel other than **a*. This supports Pawley's (1974) hypothesis that the majority of verbs used transitively probably occurred with this suffix, as the phonological shape of verbs which did not occur with *-*i* is more restricted and would have included a relatively small number of verbs. The *-*i* suffix participated in both applicative and causative derivations, depending on whether the verb stem was an Undergoer or an Actor verb; with Undergoer verbs the function was causative, with Actor verbs the function was applicative. In its applicative function, it introduced object participants with the semantic roles of patient, location, goal, addressee and stimulus. In its causative form, it introduced a new subject argument. Undergoer verbs expressing processes appear to have occurred with *-*i* but not with **pa[ka]*-, whilst U-state verbs appear to have occurred with **pa[ka]*- as well as with *-*i*, if they had the right phonological shape. In this case the causative function could be possibly attributed to the prefix more than to the suffix.

As Evans (2003, 2010) demonstrates, reconstructing the functions of *-*akin[i]* is less straightforward. Based on her analysis of Oceanic and non-Oceanic reflexes and cognates of *-*akin[i]*, she concludes that it occurred as phonologically independent (preposition) with some verbs, and as a suffix with other verbs. It appears to have encoded different types of participants with different types of verbs, as shown in Table 3. As such, verbs with *-*akin[i]* were in contrast with verbs derived by *-*i* or verbs marked as transitive by an object marker alone, rather than with the intransitive forms. This function then was a valency-rearranging one, rather than a valency-increasing one.

Evidence from modern languages suggests that the use of Proto Oceanic *-*akin[i]* developed from a prepositional one into an applicative one[3]. Based on its reflexes and cognates, it appears that POc *-*akin[i]* also had a causative use with some verbs (Evans, 2003; Pawley, 1974). Pawley (1974) reconstructs *-*akin[i]* as having a causative function with verbs of psychological and emotional states, and it appears that *-*akin[i]* may have functioned causatively with some U-process motion verbs. However, Evans (2003) notes that today this use of the *-*akin[i]* with psychological verbs seems to be limited to the Fijian languages and concludes that whilst *-*akin[i]* most likely was used causatively with some verbs in Proto Oceanic, it is not possible to determine without further detailed study how this use developed or exactly which verbs it applied to.

*Table 3 Types of roles denoted by POc *-i and *-akin[i] (after Evans, 2003)*

Verb type	Roles denoted by O with *-*i* and/or object marker	Roles denoted by *-*akin[i]*
motion verbs	location / goal	concomitant
psychological and emotional states	stimulus	cause / stimulus
speech and cognition	addressee	content
excretion / secretion	location	product
process-action verbs	patient	instrument, beneficiary

[3] For a slightly different analysis of the development of the POc *akin[i] see Pawley and Reid (1979) and Harrison (1982).

Two forms have been reconstructed for the causative prefix in Proto Oceanic: **pa-* and **paka-* (Evans, 2003). The only apparent distinction between these two forms at the POc level was most likely in that **paka-*, but not **pa-*, was used to derive multiplicatives from numerals.[4] Other functional distinctions existed in pre-Proto Oceanic but were no longer productive at the Proto Oceanic stage. In POc, **pa[ka]-* was a valency-increasing device used to derive transitive verbs from intransitive ones. The derivations it participated in were causative, so that the S of the intransitive verb corresponded with the O of the transitive verb, and a new A was supplied. Whilst all classes of verbs appear to have formed causatives, only U-statives and A-verbs occurred with **pa[ka]-*, whilst causative forms of U-process verbs were marked by **-i* or the object marker. Table 4 provides a summary of the valency-increasing devices in Proto Oceanic and the types of verbs with which they occurred.

Table 4 Verb classes and distribution of valency-increasing devices in Proto Oceanic (after Evans, 2003)

U-stative verbs		
stem	S_X V	S is in or enters into state, implied lack of Actor
stem plus **pa[ka]-*	A_Y paka-V-i/OBJ O_X	A causes O to be in or enter into a state
U-process verbs		
stem	S_XV	S undergoes event
stem with **-i*	A_Y V-i/OBJ O_X	A causes O to undergo event
stem with **-akin[i]*	A_Y V-akini=OBJ O_X	A causes O to undergo event
	A_Y V-akini=OBJ O_{INSTR}	A carries out event using O
Actor subject verbs		
stem	S_Y V	S carries out event
stem with **-i*	A_Y V-i/OBJ O_X	A carries out event, affecting O
stem with **-akin[i]*	A_Y V-akin-i=OBJ O_Z	A carries out event along with, because of, about, or producing O
stem with **pa[ka]-*	A_{CAUS} V-i/OBJ O_Y	A makes O carry out event

In terms of the valency-increasing derivations, the functions of the Proto Oceanic morphemes seem to be very similar to what we find in the contemporary Southeast Solomonic languages. In this subgroup of Oceanic the reflexes of **-i* and **-akin[i]* occur both in applicative and causative derivations, whilst the reflexes of **pa[ka]-* occur only in causative derivations but not applicative ones. Verbs can also be marked for increased valency by the object marker alone, for both applicative and causative derivations. Based on this observation, it would appear that the SES languages neatly reflect the reconstructed POc pattern. However, they do so only to a certain extent.

[4] This distinction has been retained in some of the daughter languages. Interestingly, in the SES languages both prefixes appear to be used in the multiplicative function; in the Makira/Malaita languages and in Birao it is the reflexes of **paka-*, but in Bugotu and Gela it is the reflex of **pa-*.

4 Causative derivations in Southeast Solomonic

4.1 Transitivity marking in SES languages

The morphosyntactic classes posited for Proto Oceanic are widely reflected in the contemporary Oceanic languages, including Southeast Solomonic. The boundaries of the verb classes are somewhat fuzzy, and there are some differences across the languages (and possibly across the dialects). Also, as noted by Pawley (1974:140), verbs may change category over time: some reflexes of particular POc verbs appear to belong to a different verb category in some of the contemporary languages than they probably belonged to in POc.

Similarly to a number of other Oceanic languages, transitivity in Southeast Solomonic languages is marked morphologically. Whilst some verbs occur as strictly transitive or intransitive, commonly we find pairs of verbs which are unmarked[5] when used intransitively and marked when used transitively. The intransitive and transitive counterparts are thus in a paradigmatic relation. Verbs are marked for transitivity in several ways: i) by the object marker alone (6), ii) by the short/close transitive suffix[6] (7), iii) by the long/remote transitive suffix (8), iv) by the causative prefix (9), or v) by a combination of the affixes[7] (10) and (11). Normally all verbs used transitively occur with the object marker[8] which follows the relevant suffix (if present).

Longgu

6) *pitu* 'to wait' *pitu-* 'to wait for s.o.'

(Hill, 2011a)

Gela

7) *idu* 'to read' *idu-**mi**-* 'to read s.t.'

(C. E. Fox, 1955:43)

'Are'are

8) *hote* 'to paddle' *hote-**ra'ini**-* 'to propel by paddling or rowing'

(Geerts, 1970:38)

Birao

9) *mauri* 'to live, be alive' ***vagha**-mauri-* 'to resuscitate s.o.'

(KN field data)

Arosi

10) *angi* 'to cry' ***ha'a**-angi-**si**-* 'cause to cry'

(C. E. Fox & Craft, 1978:57)

[5] Some verbs have retained the Proto Oceanic pattern of marking their intransitive forms by the valency-decreasing prefixes *ma-* or *ta-* (Evans, 2003). Languages differ as to how productive this process is. As this is not crucial for the present discussion, the valency-decreasing derivations are not mentioned here.

[6] The suffixes are reflected with a variable initial consonant that is typically lexically-determined. Both the short and long suffix may have several allomorphs in a given language.

[7] There are some verbs which occur with one of the valency-increasing affixes but are syntactically intransitive. These verbs do not seem to occur frequently and are not discussed here.

[8] In some languages, some verbs may occur with the object marker only for third person objects. Also verbs that are semantically transitive frequently occur as syntactically intransitive when a generic object is incorporated.

Bugotu

11) *dika* 'to be bad, evil' ***va**-dika-**laghini**-* 'to spoil or corrupt'

(W. G. Ivens, 1940)

The transitive suffixes generally participate in both applicative and causative derivations, but the prefix occurs only in causative derivations. This is illustrated by the Longgu data (Hill, 2011b) in 12) to 16) but the pattern is found across the Southeast Solomonic subgroup (that is in those languages that reflect all the respective morphemes).

Reflex of **-i* in applicative function

12) a. *E* *mae* *'ani-a* *malaria-i.*
3SG.SBJ be.dead INS-3SG.OBJ malaria-NMLZ
'He/she is dead because of malaria.'

b. *E* *mae-**si**-a* *malaria-i.*
3SG.SBJ die/be.dead-**APPL**-3SG.OBJ malaria-NMLZ
'He/she died of malaria.'

Reflex of **-i* in causative function

13) a. *Nununu-i* *e* *kasukasu*
earthquake-SG 3SG.SBJ shake
'The earthquake is shaking.'

b. *Na* *ho* *kasu-'**i**-a* *'ai-ne* *m-e* *ge*
1SG.SBJ IRR shake-**CAUS**-SG.OBJ tree-DEM CONJ-3SG OBLG

dio *lodo-na.*
fall fruit-DEM
'I will shake this tree and its fruit should fall.'

Reflex of **-akin[i]* in applicative function

14) a. *Mwela-i* *e* *moamoa* *ta-na* *vau-i.*
child-SG 3SG.SBJ vomit LOC-3SG.POSS stone-SG
'The child is vomiting on the stone.'

b. *E* *moa-**ta'ini**-a* *abu.*
3SG.SBJ vomit-**APPL**-3SG.OBJ blood
'He/she vomited blood.'

Reflex of **-akin[i]* in causative function

15) a. *E* *dau* *lamu-i.*
3SG.SBJ hanging lamp-SG
'The lamp is hanging up.'

b. *Dau-**ra'ini**-a* *lamu-i.*
hang-**CAUS**-3SG.OBJ lamp-SG
'Hang up the lamp.'

Reflex of **pa[ka]-* in causative function

16) a. *E* *vaolu.*
3SG.SBJ be.clean
'It's clean.'

b. *E* ***va'a**-vaolu-a.*
3SG.SBJ **CAUS**-clean-3SG.OBJ
'He/she cleaned it.'

(Hill, 2011b)[9]

Whilst the Southeast Solomonic languages have inherited the same pool of valency-increasing devices which may be used to form causative derivations, we find that that i) not all devices are present in all the contemporary languages and ii) there are differences in how they are used. Table 5 provides an overview of the valency-increasing devices used causatively in the SES languages included in the study.

As seen from Table 5, the valency-increasing devices reconstructed as marking causative derivations in Proto Oceanic are widely reflected in the Southeast Solomonic languages, including marking the causative transitives by the object marker alone. However, whilst the reflexes of POc **-i* are found in every language included in the study, the reflexes of **pa[ka]-* and **akin[i]* are used productively only in some of the languages. Lengo, Tolo and Gari do not reflect the causative prefix **pa[ka]-* at all, the prefix is reported to be rare in Inakona and no longer productive in Gela. Reflexes of **-akin[i]*, on the other hand, have been found only sporadically in Birao and Tolo, and appear to be infrequent in Gari and Bugotu.

[9] The Longgu examples appear here with their original glosses with the exception of 13) b. where the suffix was originally glossed TR whilst here it is closed CAUS.

Table 5 Valency-increasing morphemes participating in causative derivations in SES languages

Language	Object marker alone	Reflex of **-i*	Reflex of **-akin[i]*	Reflex of **pa[ka]-*	Combination **pa[ka]- + *-i/*-akin[i]*
Lau	✓	✓	✓	✓	✓
Toʔabaʔita	✓	✓	✓	✓	✓
Kwaio	✓	✓	✓	✓	✓
'Are'are	✓	✓	✓	✓	✓
Sa'a	✓	✓	✓	✓	✓
Arosi	✓	✓	✓	✓	✓
Owa	✓	✓	✓	✓	✓
Longgu	✓	✓	✓	✓	✓
Marau	✓	✓	✓	✓	✓
Lengo	✓	✓	✓		
Birao	✓	✓	✓r	✓	✓
Tolo	✓	✓	✓r		
Inakona	✓?	✓?	✓?	✓r	
Gari	✓	✓	✓		
Vaturanga		✓?	✓?	✓?	
Bugotu	✓	✓	✓r	✓	✓
Gela	✓	✓	✓	✓f	

Legend to Table 5 : ✓ - device is attested in the language as productive, ✓? - device is attested but not enough data is available to determine how productive it is, ✓r - device is attested but rare, ✓f - device is attested but fossilised, blank space - device not attested in a language or no data available

4.2 Changes in the distribution of devices with particular lexemes

The changes in the distribution of valency-increasing devices are clearly observable when we compare the Proto Oceanic reconstructions of particular lexemes with their reflexes in the Southeast Solomonic languages. The following sections present the reconstructed verbs **mate* 'be dead, **[ma-]liŋi* 'be poured' and * *taŋis* 'to cry, weep' and their reflexes from the SES languages. These verbs are reconstructed as belonging to the morphosyntactic class of Undergoer stative, Undergoer process, and Actor verbs, respectively, in Proto Oceanic. In the tables below, dotted lines separate the individual languages whilst the full line separates the Makira/Malaita branch from the Guadalcanal/Gela one.

4.2.1 POc **mate* 'be dead, die'

Proto Oceanic **mate* is reconstructed as a stative verb with an Undergoer subject. Based on reflexes of this verb in a wide range of Oceanic languages, it is reconstructed as having had

the transitive form **pa[ka]-mate-*, that is being marked as transitive by the causative prefix and an object marker. As its stem ended in a vowel other than **a*, it most likely did not occur with **-i* in its transitive form. The derivation forming the transitive verb was a causative one.

This verb is widely reflected across the languages of the Southeast Solomonic subgroup. Whilst in virtually every language in the sample there is a causative form, the formal mechanisms by which the causatives are formed differ among the languages. We find that whilst morphological causatives are more common, some languages also have serial verb constructions (in the tables V stands for the first verb in the SVC), often used alongside the more compact causatives. Within the morphological causatives, there is quite a range of devices and their combinations used in different languages. Whilst Lau, Kwaio, Marau, Longgu and Birao reflect the reconstructed causative form (**pa[ka]-* V OBJ), a number of these languages also innovated other forms with causative meaning, using the reflexes of **-i* and combinations of devices, which differs from the reconstructed pattern. Furthermore, many of the languages from the Guadalcanal/Gela group seem to have completely lost causative forms with the reflex of **pa[ka]-*.

Interestingly, in the Makira/Malaitan languages, but not in the languages from the Guadalcanal/Gela branch, this verb participates in both applicative and causative derivations. Therefore it shows behaviour of an Undergoer verb as well as an Actor verb. The applicative derivation is marked by the reflexes of **-i*. Thus whilst in the MM branch the reflex of **-i* signals an applicative derivation, the same device marks causative derivation in some of the languages from the GG branch. Somewhat puzzling are the instances where the reflex of **-i* is used to mark both types of derivations in a single language, such as in Lau, 'Are'are and Arosi.

*Table 6 Reflexes of POc *mate in Southeast Solomonic languages*

Intransitive		Applicative		Causative	
Proto Oceanic					
***mate**				***pa[ka]-mate-**	
Lau					
mae	be dead, die	*mae-li-*	die of s.t.	***faa**-mae-*	kill s.o. (illness)
		mae-si- (d)	die of	***faa**-mae-**li-***	kill or let die (person)
				*mae-**li-*** (d)	kill, cause death
Toʔabaʔita					
mae	die, be dead, be paralysed, be extinguished	*mae-li-*	die of, because of	***V** mae-**li-***	kill, cause to die, extinguish
Kwaio					
mae	die, be dead	*mae-ri-*	die of (illness)	***fa'a**-mae-*	kill, extinguish
		mae-si-	die of (illness, kastom)	***fa'a**-mae-**ri-***	make numb (with anaesthetic)
		mae-te'eni- (d)	go slowly, take breaks from doing	***V** (kwa'i) mae-**ri-***	kill s.o.
'Are'are					
mae (aana) (f)	be dead, die (of s.t.)	*mae-si-* (d)	die of, be ill of	***V** mae-**si-***	kill s.o. (person)
				ha'a**-mae-**si- (f)	kill s.o. (illness)
mae	die, be dead, unconscious, faint			***V** mae-**si-***	kill
				ha'a**-mae-**si- (d)	kill, murder
Marau					
mae	be dead, die	*mae-si-*	die of s.t.	***ha'a**-mae-**si-*** (f)	extinguish fire
				V** mae-**si- (f)	kill s.o.
				***ha'a**-mae-* (d)	pound in mortar
Arosi					
mae	die, faint	*mae-si-*	die from, be ill with	*mae-**si-***	kill
Owa					
mae	die, stop (fire, engine)	*mae-si-*	be desperate for s.t.	***ha'a**-mae-**si-***	kill
				*mae-**si-***	kill
		ma-mae-si-	die/suffer from	***faga**-mae-**si-***	kill, cause to die
Longgu					
mae	die, be dead	*mae-si-*	die of s.t.	***va'a**-mae-*	kill s.o.
				va'a**-mae-**si-	cause to die

Intransitive		Applicative		Causative	
Gela					
mate	die, be dead, fainted, unconscious, paralysed			*mate-*	kill, extinguish
Lengo					
mate	be dead, die			*mate-*	kill
Birao					
mate	be dead, die			***vagha**-mate-*	kill (person, illness), extinguish
				***vagha**-mate-**si**-*	kill (person intent., illness), extinguish
				*mate-**si**-*	kill (by accident, illness), extinguish
				mate-	extinguish fire
				***V** (labu-si) mate-*	kill (person by action)
Tolo (Talise)					
mate	be dead, extinguished			*mate-*	extinguish, turn off
Inakona (Talise)					
mate	be dead			***V** (pusu) mate-*	destroy
Gari (WG)					
mate	be dead			*mate-**si**-*	kill (person, illness), extinguish
Vaturanga (WG)					
mate	be dead			*mate-**si**-*	kill

4.2.2 POc **[ma-]liŋi* 'be poured'

This verb probably belonged to the Undergoer-process verbs in Proto Oceanic. In this class causative derivations were marked either by the object marker alone, or by the suffix **-i*, depending on the phonological shape of the stem. Only a few U-process verbs are thought to have marked causative derivations by **-akin[i]*; these verbs were likely motion verbs. So it seems likely that in Proto Oceanic this verb would have been marked as causative only by the object marker.

*Table 7 Reflexes of POc *[ma]liŋi in Southeast Solomonic languages*

Intransitive	S/A	Applicative	S=A	Causative	S=O
Proto Oceanic					
[ma]liŋi	pour			***liŋi-***	
Lau					
ligi	pour by inclining a vessel	*ligi-si-*	transitive (applicative?)	*ligi-**taini-***	no gloss (causative?)
ligi-tai	spill, capsize				
Toʔabaʔita					
ligi	stand with one's weight on one leg, hip	*ligi-si-*	take, move s.t./s.o. from a relatively high position and put them down		
ligi-ligi	shift one's weight alternately from one leg to another				
Kwaio					
-		*liki-si-*	turn upside down	*liki-**te'eni-***	turn an object upside down, or over on its back (causative?)
'Are'are					
maaniri	full to overflowing			*niri-*	spill, pour out
Marau					
aaniri	be spilled, spill			*niri-*	spill s.t.
Sa'a					
maliŋi	spilt, full to the brim (adj)	*liŋi-*	to overbalance, to lean	*maliŋi-**si-***	to cause to spill
mamaliŋi	spilt (adj)				
Arosi					
ma-riŋi	running out/over, inclined (of a vessel)			*riŋi-*	pour, incline a vessel
riŋi-ta'i	pour out, intransitive			*riŋi-**si-***	pour, incline a vessel
				ha'a**-riŋi-**si-	pour out, incline

Intransitive	S/A	Applicative	S=A	Causative	S=O
Owa					
-		*riŋi-*	pour s.t. (applicative?)[10]		
Bugotu					
ligi	to incline, drop the head			***va**-lighi*	to incline, lean, cause to wobble
li-ligi	oscillate, wobble, capsize				
Gela					
lighi	go down, decline (of sun)	*lighi-*	incline a vessel, pour		
lighi-lighi	roll (of a ship)				
like-like	roll (of a ship)	*like-*	incline a vessel	*like-**laghi**-*	causative
Gari					
like-like	to incline on one side, to roll as a boat or a canoe				
-lighi	aside, away (suffix or adverb?)				
Tolo					
lihi-	away from, out of (adverb?)				

The synchronic data provides a somewhat puzzling picture. In some cases, in the absence of sentential examples in the dictionaries makes it is difficult to decide whether the listed form is applicative or causative. Nonetheless it appears that a number of devices are used to mark the causative forms across the Southeast Solomonic languages. In Lau, Kwaio and Gela it is the reflex of **-akin[i]*, whilst in 'Are'are the causative derivation is encoded by the object marker alone. In Arosi several forms could be causative: i) one marked only by the object marker, ii) one marked by the reflex of **-i*, and iii) one marked the reflex of **-i* as well as by reflex of **pa[ka]-*, all of which appear to be causative.

4.2.3 POc *taŋis* 'weep, cry'

This verb is reconstructed as an Actor subject verb in Proto Oceanic. Apparently it had several transitive forms, one marked by the suffix **-i* and one marked by **-akin[i]*. Since a number of Actor verbs could derive causative forms with the prefix **pa[ka]-*, it is possible that this verb could do so too.

[10] In the absence of an intransitive form, the derived transitive forms have been placed in the column based on cognate derived forms in other languages from the same branch.

*Table 8 Reflexes of POc *taŋis in Southeast Solomonic languages*

Intransitive	S/A	Applicative	S=A	Causative	S=O
Proto Oceanic					
****taŋis***	cry	****taŋis-i-***	cry for		
		****taŋis-akin-i-***	cry about, mourn s.o.		
Lau					
angi	cry, make sound	*angi-si-*	cry for s.o.	***faa**-angi-* (f)	make cry (intention)
angi-angi (d)	cry	*angi-taini-* (d)	cry for a nurse	***faa**-aangi-**si**-* (f)	make cry (intention, accident)
angi-tai (d)	cry for a nurse, keep asking for payment				
Toʔabaʔita					
angi	cry, produce sound	*angi-si-*	cry for s.o./sth.		
angi-ta'i	ask to sell crops in a garden during crop shortage				
Kwaio					
aangi	cry	*angi-si-*	cry for s.o.	***fa'a**-angi-*	make cry (int)
ani (d)	cry, make noise	*ani-te'eni- (d)*	try to get sth. by crying about it		
ani-ani (d)	cry				
Arosi					
angi	cry, make sound	*angi-si-*	cry for	***ha'a**-angi-**si**-*	cause to cry
angi-angi	cry	*angi-hi-*	cry for		
angi-ta'i	cry out at, wonder at				
Owa					
angi	cry, wail, call (bird)	*angi-si-*	cry over sth.		

Intransitive	S/A	Applicative	S=A	Causative	S=O
Longgu					
angi	cry	*angi-si-*	cry for	***va'a**-angi-**si**-*	make cry, make s.o. cry for it
Bugotu					
tangi	cry, cry aloud, lament, wail	*tangi-hi-*	desire, want, bewail		
Gela					
tangi	cry, make a sound	*tangi-hi-*	cry for	*tangi-**haghi**-*	cause (cry)
				*tangi-**laghi**-*	cause to sound
Lengo					
tangi	cry, make noise (birds)				
Gari					
tangi	cry, make noise	*tangi-si-*	cry for		
Tolo					
tangi	cry, emit sound				

Not all languages form morphological causatives with this verb, or at least for some languages no derived causative form was found in the dictionaries. Among those languages that do have causatives two distinct patterns emerge: whilst the languages from the Makira/Malaita branch tend to form causatives with the reflexes of **pa[ka]-*, in the one language where a morphological causative of this verb was found in the Guadalcanal/Gela branch, in Gela, we find the reflex of **-akin[i]*.

Shifts away from the reconstructed patterns are not restricted to these three verbs, but found across many different verb cognate sets. The internal differences among the Southeast Solomonic languages suggest that significant changes have taken place in the marking of the causative constructions in these languages. It is clear that the reflexes of **pa[ka]-* have been largely lost in the Guadalcanal/Gela languages, with the exception of Birao, whilst it remains highly productive in the Makira/Malaita branch as a morphological causative. The causative function appears to be fulfilled by the reflexes of **-i* and **-akin[i]* in those languages that have lost **pa[ka]-*, or the causative verb is marked only by the object marker.

However, comparison of the reconstructed forms and their reflexes in the modern languages provides us with only a partial picture. Whilst this kind of data provides evidence for the changes and development of particular lexemes through time, it may fail to capture changes in patterns of behaviour of the inherited morphology in the synchronic languages. Understanding the contemporary systems of transitive morphology can also provide insights into the history into the valency-changing morphemes and derivations.

4.3 Changes in patterns of distribution across the SES languages

The following sections illustrate the patterns of marking causative derivations across the Southeast Solomonic languages. Sections 4.3.1, 4.3.2 and 4.3.3 provide an overview of causative derivations in three languages that differ from each other considerably: 'Are'are, Gela and Gari. The verbs on which the patterns of marking causative derivations are illustrated fall into several different categories, based on their semantics. U-state: property verbs, U-process: motion, opening and closing, U-action-process verbs - breaking, A-verbs: motion, speaking. This is because these verbs tend to belong to the same category across the SES, and in many other Oceanic, languages, and most likely were also the same category in Proto Oceanic. Section 4.3.4 discusses causative derivations with these verbs across the whole Southeast Solomonic subgroup.

4.3.1 Patterns in 'Are'are

'Are'are reflects all the devices reconstructed for POc, and in this respect it belongs to the more conservative languages. There are differences in the frequency with which the devices are used; the causative prefix appears to be the most common one. It is used with verbs expressing properties and states where it signals a direct causation, with verbs of motion, where it denotes a direct causation (U-verbs) or indirect causation (A-verbs) with meanings such as 'to incite', 'to encourage', 'to help, or 'to enable' someone to bring about the event denoted by the verb.

Verbs expressing properties and states have a strong tendency to occur with the causative prefix *ha'a-* and thus appear to be quite conservative, but there are some innovations here too. Table 9 shows property verbs with their causative forms; those causativised only with the prefix *ha'a-* are shown in the bottom part of the table. Whilst in Proto Oceanic we would expect verbs with stems ending in vowels other than **a* to also occur with the suffix **-i*; it is evident that the phonological conditioning does not apply here as the final consonants have been lost in a

regular sound change.[11] More interestingly, some verbs have more than one causative form, one with the prefix and one without it, or causatives where one form contains the prefix and the reflex of **-i* whilst the other form contains only the reflex of **pa[ka]-*.

Table 9 'Are'are verbs expressing properties and states (KN field data)

Intransitive		**Causative**	
ma'a	be empty, extinguished	*ma'a-*	
		***ha'a**-ma'a-*	empty, extinguish s.t.
aaroka	be wide	*aaroka-**si**-*	widen s.t.
		***ha'a**-aaroka-*	widen s.t.
		***ha'a**-aaroka-**si**-*	widen s.t.
honu	be full	*honu-**ri**-*	fill up s.t. (content)
		***ha'a**-honu-**ri**-*	fill up (agent)
makata	be bright	*makata-**ri**-*	brighten s.t.
		***ha'a**-makata-**ri**-*	brighten s.t.
rakaraka	be hot	*raka-**hi**-*	heat up s.t. (sun, fire)
		***ha'a**-raka-**hi**-*	heat up s.t. (person)
weo	be tired	***ha'a**-weo-si-*	tire s.o. (person)
		***ha'a**-weo-*	tire s.o. (activity)
'ewa	be long, tall	***ha'a**-'ewa-*	make s.t. long
koko'osu	be short	***ha'a**-koko'osu-*	shorten s.t.
ootoooto	be straight	***ha'a**-ootoooto-*	straighten s.t.
'okira	be strong	***ha'a**-'okira-*	make s.t. strong, tighten, harden s.t.
haoru	be new	***ha'a**-haoru-*	renew s.t.
to'o	be sharp	***ha'a**-to'o-*	sharpen s.t.
rete	be good	***ha'a**-rete-*	make s.t. good
iiwera	be plenty	***ha'a**-iiwera-*	augment
kakasu	be rotten	***ha'a**-kasu-*	cause s.t. to rot
mata	be ripe	***ha'a**-mata-*	ripen s.t. (sun)
meko	be silent	***ha'a**-meko-*	silence s.o.
'uru	be blind	***ha'a**-'uru-*	blind s.o.
sisiu'a	be cold	***ha'a**-sisiu'a-*	make cold

Whilst it is not always possible to identify semantic distinctions between the two causative forms derived from the same verb, often the two causatives indicate a different meaning:

17) a. *Kahu* *na* *ka* *honu-**ri**-a* *kapu.*
water DEM IPF be.full-CAUS-3SG.OBJ cup
'The water is filling up the cup.'
(speaker MARR1)

[11] Although there are property verbs derived with the suffix *-'a*, and some these would occur with the reflex of **-i*.

b. *Keni* *'ai'ee* *ka* ***ha'a**-honu-a* *paketi* *aa-na* *kahu.*
woman DEM IPF CAUS-be.full-3SG.OBJ bucket INS-OBJ water
'This woman is filling the bucket with water.'

In sentence in 17) a. the causative is formed only by the reflex of **-i* but without the causative prefix. The causer is the content filling the container. In 17) b. the causative form is derived with the prefix, but does not contain the suffix. In this verb the action is being carried out by a person. Apparently using the form derived with the reflex of **-i* and a human agent in the A function would give meaning like 'The woman is filling the cup with herself, she is the content of the cup.' This pattern is also found in the neighbouring language Sa'a and Ashley notes the distinction between indirect causatives derived with the causative prefix and verbs derived with the suffix *-Ci* which tends to express direct causation (2012:79-81). However, another 'Are'are speaker produced slightly different forms:

18) a. *Uuta* *'e* ***ha'a**-honu-a* */* ***ha'a**-honu-**ri**-a* *tanki.*
'The rain filled up the tank (with water).'

19) b. ***Ha'a**-honu-**ri**-a* */* ***ha'a**-honu-a* *kapu!*
'Fill up the cup!'

(speaker FARR2)

The speakers are of the same age, and come from the same area of 'Are'are. Whilst they are a male and a female, there is no indication that such morphological patterns are gender-based. The 'Are'are dictionary (Geerts, 1970) lists three forms: *ha'a-honu-a*, *ha'a-honu-ri-a* and *honu-ri-a*, without any apparent difference in meaning.

The verb *rakaraka* 'be hot' shows a similar, but not identical, pattern. Here, too, we see two causative forms, distinct in the directness of the causation. The form *raka-hi-a* would occur with a direct source of the heat, such as sun or fire, in the A function, but not with a person. The form *ha'a-raka-hi-a* on the other hand requires an animate entity, such as a human, in the A slot. This is supported also by the data from the dictionary, where *ha'a-raka-hi-a* is listed with the meaning 'heat up, food', implying the need for someone to heat it up, and the form *raka-hi-a* 'to heat, warm', which seems to imply that the causer could be an entity emitting heat.

The difference in types of causation is also coded by the different strategy with the verb *weo* 'be tired'. Whilst *ha'a-weo-a* takes a person as its A argument, implying that a person did something to make another tired, *ha'a-weo-si-a* would take an activity, such as work, as the A argument. The only causative form listed in the dictionary is *ha'a-weo-a* 'punish, make suffer' which looks like it would require a human as the causer.

Verbs of motion where the participant encoded by S undergoes the event without volition or is inanimate fall into the U-process category, as do verbs of opening and closing. Whilst in Proto Oceanic these verbs appear not to have occurred with **pa[ka]-*, some such verbs in 'Are'are do form causatives with *ha'a-*.

Usually these prefixed forms exist alongside transitive forms with the object marker or one of the suffixes. Whilst in some cases the causative forms appear to be synonymous, in other cases there is an indication of a difference in meaning. Moreover, whilst in Proto Oceanic the suffix **-akin[i]* probably had a causative function with these verbs, it does not appear to be used causatively very often in 'Are'are.

For example, the form *teke-ra'ani-* would be used in a situation when someone accidentally drops something they were holding in their hands, but to describe a situation when someone is up in a tree throwing fruits down to someone, or making the fruit drop (e.g. by shaking the branches) the forms with *ha'a-* would be used.

Table 10 Undergoer process verbs in 'Are'are (KN field data)

Intransitive		**Causative**	
Motion			
aarakoe	roll away	*aarakoe-*	roll s.t.
rarapehu	roll (down?)	*rarapehu-*	roll s.t.
		***ha'a**-rarapehu-*	cause s.t. to roll
aakiu	sink	*aakiu-*	sink s.t.
		*aakiu-**si**-*	sink s.t.
		***ha'a**-aakiu-**si**-*	sink s.t.
teke	fall	*teke-**si**-*	fell s.t.
		*teke-**ra'ani**-*	drop s.t., throw away
		***ha'a**-teke-**ra'ani**-* (f)	drop, make drop/fall
		***ha'a**-teke-**hi**-* (f)	drop, throw s.t. down
Opening			
taha	be open, open	*taha-**ni**-*	open s.t.
		***ha'a**-taha-**ni**-*	open s.t. (when it should be closed); open formally, remove ceremonial impotency (d)
Closing			
hono	be closed, close	*hono-**si**-*	close s.t.
		***ha'a**-hono-**si**-*	close s.t.
Finishing			
siko	be finished, finish	***ha'a**-siko-*	finish, use up s.t.

'Are'are affect verbs expressing breaking belong, similarly to Proto Oceanic, to the Undergoer class. They are process-action verbs as they express simultaneously that an agent is carrying out an action and that this action has an effect on the patient. For the most part, they are marked only by the object marker, but some occur with the reflex of **-i*; these verbs have the correct phonological shape that would require the suffix in Proto Oceanic. In one case there is a distinction between marking the verb with the reflex of **-i* and by the object marker alone, as shown by the pair *'aka-si-* and *'aka-*. Whilst the form with the reflex of **-i* denotes accidental causation, the verb marked as transitive only by the object marker denotes a deliberate action.

Table 11 Undergoer process-action verbs in 'Are'are

Intransitive		**Causative**	
Breaking			
hoke	be broken, break	*hoke-*	break s.t.
aa'oi	be broken, break	*'oi-*	break s.t.
mahusi	be broken, break (in two)	*mahusi-*	break s.t.
hora	be split, cracked, split	*hora-*	split s.t.
aakari (f)	be torn, tear	*aakari-* (f)	tear s.t.
		*hora-**'i**-* (d)	split s.t. into pieces
napota	be broken, break	*napota-**ri**-*	break s.t.
nanari (d)	be torn, tear	*nanari-* (d)	tear s.t.
		***ha'a**-nanari-* (d)	tear s.t.
Pouring and spilling			
'aka	be spilled, spill	*'aka-**si**-*	spill s.t. (accident)
		'aka-	pour s.t.
maaniri (d)	full to overflowing	*niri-* (d)	spill, pour out

Verbs denoting a mode of motion, where the action is carried out volitionally, and verbs of speaking take Actor subjects. These verbs often have causative forms, expressing that someone incites, encourages, helps or forces someone to carry out the action. Interestingly, there is a strong tendency towards forming the causatives of Actor verbs with the prefix *ha'a-*, rather than with any other device, which reflects the POc pattern. There were no causative forms of verbs of hitting and throwing found in the data.

Table 12 Actor subject verbs in 'Are'are

Intransitive		**Causative**	
Motion			
aano	crawl, creep	***ha'a**-aano-*	make s.o. crawl
hane	climb	***ha'a**-hane-*	make s.o. climb; elevate
ooro	run	***ha'a**-ooro-*	make s.o. run
pora	jump	***ha'a**-pora-*	make s.o. jump
roho	fly	***ha'a**-roho-*	teach or enable to fly
Speaking			
na'a	talk	***ha'a**-na'a-*	make s.o. talk
aarahu	give speech	***ha'a**-aarahu-*	encourage s.o. to speak
nuu	sing	***ha'a**-nuu-*	make s.o. sing
sisihora	tell stories	***ha'a**-sisihora-*	make s.o. tell story
uuro	shout	***ha'a**-uuro-*	make s.o. shout

On the whole the 'Are'are verbs tend to be conservative in marking the causative derivations. However, there are some interesting innovations where Undergoer process verbs occur with the causative prefix, whereas they likely would not have done so in Proto Oceanic.

Also a number of verbs have two or more causative forms. Whilst it is not always possible to pinpoint the difference in meaning, there are clear cases where the different causative forms code a distinction in meaning. It appears that there has been a development of marking some distinctions in causatives, possibly between direct and indirect causation, where the indirect causation tends to be coded by the causative prefix *ha'a-*, similarly to a number of other Oceanic languages. This could be parallel to the causatives derived from the Actor subject verbs, where causatives are common but they all tend to be indirect.

4.3.2 Patterns in Gela

The first obvious difference between causative derivations in 'Are'are and Gela is that whilst the reflex of **pa[ka]-* exists in Gela, it is no longer productive although it appears with some verbs. The two suffixes participating in causative derivations are the reflexes of **-i* and **-akin[i]*, with the latter appearing to be used as causative much more frequently.

Only for some property verbs was it possible to establish both intransitive and corresponding causative counterparts. Different causativising strategies appear here: in some cases the verb is marked as transitive/causative only by an object marker, one verb, *va-uto-* 'make something good' appears with the reflex of **pa[ka]-*, a couple of verbs occur with the reflex of **-i*, but the most common device seems to be the reflex of **-akin[i]*. This is a significant change from the reconstructed pattern, where these verbs would have occurred with **pa[ka]-*.

Table 13 Property verbs in Gela

Intransitive		**Causative**	
maemane	straight, correct, just	*maemane-*	to straighten
vaolu	be new	*vaolu-*	renew s.t.
		vaovaolu-	renew
para	be hot	*para-*	to scorch
uto	be good	***va**-uto-*	make s.t. good
kama	great, big	*kama-**ni**-*	increase, enlarge, add to
mali	be bitter, salt	*mali-**hi**-*	make bitter; salt a dish
danga	be full	*danga-**li**-*	to fill full (applicative?)
		*danga-**laghi**-*	cause to be full, fill
vonu	be full	*vonu-**li**-*	to fill (be full of, applicative?)
		*vonu-**laghi**-*	cause to be full
bau	dirty, black with dirt	*bau-**laghi**-*	to blacken
boe	be tired	*boe-**laghi**-*	be tired by
daro	be long (adj?)	*daro-**laghi**-*	to lengthen
kukulu	be short (space/time), brief	*kukulu-**laghi**-*	shorten
dara	be bright, flashing	*dara-**laghi**-*	cause to flash
viti	bright, dazzling	*viti-**laghi**-*	causative
dolo	kind, friendly (adj?)	*dolo-**vaghi**-*	to tame
mabo	just, upright, righteous, good, honest, innocent	*mabo-**laghi**-*	put at ease

Undergoer-process verbs in Gela tend to be conservative and mark causative derivations by the reflex of *-*akin[i]*. Whilst there are verbs that occur with other devices, none of them appear to be as common as the long suffix.

Table 14 Undergoer-process verbs in Gela

Intransitive		**Causative**	
Motion			
lu-lumi	sink down, drown	*lumi*	submerge s.t.
luvu	capsize and sink	*luvu-**hi***	transitive
biso	sink, be bogged	*biso-**kaghi***	cause to be bogged, push into a bog
like-like	roll (of a ship)	*like-**laghi**-*	causative
belulu	sink in water	*belu-**laghi***	cause to sink
kutu	fall, tumble	*kutu-**laghi***	cause to fall, throw down, knock over
sata	fall	*sata-**laghi***	let fall
tavi	stumble, slip	*tavi-**laghi***	cause to slip
Opening			
ta-voka	opened, split open, divided	*voka-*	divide, separate (causative?)
		*voka-**ri**-/voka-**si***	divide, separate, open out
ta-vuki	opened	*vuke-**si***	pull apart
vure	open out	*vure-**hi***	open out s.t.
Closing			
ponoa	be closed, close	*pono*	to shut in, block close s.t.
Finishing			
soko	be finished, finish	*soko-**laghi***	cause to end
		*soko-**vaghi***	cause to end

The verbs expressing process-actions with Undergoer subject in Gela have a tendency to form causatives with only the object marker, but there are some exceptions, and here reflexes of both suffixes, *-*i* and *-*akin[i]*, are used as a causative device.

Table 15 Undergoer process-action verbs in Gela

Intransitive		**Causative**	
Breaking			
ta-ngodo	be broken, smashed	*ngodo*	break, smash s.t.
ta-pido	fallen and broken	*pido*	break up small
ta-sodu	broken	*sodu*	to break s.t.
ta-boha	broken, smashed, burst	*boha*	break, smash
ta-voti	broken, split	*voti*	break open (transitive?)
voti	break open, split up		
ta-utu	break, be severed (rope)	*utu-**hi***	to break s.t.
utu	break		
pao-pao	broken up (of food)	*pao*	break into pieces
		*pao-**laghi***	causative
Pouring and spilling			
tipo	move swiftly (of water)	*tipo-**raghi***	causative
tipoa	spilt		

Verbs expressing volitional motion (mode of motion) have Actor subjects. Whilst not many causative forms of these verbs have been found, it appears that the preferred device for deriving causatives from these verbs is the reflex of **-akin[i]*. This device also occurs with the one verb of speaking for which a causative form was found, reflecting the Proto Oceanic pattern for this verb class.

Table 16 Actor verbs in Gela

Intransitive		**Causative**	
Motion			
ago	crawl	*ago-**laghi***	cause to crawl
tapa	rise to a sitting position; to run	*tapa-**laghi***	causative
lovo	fly, move in the air	*lovo-**vaghi***	cause to fly
haliu	stroll about	*haliu-**vaghi***	causative
sei	ascend, climb	*sei-**laghi***	causative
Speaking			
bosa	speak, say, talk	*bosa-**laghi***	causative

The data presented here indicates that the patterns of deriving causative forms in Gela differ from patterns found in 'Are'are (and other Makira/Malaitan languages). The most notable difference is the loss of productive function of the reflex of **pa[ka]-*, which now appears unproductive and occurs only with some verbs. Whilst Gela verbs have the ability to form causatives, most often the device used is the reflex of **-akin[i]*, only the Undergoer process-action verbs tend to form causatives marked only by the object marker.

4.3.3 Patterns in Gari

Gari, a dialect of West Guadalcanal, also shows changes to the distribution of transitive morphology. In this language no trace of reflex of **pa[ka]-* were found. Whilst the dictionary states that the forms *-vagini-* and *-lavagini-* convey causative meaning, there are not many forms with this suffix listed. Also in the field data causative forms derived with the reflex of **-akin[i]* are infrequent.

Verbs expressing properties in Gari are almost exclusively causativised with the reflex of **-i*. This is a significant shift from the reconstructed pattern, as i) these verbs are U-state verbs, which would have occurred with **pa[ka]-*, and ii) the suffix in Gari occurs with basically all property verbs, regardless of the vowel the stem ends in. There appear to be some interesting patterns emerging in Gari property verbs. First, even a brief glance at the data reveals that, at least with this class of verbs, the suffix functioning as the causative device seems to have been largely regularised, and only two allomorphs are used; *-si* and *-li*. There also appears to be possible phonological conditioning for the distribution of these two allomorphs, as the *-li* allomorph tends to occur with verbs that have /s/ in the stem and thus there may be a motivation for dissimilation. Whilst the dictionary lists *goto-li-* 'straighten up something', my language consultant produced *ghoto-si-*, preferring the more regular form.

Table 17 Property verbs in Gari

Intransitive		**Causative**	
loki	be big	*loki-**si**-*	enlarge s.t.
		*anggo**si** loki-**si**-*	make s.t. big(er)
tetelo	be small	*tetelo-**si**-*	make s.t. small(er)
		ratsu tetelo-	make s.t. small(er)
dama	be wide	*dama-**si**-*	widen s.t.
vaolu	be new, fresh	*vaolu-**si**-*	renew, refresh s.t.
mamaatsa	be dry	*mamatsa-**si**-*	dry s.t.
pori	be wet	*pori-**si**-*	wet s.t.
papara	be hot	*papara-**si**-*	heat up s.t. (sun)
bau	be dirty	*bau-**si**-*	dirty s.t.
kora	be empty (of liquid)	*kora-**si**-*	cause s.t. dry up
male	be clean	*male-**si**-*	clean sth.
		male- (d)	clean, weed s.t.
		*anggo**si** male-* (d)	make clean
vaolu	be new	*vaolu-**si**-* (d)	renew s.t.
		anggosi vaolu- (d)	renew s.t.
ghoto	be straight	*ghoto-**si**-*	straighten up s.t.
		*ghoto-**li**-* (d)	straighten up s.t.
bisi	be cold	*bisi-**li**-*	make s.t. cold
danga	be full	*danga-**li**-*	fill up s.t.
seko	be bad	*seko-**li**-*	spoil, damage s.t.

Apart from the tendency to regularise the phonological form of the suffix, there is also another possible pattern emerging. Alongside the morphological causatives, the language consultant tended to produce periphrastic causatives, usually with the verb *anqo* 'to work':

20) [*John / na lake e annggo-si-a*
John DEM fire 3SG.SBJ work-CAUS-3SG.OBJ

[*na ko me papara*]].
DEM water CONJ.3SG.SBJ be.hot
'John/the fire heated up the water.'

21) [*Eriki e annggo-si-a* [*Katy me beke*]].
Erik 3SG.SBJ work-CAUS-3SG.OBJ Kate CONJ.3SG.SBJ be.surprised
'Erik surprised Kate.'

It may be speculated that the periphrastic causatives are relatively common, and with some property verbs perhaps the preferred mechanism for forming causatives. The dictionary lists *anggosi vaolu-* alongside *vaolu-si-* for 'renew something', and *anggosi male-* alongside *male-* for 'clean something'. The language consultant only produced periphrastic causatives with the verbs *ghovisai* 'be narrow', *tapetape* 'be thin', and alongside the morphological causative for *ghoto* 'be straight'.

Table 18 U-process verbs in Gari

Intransitive		**Causative**	
Motion			
kabokeli	roll down	*kabokeli-**si**-*	roll s.t. down
		(keli-) (d)	roll over, roll down
kabo-kabo	roll	*kabo-**li**-*	roll s.t.
luvu	sink	*luvu-**si**-*	sink s.t.
puka	fall	*puka-**li**-*	cause s.t. fall
		*puka-**laghini**-* (d)	cause s.t. fall
tsobo	float, be afloat	*tsobo-**li**-* (f)	make afloat
		*tsobo-**laghini**-* (d)	put afloat
tubu-lagi	stumble (d)	*tubu-**laghini**-* (d)	cause to fall
-		*kopo-**raghini**-* (d)	turn upside down
Opening			
sangavi	be open	*sangavi-*	open s.t.
Closing			
pono (d)	be closed, close	*pono-**ti**-* (d)	close s.t.
vongo (f)	be closed, close	*vongo-* (f)	close s.t
Finishing			
sui	be finished, finish	*sui-**lavaghini**-* (f,d)	finish s.t.
		*sui-**laghini**-* (d)	finish s.t.

Undergoer process verbs in Gari are something of a mixed bag in terms of marking causative derivations. Verbs denoting non-volitional motion fall into two categories, i) those marking causatives with the reflex of **-i*, and ii) those marking causatives with the reflex of **-akin[i]*. In two cases the language consultant produced causative forms marked by the reflex of **-i* where the dictionary lists forms with the reflex of **-akin[i]*. The one opening verb appears to have a fossilised reflex of **-i* which appears in both the transitive and intransitive forms. Whilst the dictionary and the speaker differ in their word for closing, the forms appear to be related, albeit marked with a different devices for transitivity. The finishing verb has a causative form with the reflex of **-akin[i]* and apparently two allomorphs can be used here denoting the same meaning.

Verbs expressing process-action appear to have Undergoer subjects in Gari. These verbs tend to mark causative forms only by the presence of the object marker, as seen from the data in Table 19. In one case, a distinction in meaning is marked by two causatives derived from the same stem, one with the reflex of **-i* and one without it, as shown by the forms *nggetu-* denoting a deliberate pouring and *tanggetu-li-* denoting accidental spilling.

Table 19 Undergoer process-action verbs in Gari

Intransitive		**Causative**	
ta-kuti	be broken (off)	*kuti-*	cut, break s.t. off
ta-kidi	be broken	*kidi-*	break s.t.
ta-voti	be broken	*voti-*	break s.t.
ta-bake	be broken off, detached	*bake-*	break off with a hand
ta-ratsi	be torn, tear	*ratsi-*	tear s.t.
ta-rese	be broken (into pieces)	*rese-*	break s.t.
Pouring and spilling			
ta-reo (d)	be spilled, spill	*reo-*	spill s.t.
ta-nggetu	be spilled, spill	*nggetu-* (d)	spill s.t.
		nggetu- (f)	pour s.t.
		*tanggetu-**li**-* (f)	spill s.t.

Verbs denoting volitional motion and speaking are Actor verbs. Only one morphological causative occurred in the field data, and a couple more in the dictionary; the device used in this case is the reflex of **-akin[i]*, showing a tendency towards the reconstructed pattern.

Table 20 Actor verbs in Gari

Intransitive		**Causative**	
Motion			
lovo	fly	*lovo-**saghini**-*	cause to fly away
savu (d)	traverse, cross	*savu-**laghini**-* (d)	give s.t. to s.o.
-		*gao-**vahgini**-*[12] (d)	to chase
Speaking			
soa (d)	call	*soa-**ghini**-* (d)	call s.o. by name, give a name

To express causation with Actor motion verbs, the language consultant tended to use periphrastic causatives; that is two separate verbs in two clauses:

22) [*Pita* *e* *turu-a* [*John* *ke* *uulo*].]
Peter 3SG.SBJ force-3SG.OBJ John ?.SBJ run
'Peter made/forced John to run.'

Gari shows some similarities to both 'Are'are and Gela, especially in marking the causative derivations on Undergoer process-action verbs only by the object marker. However, in this this language causatives of property verbs tend to be marked by the reflex of **-i*, and the allomorphs of the suffixes show a strong indication of regularisation, which however seems to apply only to this class. Causatives of Actor verbs, however, tend to be marked by the reflex of **-akin[i]*, as do, to some extent, Undergoer process verbs. It may be possible that this language is developing a system where verbs that could be described as inherently stative are causativised by the reflex of **-i*, whilst dynamic verbs lean towards forming causatives with the reflex of **-akin[i]*. However, this hypothesis will need to be further tested.

4.3.4 Patterns across the Southeast Solomonic languages

The preference in marking causative derivations by different means with different types of verbs is apparent in other Southeast Solomonic languages too. Whilst the individual languages differ somewhat, there are some patterns emerging in the data, and a divide between the languages of the Makira/Malaita branch and most of the languages of the Guadalcanal/Gela branch is apparent. These patterns are observable when we compare patterns of causative marking in verbs with the same or similar meaning, belonging to the same morphosyntactic class.

4.3.4.1 Causative derivations with property verbs

Whilst there are some differences among the languages, the device regularly used to derive a transitive verb from a U-stative intransitive one in the Makira/Malaita languages appears to be the reflexes of **pa[ka]-*. There seems to be a tendency towards marking the causative derivation by the prefix only. Table 21 shows the intransitive and causative forms of some U-stative verbs expressing properties in the MM languages.

[12] This verb is included despite no intransitive counterpart being found because it appears to be a derived causative.

Table 21 U-stative verbs and their causative forms in Makira/Malaita languages

Intransitive		**Causative**	
Lau			
baita	be big	***faa**-baita-*	enlarge; respect
faekwa	be small	***faa**-faekwa-*	make small; humble
bilia	be dirty	***faa**-bili-*	make dirty
gwari	be cold	***faa**-gwari-*	make cold
Toʔabaʔita			
ba'ita	be big	***fa'a**-ba'ita-*	show respect, think highly of
fa'ekwa	be small	***fa'a**-fa'ekwa-*	make, keep s.t. small
bili'a	be dirty	***fa'a**-bili'a-*	make dirty
gwa-gwari	be cold	***fa'a**-gwari-*	make cold
Kwaio			
ba'ita	be big	***fa'a**-ba'ita-*	enlarge; elevate rank
sika'u	be small	***fa'a**-sika'u-*	make small(er)
biribiri'a	be dirty	***fa'a**-biri-*	make dirty
gwari	be cold	***fa'a**-gwari-*	make cold
'Are'are			
paina	be big	***ha'a**-paina-*	make big, elevate
masika	be small	***ha'a**-masika-*	make small
piripiri	be dirty	***ha'a**-piri-*	make dirty
sisiu'a	be cold	***ha'a**-sisiu'a-*	make cold
Owa			
rafa	be big	***faga**-rafa*	increase (transitive)
hihiroku	be cold	***ha'a**-hihiroku-*	make cold
Marau			
paina	be big	***ha'a**-paina-*	make big, elevate rank, respect
masike	be small	***ha'a**-masike-*	make small
pipiri'a	be dirty	***ha'a**-pipiri'a-i-*	make dirty
sisiu'a	be cold	***ha'a**-sisiu'a-i-*	make cold, cool

Languages in the Guadalcanal/Gela branch also derive transitive verbs from intransitive ones by means a valency-increasing causative derivation. However, the device they employ differs from language to language. Whilst Bugotu and Birao both use the causative prefix to derive causative verbs from intransitive verbs expressing properties, in Gela the most common device is the reflex of **-akin[i]* and in Gari it is reflex of **-i*.

Table 22 U-stative verbs and their causative forms in Guadalcanal/Gela languages

Intransitive		Causative	
Bugotu			
hutu	be big	***va**-hutu*	increase (transitive)
iso	be small	***va**-iso*	few
turu	be dirty	***va**-turu*	make dirty, defile
ghaula	be cold	***va**-ghaula*	make cold, cool
Birao			
lava	be big	***vagha**-lava-*	enlarge
dakedake	be small	***vagha**-dakadake-*	make small
muku	be dirty	***vagha**-muku-*	make dirty
bisi	be cold	***vagha**-bisi-*	cool s.t.
		*bisi-**li**-*	make a person feel cold
Gela			
sule	be big	*sule-**laghi***	cause to increase in size, enlarge
meto	be dirty	*meto-**laghi***	make dirty, defile
bihi	be cold	*bihi-**laghi***	make cold
Gari			
loki	be big	*loki-**si**-*	make big
tetelo	be small	*tetelo-**si**-*	make small
bau	be dirty	*bau-**si**-*	make dirty
bisili	be cold	*bisi-**li**-*	make cold
Tolo			
seko	be bad	*seko-**li**-*	spoil, damage, harm

4.3.4.2 Causative derivations with U-process verbs

Undergoer process verbs express that an Undergoer is experiencing a change of state. Verbs belonging to this class include, among others, verbs of involuntary motion and finishing verbs. In the Makira/Malaitan languages, these verbs tend to have causative forms with the reflex of **pa[ka]-*, although some languages express causatives with the reflex of **-akin[i]*. As U-process verbs are reconstructed as forming causatives with the short or long suffix, or by marking the verb as causative only by the object marker, the co-occurrence of the reflexes of **pa[ka]-* seems to be an innovation. Whilst not all U-process verbs occur with the prefix, the fact that at least some of them do appears to signal an extension of use of this device to a new verb class.

Table 23 U-process verbs and their causative derivations in Makira/Malaita languages

Intransitive		**Causative**	
Lau			
'asia	fall	***faa**-'asia-*	drop (transitive)
sui	be finished	***faa**-sui-*	finish (transitive)
Toʔabaʔita			
ifu	fall over, topple	*ifu-*	cause to fall over
'aru	fall down	*'aru-*	drop, make fall
thada	fall down	*thada-**langani**-*	throw s.t. down from a height
sui	end, finish, be finished	***fa'a**-sui-*	finish, bring an end to
Kwaio			
'esia	fall	***fa'a**-'esia-*	drop, cause to fall
sui	be finished	***fa'a**-sui-*	finish (transitive)
'Are'are			
teke	fall	*teke-**ra'ani**-*	drop, cause to fall
siko	be finished	***ha'a**-siko-*	finish (transitive)
Owa			
apuri	fall	***faga**-apuri-*	cause to fall
		***faga**-puri-**si**-*	cause to fall
Marau			
teke	fall, collapse	*teke-**la'ini/ra'ini**-*	drop, cause to fall
siko	be finished	***ha'a**-siko-*	finish (transitive)
Longgu			
dio	fall	***va'a**-dio-*	drop (transitive)
soko	be finished	*soko-*	finish s.t.

In the Guadalcanal/Gela branch several different patterns are discernible. Whilst both Birao and Bugotu use a reflex of **pa[ka]-*, Gela uses reflex of **-akin[i]*. In Gari and Tolo we find causative forms of U-process verbs derived with the reflex of **-i* as well as with **-akin[i]*. However, this form with the long suffix is one of only a handful found in the Tolo dictionary (Crowley, 1986) and there are only a few of transitive verbs derived with the reflex of **-akin[i]* in the Gari dictionary (2008) which are demonstrably causative.

Again, the fact that these verbs form causatives is not surprising, as this reflects the reconstructed pattern. If that is the case then Birao is the innovative language, as the preferred causative device is the reflex of **pa[ka]-*. As there are not many U-process verbs in the Bugotu dictionary it is not clear how wide-spread is its tendency towards marking these verbs as causatives with the prefix.

Table 24 U-process verbs and their causative derivation in Guadalcanal/Gela languages

Intransitive		**Causative**	
Birao			
puka	fall	***vagha**-puka-*	drop (transitive)
sui	be finished	***vagha**-sui-*	finish (transitive)
tsoko	be finished	***vagha**-tsoko-*	finish (transitive)
Bugotu			
sikili	drop, fall	***va**-sikili*	to let fall, drop
nggovu	be finished, completed	***va**-nggovu*	finish, complete
Gela			
sata	fall	*sata-**laghi***	let fall
soko	be finished	*soko-**laghi***	cause to end
		*soko-**vaghi***	cause to end
Gari			
puka	fall, collapse	*puka-**li**-*	drop, cause to fall
sui	be finished	*sui-**lavaghini**-*	finish (transitive)
Tolo			
puka	fall	*puka-**li**-*	drop s.t.
sui	be finished	*sui-**lani**-*	finish (transitive)

4.3.4.3 Causative derivations with process-action verbs

Process-action verbs denote both a process where a patient is undergoing a change of state, as well as action performed by an agent. Verbs of breaking and spilling belong to this class. Whilst some languages in the Makira/Malaita branch form causative forms with an affix, a large proportion of verbs with causative meaning occur only with the object marker.

Table 25 Process-action verbs and their causative derivations in Makira/Malaita languages

Intransitive		**Causative**	
Lau			
mo'oi	be broken (in half)	*mo'oi-*	break s.t.
maga	be broken (in bits)	*maga-*	break s.t.
'igi-tai	be spilled	*'igi-**taini**-*	spill s.t.
Toʔabaʔita			
dekwe	break into pieces, crack open	*dekwe-*	break s.t. into pieces, crack s.t. open
fidu	break, snap	*fidu-*	break s.t. into pieces
maga	break, shatter	*maga-*	break, smash s.t.
kiki	spill (out)	*kiki-*	spill (out), pour (out)
Kwaio			
mo'oi	be broken (in half)	*'oi-*	break s.t.
		***fa'a**-moi-*	break s.t.
gaa	be broken, split	*gaa-**si**-*	split, break s.t.
foga	be split, broken	*foga-*	split, break (accidentally)
		***fa'a**-foga-*	break s.t.
aa'iri	be spilled, spill	*aa'iri-**si**-*	spill s.t.
		*aa'iri-**te'eni**-*	pour s.t.
		'iri-	pour s.t.
'Are'are			
aa'oi	be broken	*'oi-*	break s.t.
mahusi	be broken (in two?)	*mahusi-*	break s.t.
napota	be broken, split	*pota-*	break s.t.
		*napota-**ri**-*	break s.t.
'aka	spill, be spilled	*'aka-*	spill s.t.
		*'aka-**si**-*	spill s.t.
Marau			
mahusi	break, be broken	*mahusi-*	break s.t. (in two)
aaniri	be spilled	*aaniri-*	spill s.t.
Sa'a			
ma'oi	be broken	*'oi*	break s.t.
mapota	be broken, smashed	*mapota-**ri***	brea, smash s.t.
aa'aro	be broken	*aro*	break s.t.
maliŋi	spilt, full to the brim (adj)	*malingi-si*	cause to spill
Owa			
qaro	be broken, break	*qaro-**gi**-*	break, snap s.t.
Longgu			
mou	be broken	*mou-**si**-*	break

The languages from the Guadalcanal/Gela branch show a similar behaviour, and in most of them verbs of breaking and spilling form causative derivations only by the object marker. An exception is Birao, where we usually find two causative forms: one with the reflex of **pa[ka]-* and one without. The presence of the causative prefix with these verbs signals that an action has been performed accidentally, rather than intentionally.

Table 26 Process-action verbs and their derivations in Guadalcanal/Gela languages

Intransitive		**Causative**	
Birao			
ta-bosa	be broken	*bosa-*	break s.t.
		***vagha**-bosa-*	break accidentally
ta-karo	be broken	*karo-*	break s.t.
		***vagha**-karo-*	break accidentally
ta-kubu	be broken	*kubu-*	break s.t.
		***vagha**-kubu-*	break accidentally
ta-vota	be broken, split	*voti-*	break, split s.t.
kovala	be spilled	***vagha**-kovala-*	spill (transitive)
		*koval**i**-*	spill (transitive)
Bugotu			
fota	be broken	*fota*	break, smash
		*fota-**li***	transitive, no gloss
tatohu	be broken	*tahohu*	break in pieces
Gela			
ta-ngodo	be broken, smashed	*ngodo*	break, smash s.t.
ta-pido	be fallen and broken	*pido*	break up small
raborabo	no gloss	*rabo*	break, smash
Gari			
ta-boku	be broken (in half)	*boku-*	break s.t.
ta-voti	be broken (in bits)	*voti-*	break s.t.
ta-rese	be broken, cut off	*rese-*	break s.t. in bits
ta-kuti	be broken, cut off	*kuti-*	break s.t. off
ta-reo (d)	be spilled, spill	*reo-*	spill s.t.
ta-nggetu	be spilled, spill	*nggetu-* (d)	spill s.t.
		nggetu- (f)	pour s.t.
		*tanggetu-**li**-* (f)	spill s.t.
Tolo			
ta-bosa	be broken, splintered	*bosa-*	break s.t.
ta-kubu	be broken	*kubu-*	break s.t.
ta-kudi	be broken	*kudi-*	break s.t.
reo	spill, be spilled	*reo-*	spill s.t.

4.3.4.4 Causative derivations with Actor subject verbs

Actor subject verbs are here represented by verbs of mode of motion. Unlike in U-process verbs, this motion is volitional.

Table 27 Actor motion verbs in Makira/Malaita languages

Intransitive		Applicative		Causative	
Lau					
aango	crawl	*aango-fi-*	crawl upon	***faa**-aango-*	let crawl
lae	go, walk	*lae-fi-*	*go after, follow*	***faa**-lae-*	send
lalao	run	*lalao-si-*	*run to*	***faa**-lalao-*	make run
lofo	fly			*lofo-**tani**-*	blow away
Toʔabaʔita					
ango	crouch, creep	*ango-fi-*	*crawl all over*		
lae	go	*lae-fi-*	*go for*		
lofo	fly	*lofo-'i-*	*swoop down on*	*lofo-**tani**-*	cause or teach to fly
Kwaio					
leka	go			***fa'a**-leka-*	make go
lofo	fly	*lofo-'i-*	*fly at (to attack)*	***fa'a**-lofo-* (f)	teach to fly
		lofo-te'eni-	*fly with*	*lofo-**le'eni**-* (d)	teach or cause to fly
'Are'are					
aano	crawl	*aano-hi-*	*crawl to*	***ha'a**-aano-*	make crawl
ra'au	go	*ra'au-hi-*	*go towards*	***ha'a**-ra'au-*	make walk
roho	fly			***ha'a**-roho-*	teach, enable to fly
hane	climb	*hane'i-*	*climb s.t.*	***ha'a**-hane-*	make or encourage to climb, elevate
Sa'a					
lae	go	*lae-hi-* (2)	*go through*	*lae-**nga'ini**-* (2)	spread (word)
hane	climb	*hane-nga'ini-*	*climb and carry*	***ha'a**-hane-**nga'ini***	exult
		hane-'i- (2)	*climb s.t.*	*hane-**la'ini***	elevate, put up
Arosi					
hahano	go, set out	*hano-ri*	*go to*	***ha'a**-hahano*	send, teach to walk
hano-nga'i	go				
roho	fly	*roho-si-*	*fly to*	***ha'a**-roho*	fly, let fly
Owa					
gogo	walk			*go-**fi**-*	chase s.o.
				***faga**-gogo-**fi**-*	send (a message)

Most of the Makira/Malaita languages seem to be able to form morphological causatives of these verbs, mostly with the reflex of **pa[ka]-*. An odd pattern is shown by the Owa data, where the reflex of **-i* functions causatively with the Actor verb. Some languages tend to prefer a reflex of **-akin[i]* with some verbs. Interestingly, whilst in Lau and Toʔabaʔita the reflex of **-akin[i]* with the verb 'fly' marks a causative derivation, in Kwaio there is a conflicting evidence for the kind of derivation it marks. Whilst the dictionary lists the suffixed form as causative, data obtained from the language consultant suggests that it marks an applicative derivation, where it introduces an object with the commitative role. Similar situation is in Sa'a, where the reflex of **-akin[i]* also marks both applicative and causative derivation with the verb *hane* 'climb'. The commitative function reflects the reconstructed function of **-akin[i]* with Actor motion verbs in Proto Oceanic, which suggests that the causative use of the reflexes of **-akin[i]* with Actor motion verbs in the languages of north Malaita is an innovative one.

Languages from the Guadalcanal/Gela branch seem to have innovated in a similar direction. Again, Bugotu and Birao prefer to form causatives with the reflexes of **pa-* and **paka-*, respectively. In Gela, the causative forms tend to occur with the reflex of **-akin[i]* whilst Gari leans towards periphrastic causatives rather than morphological ones. The situation is difficult to evaluate in Tolo as there are not many causative forms listed in the dictionary. The one form listed here occurs with the reflex of **-akin[i]*; however this does not seem to be typical.

Table 28 Motion verbs in Guadalcanal/Gela languages

Intransitive		**Applicative**		**Causative**	
Birao					
vanovano	walk			***vagha**-vanovano-*	teach or force to walk
lovo	fly			***vagha**-lovo-*	teach to fly
vola-volau	run			***vagha**-vola-volau-*	make s.o. run
hala	climb	*hala-vi-*	*climb s.t.*	***vagha**-hala-*	help s.o. climb
Bugotu					
kanggu	crawl	*kanggu-li-*	*climb, creep along*		
thovo	fly			***va**-thovo*	cause to fly, blow away
Gela					
anggo	crawl	*ago-vi-*	*crawl upon*	*anggo-**laghi***	cause to crawl
tapa	run	*tapa-li-*	*run to*	*tapa-**laghi***	causative
lovo	fly			*lovo-**vaghi***	cause to fly
sei	ascend, climb	*sei-li-*	*climb upon*	*sei-**laghi***	causative
Gari					
tsipu	jump	*tsipu-li-*	*jump for*		
oolo	swim	*oolo-vi-*	*swim to/for (purpose)*		
lovo	fly			***V** lovo-**saghini**-*	make fly away (SVC)

4.3.4.5 Morphological versus lexical causatives

Another apparent difference between some of the languages that do and do not reflect **pa[ka]-* are instances where some verbs mark causatives morphologically in the Makira/Malaita languages whereas in the Guadalcanal/Gela branch we find lexical causatives involving two lexemes. This is illustrated on the following data:

Lau

23) *foli-*	'buy s.t.'	*faa-foli-*	'sell s.t.'
24) *fanga*	'eat'	*faa-fanga-*	'feed s.o.'
25) *mou*	'be afraid'	*faa-mou-*	'scare s.o.'

(KN field data)

'Are'are

26) *hori-*	'buy s.t.'	*ha'a-hori-*	'sell s.t.'
27) *hana*	'eat'	*hana-ri-*	'feed s.o.'
28) *ma'u*	'be afraid'	*ha'a-ma'u-*	'scare s.o.'
		ha'a-ma'u-ni-	'scare s.o.'

(KN field data)

Owa

29) *wori-*	'buy s.t.'	*faga-wori-ngai-*	'sell s.t.'
30) *ngau*	'eat'	*faga-ngau-*	'feed s.o.'
31) *maagu*	'be afraid'	*faga-maagu-si-*	'scare s.o.'

(Mellow, 2014)

Gari

32) *voli-*	'buy s.t.'	*sabiri-*	'sell s.t.'
33) *mutsa*	'eat	*pala-*	'feed s.o.'
34) *mataghu*	'be afraid'	*posuli-*	'scare s.o.'

(KN field data)

Tolo

35) *voli-*	'buy s.t.'	*sabiri-*	'sell s.t.'
36) *hani-*	'eat s.t. '	*pala-*	'feed'
37) *matahu*	'afraid'	*meu-*	'scare'

(Crowley, 1986)

More data is needed to determine how wide-spread is the pattern involving two lexemes. However, as it appears in the languages that do not reflect **pa[ka]-* it is possible that the use of the lexical causatives involving two lexemes was at least partially motivated by the loss of the causative prefix.

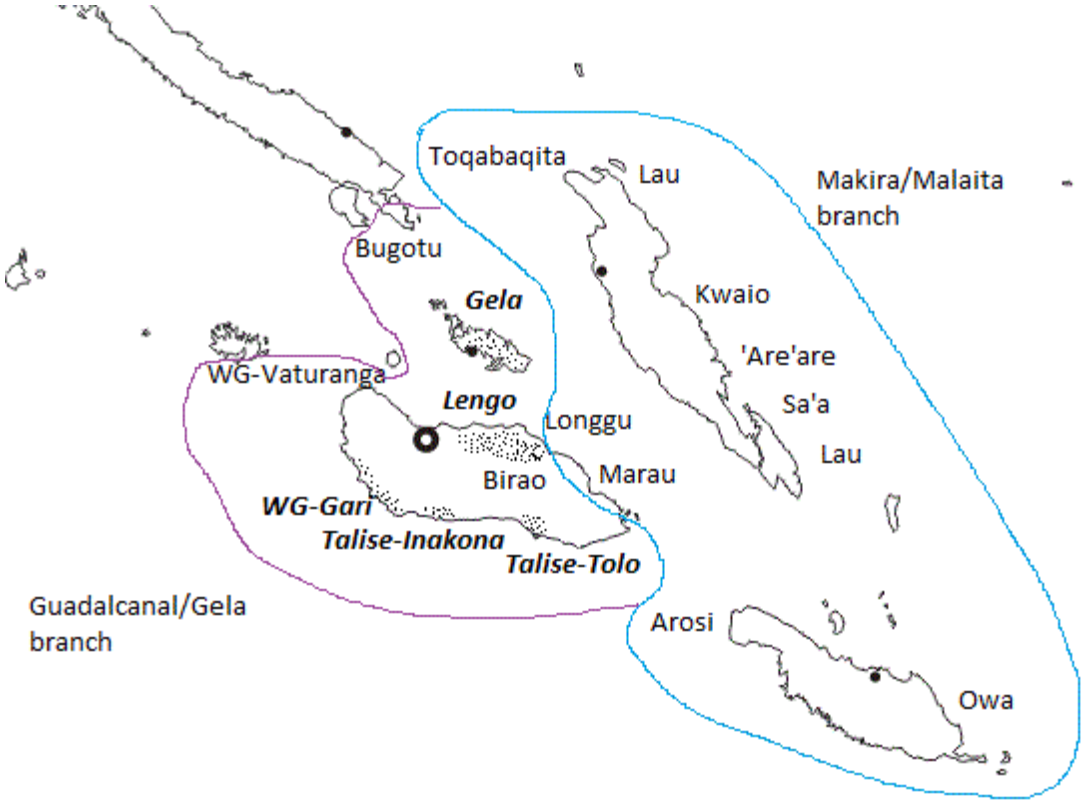
4.4 Discussion

In many contemporary Southeast Solomonic languages the valency-increasing derivations reflect the pattern reconstructed for Proto Oceanic. However, closer investigation of the modern data reveals some significant changes in the distribution and function of these morphemes in this subgroup, and in the marking of the causative derivation with different types of verbs. As the above sections illustrate, despite inheriting the same pool of valency-increasing devices the languages from the Southeast Solomonic subgroup diverge in the distribution of these devices, and in their patterns of marking causative derivations with them.

Whilst virtually all languages from the Makira/Malaita branch reflect all three valency-increasing morphemes reconstructed for Proto Oceanic, some of the languages from the GG branch reflect only the suffixes **-i* and **-akin[i]*, and the prefix **pa[ka]-* has either

been lost completely or occurs only unproductively with a small number of verbs, as seen from Map 3. Other GG languages reflect *-*i* and **pa[ka]*- productively, but *-*akin[i]*, especially in its causative function, appears to be quite rare.

*Map 3 Geographical distribution of SES languages which do not reflect *pa[ka]-*



The loss of **pa[ka]*- is an innovation that seems to have spread across most of the GG branch, as seen on Map 3. Here the names of languages where no reflex of **pa[ka]*- has been found or where it has become unproductive are shown in bold italics, and the approximate geographical areas corresponding with the languages are dotted. Whilst in Birao and Bugotu the respective reflexes of POc **paka*- and **pa*- are productive, in the rest of the GG languages for which data is available the reflex of the causative prefix was not found productively. In some cases the loss of the reflex of **pa[ka]*- is not certain due to the lack of available data. For Inakona, Capell (1930:124) reports that there exists a causative prefix *vaga*, but it "does not seem to be very common; more often a verb is used causatively without it…" In the Tolo dictionary (Crowley, 1986), the causative prefix does not appear at all. Tolo and Inakona appear to be two dialects of the same language, both spoken on the southern coast of Guadalcanal although apparently not neighbouring each other. It appears that at the time of Capell's data collection, the prefix was still used in Inakona, but only very infrequently. One may only hypothesise whether at that time, that is the 1930's, the situation may have been similar in Tolo, where the loss now appears to be complete.

In the Vaturanga dialect of West Guadalcanal, Ivens (1934) suggests the possibility of the causative prefix being present in this language in the form *ba*, however his evidence is not conclusive. As Ivens (1934:366) himself admits, from the texts used for his description of

Vaturanga it is "difficult to distinguish between the use of the causative *ba* and the verb *ba* "to go"…"Two things speak against concluding that the Vaturanga *ba* is indeed a reflex of the Proto Oceanic **pa[ka]-*. One, in my data there does not appear to be any evidence of the verb 'to go' being used causatively anywhere else in the subgroup. When periphrastic causatives are formed in Gari, another dialect of West Guadalcanal, it is done so using the verb 'do' but not 'go'. Second, the initial consonant is not one we would expect to find in the reflex of **pa[ka]-*, as the regular reflex of POc *p in Vaturanga is /v/. The monosyllabic form in itself does not provide much clue as the SES languages reflect both **pa-* and **paka-*. Ivens (1934) makes a brief comment that there are instances of a causative *va* in the Vaturanga texts. However, he suggests that the occurrence of these in the Vaturanga data is due to a Gela-speaking translator. It is thus possible that Vaturanga indeed does, or rather did at the time the texts in question were collected, reflect **pa-*, similarly to Bugotu and Gela.

The apparent loss of the reflexes of **-akin[i]* also seems to be limited to languages belonging to the Guadalcanal/Gela branch, and again here we find differences within the branch. Whilst it is apparently the main causative device in Lengo (Unger, 2008) and very productive in deriving causatives in Gela, only a handful of verbs with the long suffix have been found in neighbouring Bugotu. The Gari dictionary (2008) lists some thirty verbs which appear to contain the reflex of **-akin[i]*, with both applicative and causative function. However, the number of verbs where the suffix appears to be causative is quite small, and only one such form was found in my field data. In Birao only one verb in the sample occurs with the long suffix; whilst my field data contain a significant amount of reflexes of **-akin[i]*, these seem to function as prepositions rather than suffix.

4.4.1 Possible explanations for the synchronic patterns

In Proto Oceanic, all three valency-increasing morphemes are reconstructed as participating in causative derivations. U-stative verbs formed causatives with the prefix **pa[ka]-* and the object marker, some of them also took **-i*. U-process verbs were marked as causative by **-i*, **-akin[i]* or the object marker alone. Actor subject verbs formed indirect causatives with the prefix **pa[ka]-*, which in some verbs co-occurred with **-i*. When we consider the synchronic data, we see that the languages are conservative in their marking of causatives with some classes of verbs, but innovative with others.

The U-stative verbs expressing properties behave in a conservative way in the Makira/Malaita languages, as well as in Bugotu and Birao. In the rest of the languages of Guadalcanal the reflexes of **-i* and **-akin[i]* have been extended to mark causatives for this verb class.

U-process verbs behave conservatively in the Guadalcanal/Gela branch, except for Birao and in some cases also Bugotu. In this branch the causative use of **-i* and **-akin[i]* is reflected, whilst a number of Malaita/Makira languages show a shift towards the causative prefix, at least with some verbs.

The Undergoer process-action verbs are something of a mixed bag, but both branches seem to prefer marking causatives only by the object marker.

Actor verbs show conservative behaviour in the Makira/Malaita branch and in Birao and Bugotu, as they retained the causative marking by reflexes of **pa[ka]-*. The other languages of Guadalcanal/Gela branch shifted towards marking causatives of these verbs with the reflexes of **-akin[i]*.

Given that all of the devices could be used causatively it seems plausible that one device could become to be used with higher frequency, meaning its causative function could gradually extended to verbs with which it did not occur in Proto Oceanic. The shift was most likely preceded by a period of variation, where two of more forms denoting the same causative meaning were used. Given the variation and the existence of multiple causative forms attested

in the Malaita/Makira languages and Birao, this seems highly plausible. One device then would become more associated with the causation than the other, and the other would gradually become redundant and dropped from use. It appears that the same kind of process proceeded in different directions in different languages. So whilst in Makira/Malaita languages the prefix appears to be the causative device used most frequently, it is the long suffix in Gela and Lengo and the short suffix in Gari, and possibly Tolo. It also appears that some changes, such as the loss of **pa[ka]-*, may be relatively recent. The prefix was attested in the south of Guadalcanal in the 1930's, but has completely disappeared since then in both Tolo and Gari. The fact that there are items with the prefix listed in the Gela dictionary but not in the recent Gari dictionary would suggest that the change may have originated in Guadalcanal and spread to Gela later.

An interesting question to ask would be why Birao and Bugotu tend to pattern with the Makira/Malaita languages rather than with the rest of Guadalcanal/Gela in retaining the causative prefix, and how and from where the innovations in the other languages spread. One may only hypothesise that this may have to do with their geographical location and socio-cultural links with speakers of other languages. Bugotu is conservative in retaining the reflex of **pa[ka]-* whereas its neighbour Gela largely lost it, or at least it is no longer productive. Bugotu normally shows a large number of lexical items that are non-cognate with the rest of the group, which is explained by its close proximity to other languages on Santa Isabel, not belonging to the SES subgroup. It is possible that Bugotu speakers maintained closer contact with other groups on Santa Isabel rather than with speakers of other Southeast Solomonic languages, such as Gela. Thus changes originating elsewhere in the GG branch may be slower in permeating into Bugotu.

Birao is spoken in the inland of Guadalcanal. The inland terrain is mountainous and accessible only with difficulty. The relative geographical isolation could help explain why Birao is more conservative and retained the causative prefix whilst its coastal neighbour Lengo did not. One could also hypothesise whether the nature of relationships and contacts between different language groups on Guadalcanal also played role. Reportedly there are relatively close ties between the Lengo and Gela people, with frequent intermarriages (anecdotal, told by my WG speaker). At the same time, northern and eastern parts of Guadalcanal have been settled by incomers speaking Malaitan languages. This has brought a great deal of hostility and tensions between the different groups, usually because of land and resource use. It is possible that these issues were stronger on the coast where Lengo is spoken than in inland where Birao is spoken. It is also possible that the Birao people had more cordial relationships with the neighbouring Marau people than Lengo had with their neighbour, Longgu people, and this helped to retain the prefix whereas change spread throughout the rest of the island. However, more research is needed before any of these hypotheses can be verified or disputed. The most likely explanation is that both geography and the social contact with speakers of Malaitan languages had a role to play.

4.4.2 Summary

The data presented in this paper demonstrates that i) patterns of distribution of transitive morphology, especially with respect to causative derivations, have shifted significantly from the reconstructed Proto Oceanic pattern, ii) these changes were sensitive to the established morphosyntactic classes of verbs in these languages, as different classes of verbs were affected differently and iii) a language may behave conservatively as well as innovatively with the same word class. The fact that different verbs shifted in different ways in their morphological marking of causative derivations highlights the need for a two-way approach in understanding changes to morphological systems. Considering changes in the behaviour of individual lexemes

across time will provide only partial clues, and only when we also compare synchronic patterns with reconstructed ones can we obtain a more accurate picture of the changes that took place.

The study presented here by no means claims to provide definite answers on the changes to the distribution of transitive morphology in Southeast Solomonic languages. It is clear that whilst the distribution of *-*i* was phonologically conditioned in Proto Oceanic, it does not appear to so be in the synchronic Southeast Solomonic languages, or at least not for most of the verbs. However, phonology likely played an important role alongside semantics and morphosyntactic classes of verbs in directing the changes that we see in this subgroup of Oceanic languages. Whilst in some cases the presence/absence of the transitive suffix is likely due to a shift in preferred causative device, in other cases it is likely the result of sound changes in the respective languages, or a combination of both. More natural data is needed from some languages/verb classes to determine how some of the forms are used, and how widely it is possible to generalise the patterns found across the two branches.

Appendix

The sources of data used in this paper are as follows:

Language	**Source**
'Are'are	Naitoro field notes, Geerts (1970)
Arosi	C. E. Fox and Craft (1978)
Birao	Naitoro field notes
Bugotu	W. G. Ivens (1940)
Gari	Naitoro field notes, *A dictionary of Gari language* 2008)
Gela	C. E. Fox (1955), Fox, Pawley, and Miller
Inakona	Capell (1930)
Kwaio	Naitoro field notes, Keesing (1975)
Lau	Naitoro field notes, C. E. Fox (1974)
Lengo	Unger (2008), Unger (2010)
Longgu	Hill (n.d.), Hill (2011a), (Hill, 2011b)
Marau	Naitoro field notes, W. G. Ivens (1929)
Owa	Mellow (2014)
Tolo	Crowley (1986)
Sa'a	Walter George Ivens (1929), Ashley (2012) (in tables marked as 2)
To'aba'ita	Lichtenberk (2008)
Vaturanga	Ivens (1934)
Proto Oceanic	Evans (2003)

References

Ashley , K. C. (2012). *Semantics of Sa'a transitive suffixes and thematic consonants.* (MA), Graduate Institute of Applied Linguistics, Dallas.

Blust, R. (1984). Malaita-Micronesian: an Eastern Oceanic subgroup? *The Journal of the Polynesian Society, 93*(2), 99-140.

Capell, A. (1930). The language of Inakona, Guadalcanar, Solomon Islands. *The Journal of the Polynesian Society, 39*(2(154)), 113-136.

CartoGIS, C. o. A. a. P., Australian National University (Producer). (17.10.2014). Base map of Micronesia, Melanesia and Polynesia.

Chafe, W. L. (1970). *Meaning and the structure of language.*

Crowley, S. S. (1986). *Tolo dictionary* (Vol. no. 91.). Canberra: Dept. of Linguistics, Research School of Pacific Studies, Australian National University.

A dictionary of Gari language. (2008). made available through the Archdiocese of Honiara.

Dixon, R. M. (2000). A typology of causatives: form, syntax and meaning. In R. M. Dixon & A. Y. Aikhenvald (Eds.), *Changing valency* (pp. 30-79). Cambridge: Cambridge University Press.

Evans, B. (2003). *A study of valency-changing devices in Proto Oceanic*. Canberra, A.C.T: Pacific Linguistics in association with the Centre for Research on Language Change.

Evans, B. (2010). Proto oceanic *akin[i]: reconstructing change in progress. In J. Bowden, N. Himmelmann & M. Ross (Eds.), *A journey through Austronesian and Papuan linguistic and cultural space. Papers in honour of Andrew Pawley* (pp. 179-196). Canberra: Pacific Linguistics, School of Culture, History and Language, College of Asia and the Pacific, The Australian National University.

Foley, W. A., & Van Valin, R. D. (1984). *Functional syntax and universal grammar* (Vol. 38.). Cambridge [Cambridgeshire]; New York: Cambridge University Press.

Fox, Pawley, A., & Miller. *A dictionary of the Gela language, Solomon Islands*.

Fox, C. E. (1955). *A dictionary of the Nggela language (Florida, British Solomon Islands).* Auckland: Unity Press

Fox, C. E. (1974). *Lau dictionary*: Dept. of Linguistics, Research School of Pacific Studies, Australian National University.

Fox, C. E., & Craft, M. (1978). *Arosi dictionary* (Revised ed. Vol. no.57.). Canberra: Department of Linguistics, Research School of Pacific Studies, Australian National University.

Geerts, P. (1970). *'Āre'āre dictionary* Canberra: Linguistic Circle of Canberra.

Harrison, S. P. (1982). Proto Oceanic **aki(ni)* and the Proto oceanic periphrastic causative. In A. Halim, L. Carrington & S. A. Wurm (Eds.), *Papers from the Third International Conference on Austronesian Linguistics* (Vol. 1: currents in Oceanic, pp. 179-230). Canberra: Pacific Linguistics.

Hill, D. (2011a). *Longgu grammar*. Muenchen: LINCOM GmbH.

Hill, D. (2011b). Transitivity in Longgu: The Interdependence of Verb Classes and Valency-Changing Derivations. *Oceanic Linguistics, 50*(2), 458-482.

Hill, D. (n.d.). *Longgu Dictionary*.

Ivens, W. G. (1929). *A dictionary of the language of Sa'a (Mala)and Ulawa, South-East Solomon Islands*: Oxford University Press

Ivens, W. G. (1929). A Study of the Language of Marau Sound, Guadalcanal, Solomon Islands. *Bulletin of the School of Oriental Studies, University of London, 5*(2), 345-358.

Ivens, W. G. (1934). A Grammar of the Language of Vaturanga, Guadalcanal, British Solomon Islands. *Bulletin of the School of Oriental and African Studies, 7*(2), 349-375. doi: 10.1017/S0041977X0008527X
Ivens, W. G. (1940). *A dictionary of the language of Bugotu*.
Ivens, W. G. (1940). *A dictionary of the language of Bugotu, Santa Isabel island, Solomon islands*. London: The Royal Asiatic Society.
Keesing, R. M. (1975). *Kwaio dictionary* (Vol. no. 35.): Dept. of Linguistics, Research School of Pacific Studies, The Australian National University
Levy, R. S. (1980). Languages of the Southeast Solomon Islands and the reconstruction of Proto-Eastern-Oceanic. In P. B. Naylor (Ed.), *Papers from the second eastern conference on Austronesian languages*: Center for South and Southeast Asian Studies, The University of Michigan
Lichtenberk, F. (1988). The Cristobal-Malaitan Subgroup of Southeast Solomonic. *Oceanic Linguistics, 27*(1/2), 24-62.
Lichtenberk, F. (2008). *A dictionary of Toqabaqita (Solomon Islands)* (Vol. 592). Canberra, ACT: Pacific Linguistics, Research School of Pacific and Asian Studies, Australian National University.
Lynch, J., Ross, M., & Crowley, T. (Eds.). (2002). *The Oceanic languages*. Richmond [England]: Curzon.
Mellow, G. (2014). *A dictionary of Owa; a language of the Solomon Islands*: Book News, Inc.
Pawley, A. (1972). On the internal relationships of Eastern Oceanic languages. In R. C. Green & M. Kelly (Eds.), *Studies in Oceanic culture history* (Vol. 3, pp. 1-142). Honolulu: Bishop Museum.
Pawley, A. (1974). Some Problems in Proto-Oceanic Grammar. *Oceanic Linguistics, 12*(1/2), 103-188.
Pawley, A. (2011). On the Position of Bugotu and Gela in the Guadalcanal-Nggelic Subgroup of Oceanic. *Oceanic Linguistics, 50*(1), 1-24.
Pawley, A., & Reid, L. A. (1979). The evolution of transitive constructions in Austronesian. In P. B. Naylor (Ed.), *Austronesian studies*
Papers from the second eastern conference on Austronesian languages (pp. 103-130). Ann Arbor: The University of Michigan
Center for South and Southeast Asian studies.
Ross, M. (1998). Proto Oceanic Phonology and Morphology. In M. Ross, A. Pawley & M. Osmond (Eds.), *The lexicon of Proto Oceanic. The culture and environment of ancestral Oceanic society: Material culture* (Vol. 1, pp. 15-37). Canberra: Pacific Linguistics
Research School of Pacific and Asian Studies
The Australian National University.
Tryon, D. T., & Hackman, B. D. (1983). *Solomon Islands languages: an internal classification* (Vol. no. 72.): Dept. of Linguistics, Research School of Pacific Studies, Australian National University.
Unger, P. (2008). *Aspects of Lengo grammar.* (MA), Trinity Western University, Canada.
Unger, P. (2010). *Dictionary of Lengo (unpublished).*
Van Valin, R. D. (2002). *Semantic macroroles in role and reference grammar*. Retrieved from http://linguistics.buffalo.edu/people/faculty/vanvalin/rrg/vanvalin_papers/SemMRsRRG.pdf