Chapitre IV

Nauruan *ka-* and causative pathways in Micronesian

Le morphème ka- *en nauruan et les voies de dérivation causative en micronésien*

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Abstract

A survey of Micronesian languages demonstrates two kinds of use of the causative affix: canonical use that increases valence of the base verbs by adding a causer/agent participant, present in all Micronesian languages, and non-canonical uses that derive various kinds of active verbs without increasing valence, present in a subset of languages. In Nauruan, the two types of uses are handled by different, but diachronically related morphemes. The paper proposes a diachronic scenario that derives non-canonical from canonical use *via* a nominalization step: a causative verb undergoes nominalization, followed by verbalization (V → N → V), and then followed by telescoping of these steps into one and concomitant reanalysis of the causative morpheme as deriving active verbs without changing valence. Syntactic and lexical evidence from Nauruan supports this scenario.

Keywords

Nauruan, Micronesian, causative.

Résumé

Une enquête portant sur les langues micronésiennes démontre deux types d'usage des affixes causatifs : un emploi canonique, présent dans toutes les langues micronésiennes, visant à augmenter la valence de base de certains verbes en ajoutant un participant agent/causateur ; et un emploi non-canonique, présent dans un échantillon de langues, permettant de dériver différents types de verbes d'action sans cependant en augmenter la valence. En nauruan, ces deux types d'emplois sont encodés par des morphèmes différents mais cependant reliés diachroniquement. Cet article propose un scenario diachronique dérivant l'emploi non-canonique depuis l'emploi canonique via une étape de nominalisation : un verbe causatif ayant subi une nominalisation connait ensuite une verbalisation (V → N → V) avant de procéder à un télescopage de ces étapes en une et simultanée ré-analyse du morphème causatif comme permettant la dérivation de verbes actifs sans en changer la valence. Des preuves syntaxiques et lexicales en nauruan permettent de défendre ce scénario.

Mots-clés

Nauruan, micronésien, causatif.

1. Introduction

Causative affixes are prototypically used to increase valency of a verb by adding a causer participant. They are well-studied in this context (e.g. Comrie and Polinsky, 1993; Song, 1996; Dixon, 2000 among others). However,

as noted by e.g. Kulikov (1993) and Kittila (2009), causative morphemes also display a number of non-canonical uses, which share some but not all properties with their canonical use. In particular, causatives may introduce agents without increasing valence, and may even reduce valence in some cases (Kittila, 2013). Kittila speculates that these non-canonical uses are diachronically secondary.

In this paper, both canonical and non-canonical uses are examined in the context of Nauruan and, more broadly, Micronesian data. The specifics of non-canonical causative uses are remarkably common across these languages, and distinct from what has been noted on non-canonical causatives by Kulikov and Kittila. I suggest a specific diachronic pathway by which these uses of the causative may develop. In sum, the scenario takes the form of a so-called *Duke-of-York* derivation, of the form A → B → A. Specifically, I will argue that the non-canonical uses of the causative result from first nominalizing a causative verb, and then deriving a verb from that nominalization. The V → N → V pathway is then telescoped into a verbal derivation that does not preserve valence of the original verb. This scenario has been observed outside of Oceanic as a pathway for the grammaticalization of antipassives and causatives, e.g. in Sino-Tibetan (Guillaume 2015).

Before turning to Nauruan, I will begin below by discussing the reflexes of Proto-Micronesian (PMc) *ka- in a variety of Micronesian languages, where it shows up commonly, but not exclusively, in the role of causative. I will suggest that Micronesian languages fall into two types: one, more conservative, where the reflex of *ka- is used exclusively as a valence-increasing causative morpheme, and a more innovative type where it is also used to derive active verbs without increasing valence. Turning to the Nauruan facts, I will suggest that these two uses are handled by two different, but related, Nauruan morphemes. I will then turn to speculating about the diachronic pathways that resulted in the observed situation.

2. Causative in Micronesian

Across Micronesian languages, the reflexes of PMc *ka- (Bender *et al.*, 2003) appear in both canonical, valence-increasing uses, and other non-canonical uses. Within each category, there are several subtypes, as summarized in (1) below. Canonical causatives produce change-of-state verbs from stative verbs (COS), and causative transitives from intransitives (TR-CAUS). The latter class may display further subtypes, which are not distinguished here,

between causatives derived from unaccusative and agentive intransitives, or "agent-related" vs. "causer-related" causation.

Non-canonical causatives are grouped here in three main classes. First, there are uses that might be called "causer quality" (CAUS-QU), namely, intransitive verbs derived from statives with the meaning of 'possess the qualities that cause the state'. Second, there are agentivizing uses derived from states (ST-TO-ACT) and denoting an activity associated with the state, the particulars depending on the lexical semantics of the verbs (cf. Kittila, 2009, on agentivizing uses of causative morphemes in other languages such as Finnish). Finally, the same morphemes can be used to derive active verbs from other active verbs, sometimes with idiosyncratic meaning changes (ACT-TO-ACT).

(1) Functions of the causative morpheme in Micronesian

    a. Adds causer argument (valence increase)

        COS: Stative or adjective to causative change of state

        TR-CAUS: Active to causative transitive

    b. Derives intransitives (no valence increase)

        CAUS-QU: Stative to causer quality

        ST-TO-ACT: Stative to activity associated with state

        ACT-TO-ACT: Activity to activity

Micronesian languages appear to fall into two subtypes: those that allow only valence-increasing, canonical uses of the causative (1a), call it the Kiribati type, and those that show both canonical and other uses of the morpheme (1a) and (1b), call it the Marshallese type. This is summarized in the following table, which lists the languages examined below: Kiribati, Kosraean, Pohnpeian, Woleaian, and Marshallese.

	COS	TR-CAUS	CAUS-QU	ST-TO-ACT	ACT-TO-ACT	
Kir	✓	✓				Kiribati type
Ksr	✓	✓				
Pohn	✓	✓				
Wol	✓	✓				
Mrs	✓	✓	✓	✓	✓	Marshallese type
Mok	✓	✓	✓	✓	(✓)	

Table 1. Two causativization patterns in Micronesian languages

In the remainder of this section, the claims of this table are supported by data from published grammars and dictionaries.[1]

In Kiribati, "[t]he prefix *ka-* [. . .] is perhaps the most productive [. . .] This process is quite universal and can be used to transitivise almost any intransitive verb in an analogous way." (Groves *et al.*, 1985, p. 88-89). The same morpheme can also be used with most adjectives. The valence-increasing uses of *ka-* are shown in (2) and (3); the morpheme does not appear to have other uses.[2]

(2)	COS	*uraura*	'red'	*kaurauraa*	'to make red'
		kukurei	'happy'	*kakukureia*	'to make happy'
		anaanau	'long'	*kaanaanaua*	'lengthen'
		un	'angry'	*kauna*	'make angry'
(3)	TR-CAUS	*nako*	'go'	*kanakoa*	'send away'
		wene	'lie down'	*kawenea*	'lay down'
		am'arake	'eat'	*kaam'arakea*	'feed'
		buti	'progress'	*kabuta*	'propel'

In Kosraean, the causative prefix *ahk-* (<PMc *fa-ka in Bender *et al.*, 2003) is also used to derive causative change-of-state verbs from states (4), and transitive causatives from active intransitives (5) (Lee, 1975, p. 187 and ff.). It is used together with the transitive marker *-ye*.

(4)	COS	*rangrang*	'yellow'	*ahkrangrangye*	'make yellow(er)'
		fasrfasr	'white'	*ahkfasrfasrye*	'make white'
		fohkfohk	'dirty'	*ahkfohkfohkye*	'make dirty'
(5)	TR-CAUS	*osak*	'limp'	*ahkosakye*	'cause to limp'
		mutul	'sleep'	*ahkmutulye*	'put to sleep'
		nihm	'drink'	*ahkmihmnihmye*	'cause/force to drink'
		marasong	'marathon'	*ahkmarasongya*	'make to run a marathon'
		mongo	'food'	*ahkmongoye*	'give food, fertilize'
		lap	'paint'	*ahklapye*	'have smb. paint'

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1 - The data are presented with the caveat that relying on English glosses to classify these verbs into the suggested subtypes can be risky; where possible, the grammar's own statements are given in support.

2 - Verbs with *ka-* are given in their citation form, which for transitive verbs includes the 3SG object suffix *-a* (see Groves *et al.*, 1985, p. 85).

A similar pattern is observed in Pohnpeian (Rehg, 1981, p. 215 and ff.) (not all items were glossed in the source). Again, the prefix is used together with transitivizing suffixes -*a* and -*ih*.[3]

(6)	COS	*luwak*	'be jealous'	*kaluwaka*	'cause to be jealous'
		ketiket	'be numb'	*kaketiket(ih)*	
		mer	'be rusty'	*kamer(e)*	
		tikitik	'be small'	*katikitik(ih)*	
		mwotomwot	'be short'	*kamwotomwotih*	
		pweipwei	'be stupid'	*kapweipwei*	
		dir	'be filled'	*kadirih*	
(7)	TR-CAUS	*mwenge*	'eat'	*kamwenge*	'cause to eat'
		lisoi	'nod'	*kalisoi*	
		weid	'walk'	*kaweid*	'cause to walk, lead'
		ned	'smell'	*kanedih*	
		reid	'stain'	*kareidih*	

Likewise in Woleaian (Sohn, 1975, p. 123 and ff., 134 and ff.), the two uses of the reflex of this morpheme are well-supported. In some cases the prefixation is accompanied by reduplication.

(8)	COS	*mmwel*	'be good'	*gammwel*	'to take care of'
		peo	'be even'	*kapeo*	'to measure'
		mwash	'to be held'	*kemwash*	'to hold'
		pou	'to be dumped'	*gapoupou*	'to spill'
		tar	'to be destroyed'	*gatettar*	'to rip'
		ssoong	'to be angry'	*gassoong*	'to tease'
		metaf	'be clear'	*gemetafa*	'explain it'
		ker	'be happy'	*gaker*	'make happy'
		ssit	'be hard'	*gassit*	'make hard'

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3 - In Pohnpeian, *ka*-marked forms can also occur without the transitive marker, in which case they have a passive meaning; see details in Rehg, 1981, p. 215-216.

(9)	TR-CAUS	*skuul*	'study'	*gaskuul*	'teach'
		mmwe	'sleep well'	*gammw*	'make sleep well'
		mmat	'wake'	*gemmat*	'wake up'
		cheiu	'be carried on back'	*gacheiu*	'carry on back'
		shewar	'move'	*gachewar*	'carry'
		masiur	'sleep'	*gemmasiur*	'make sleep'

Together, these four languages display a clear pattern of productive use of the causative morpheme to increase the valence of the base verb. Turning now to Marshallese, we see a broader use of the cognate morpheme (data below are from Bender et al., 2016, p. 157 and ff., 306 and ff.). First, like the other languages, Marshallese also displays the valence-increasing uses, sometimes accompanied by other suffixes, similar to other languages above.

(10)	COS	*dipen*	'be strong'	*kadipen*	'strenghen s.'
		dujejjet	'be full'	*kadujejjete*	'fill s.'
		kut	'be crowded'	*ko̧kuti*	'make s. crowded'
(11)	TR-CAUS	*eañ*	'urinate'	*keañ*	'help s. urinate'
		ebeb	'shiver'	*kaebebe*	'make s. shiver'
		dibuk	'penetrate'	*kadibuki*	'make s. penetrate'
		bukwelōlō	'kneel'	*kabukwelōlōūk* 'make s. kneel'	

Additionally, Bender *et al.* (2016, p. 306) demonstrates non-valence-increasing uses in "derivations in which there are no syntactic consequences, and only the semantic features of the source verb are changed" in verbs derived by *ka-* (∼ *kō-*, *ke-*, *ko̧-*). These uses can be grouped, to the extent possible from the glosses provided, as deriving causer qualities from statives, as in the following examples. Once again, often the addition of *ka-* is accompanied by other morphology, not systematically classified here.

(12)	CAUS-QU	*kūtōtō*	'be angry'	*kakūtōtō*	'be anger-provoking'
		m̧akoko	'be unwilling'	*kōm̧akoko*	'be bothersome'
		mijak	'be afraid'	*kaamijak*	'be scary'
		bwilōñ	'be surprised'	*kabwilōñlōñ*	'be surprising'
		jim̧ we	'be straight'	*kajjim̧ we*	'be strict'

The following examples show derivations of activities from states, but the activities are unlike causatives in examples such as those in (11): the morpheme does not contribute a causer participant.

(13)	ST-TO-ACT	iur	'be fast'	kaiur	'hurry'
		mminene	'be experienced'	kamminenen	'practice'
		būrōrō	'be red'	kabūrōrō	'wear lipstick'
		jerọ	'be a good shot'	kōjjerọror	'have shooting contest'

Finally, activities can be derived from other activities, with more idiosyncratic semantic contributions.

(14)	ACT-TO-ACT	tilekek	'hide'	kattilekek	'play hide and seek'
		util	'be agile'	kọutiltil	'have acrobatic contest'
		ttōr	'run'	kattōr	'drive'
		bwebwenato	'talk'	kabwebwenato	'make conversation'
		batur	'crave fish'	kōbbaturtur	'refrain from fish'

A similar variety of uses is observed in Mokilese (Harrison, 1976, p. 166 and ff.). Valence-increasing uses of the causative are once again well-documented. The prefix sometimes occurs in the shape *ko-*, *koa-*, or *ke-*, under conditions not specified in the source.

(15)	COS	loau	'cooked'	kaloaui	'cook' (trans.)
		loklok	'bent'	kaloklokihla	'bend' (trans.)
		inen	'straight'	kainene	'to straighten'
		mwakelkel	'clean'	kamwakele	'to clean' (trans.)
		rar	'split'	karara	'to split' (trans.)
(16)	TR-CAUS	pijpij	'urinate'	kapijpiji	'make someone urinate'
		mwinge	'eat'	kamwinge	'feed'
		umwwuj	'vomit'	kaimwuj	'make someone vomit'
		koaul	'sing'	kakoauli	'make someone sing'
		alu	'walk'	kahlua	'to lead'
		dihdi	'suck the breast'	kadihdi	'breastfeed'
		doadoahk	'work'	koadoahkoa	'work on'

As in Marshallese, Mokilese also displays non-canonical uses of *ka-*, though the last type, where activities are derived from other activities, does not appear well-populated.

(17)	ST-TO-ACT	*diroapw*	'busy'	*kadiroapwoa*	'bother'
		raj	'equal'	*karaja*	'to compare'
		pai	'lucky'	*kapaia*	'to praise'
		pwung	'correct'	*kopwung*	'to judge'
(18)	ACT-TO-ACT	*rong*	'hear'	*koaronge*	'listen'

In Mokilese, a particularly common pattern is the "stative intransitive causative", in Harrison's terminology (1976): derivations that are here termed causer qualities. "This construction is particularly common with verbs that describe feelings and emotions" (*ibid.*, p. 171), though is not exclusive to this class.

(19)	CAUS-QU	*mijik*	'afraid'	*kamijik*	'frightening'
		pwuriamwei	'surprised'	*kapwuriamwei*	'surprising'
		johsik	'economical'	*kajohsik*	'thrifty'
		koahk	'tired'	*kakoahk*	'tiring'
		uruhr	'to laugh'	*kauruhr*	'funny'
		injinjued	'sad'	*kainjinjued*	'saddening'
		peren	'happy'	*kaperen*	'pleasing, funny'
		sangaj	'lonely'	*kasangaj*	'lonely, causing loneliness'
		ok	'burn'	*koahok*	'flammable'
		pou	'feel cold'	*kopou*	'cold'

In sum, the Kiribati type, with only valence-increasing uses of the morpheme, includes Kosraean, Pohnpeian, and Woleaian, while the Marshallese type also includes Mokilese.[4]

3. Causative in Nauruan

3. 1. Contextualization

Nauruan is an understudied Micronesian language spoken in the Republic of Nauru, an isolated raised coral atoll in the Eastern Central Pacific, by a population

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4 - Cf. Rehg and Bender, 1990 on Marshallese-to-Mokilese influence.

of about 7 000 speakers, locally as well as in Australia and New Zealand. The language, while Micronesian, is divergent, and "aberrant" (Grace, 1990) both in the Austronesian family, as well as more locally in Micronesian, due to high rate of cognate replacement and radical sound changes, as detailed in Hughes, 2020.[5] While the language is vibrantly used, it is undergoing rapid change due to disruption of the traditional lifestyle and extensive linguistic contact with Kiribati, German, English, and more recently Persian and Arabic.

The present work is based on published sources (Kayser, 1993[1936]; Hough, 1974; Nathan, 1973a,b; Jacob *et al.*, 1996; Johnson 2002; Hughes 2020), and original fieldwork on location (2015 and ff.), including a collaborative lexicographic project with the Nauruan community on completing the Nauruan Dictionary, based on Jacob *et al.* (1996). The data comes from English-mediated elicitation with native speaker consultants guided by the lexical entries in Jacob *et al.* (1996), and the written source of Detudamo (1930).[6] The data are presented in the dictionary orthography, which, although neither very systematic nor very phonetically transparent, suffices in the discussion of morphology.

3. 2. õ- and *ka-* causatives

Unlike all other languages examined above, Nauruan has two morphemes described as causative: the prefixes õ- and *ka-.* Their responsibilities are divided between canonical, valence-increasing causatives handled by õ- and the non-canonical uses handled by *ka-*. Thus, Nauruan is in a sense both a Kiribati-type language and a Marshallese-type language, depending on which morpheme is being examined, as illustrated in the following table.

	COS	TR-CAUS	CAUS-QU	ST-TO-ACT	ACT-TO-ACT
Kir-type	✓	✓			
Mrs-type	✓	✓	✓	✓	✓
Nauruan	õ-		*ka-*		
	add causer		intransitive		

Table 2. Typology of *ka-* functions in Micronesian

The valence-increasing behavior of *õ-* is illustrated in the following examples (20), where adjectives with the prefix *õ-* express change of state.

(20)	COS	*roe*	'heavy, sad'	*õ-roe*	'make sad'
		bõg	'flat'	*õ-bõg*	'make flat'
		eow	'calm'	*õ-eow*	'make calm'
		dereder	'clean'	*õ-dereder*	'cause to be clean'
		babareow	'well-known'	*õ-babareow*	'publicize'
		baõ	'open'	*õ-baõ*	'separate, cleave'
		būrūbūr	'white'	*õ-būrūbūr*	'whiten'
		dabūk	'beautiful'	*õ-dabūk*	'decorate'
		ebak	'many'	*õ-ebak*	'increase, boost'
		eibibõki	'happy'	*õ-eibibõki*	'gladden, cheer'

Likewise, in a number of intransitive verbs, both unaccusative and active, *õ-* adds a causer argument.

(21)	TR-CAUS	*ake*	'fight'	*õ-ake*	'incite, provoke'
		denigae	'fail, lose'	*õ-denigae*	'defeat, overcome'
		eõñ	'cry, weep'	*õ-eõñ*	'ring, play'
		erū	'catch'	*õ-erū*	'conceal'
		rig	'begin, originate'	*õ-rig*	'yield, produce'
		rida	'awake, arise'	*õ-rida*	'awaken, arouse'
		makur	'work'	*õ-makur*	'reap; cause to work'

In contrast, *ka-* (*k-* before vowels) fulfills the non-canonical causative functions also encountered in the languages of the Marshallese type. The most productive use in Nauruan, as in Mokilese, is provided by the causer-quality derivations. They are glossed below in a nominal or adjectival way, but all of them can be used verbally, with some syntactic restrictions that are discussed below.

(22)	CAUS-QU	(e)ibibõki	'happy'	kibibõki	'cause of happiness'
		baran	'jealous'	kabaran	'source of jealousy'
		erita	'surprise'	kerita	'cause of surprise'
		maga	'hurt, pain'	kamaga	'cause of pain'
		mamado	'insult'	kamamado	'what causes insult'
		miow	'fear'	kamiow	'cause of fear'
		ñij	'be bored'	kañij	'cause of boredom'
		roe	'be sad, heavy'	karoe	'cause of sadness'
		damadam	'riled, angry'	kadamadam	'provocative, annoying'
		maiũr	'ashamed'	kamaiũr	'embarrassing'
		derũga	'lie, prevaricate'	kaderũga	'false, erroneous'
		mwitõñ	'amaze, surprise'	kamwitõñ	'surprising, amazing'

The other uses are also represented, though the ST-TO-ACT case, according to my data, does not appear very clearly represented.

(23)	ST-TO-ACT	bebi	'light'	kabebi	'urinate'
		ñuruñure	'envious'	kañuruñure	'fight, quarrel'
		keiwin	'be a friend'	kakeiwin	'make a friend'

In contrast, *ka-* occurs relatively frequently with active verbs, with the result glossed identically by the main verb, but described by my consultants as 'to engage in the activity denoted by the main verb, be a V-er'.

(24)	ACT-TO-ACT	buõg	'help'	kabuõg	'help'
		õtar	'boil'	kõtar	'boil'
		wej	'build'	keij	'build'
		dereder	'clean'	kadereder	'clean, be a cleaner'
		maerer	'reconcile, conciliate'	kamaerer	'pacify, appease'
		mwat	'squeeze, clutch'	kamwat	'wring, squeeze'
		õraijida	'throw upward'[7]	karaijida	'fish by casting net'
		õrarõ	'sharpen'	kararõ	'grind'

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7 - In some cases, such as *õraijida* 'throw upward', the base word may already contain what appears to be diachronically the prefix *õ-*, but is probably synchronically a fossilized part of the root. The fact that the *k-* form appears as *karaijida* rather than *kõraijida* is an artifact of the Dictionary orthography used here.

3. 3. The syntax of *õ-* and *ka-* causatives

Superficially, there are some examples (25) where *ka-* appears to fulfill a function similar to that of *õ-*:

(25)	*raq*	'long'	*karaq*	'lengthen'
	tsimor	'alive, healthy'	*katsimor*	'save, rescue'
	bõg	'flat'	*kabõg*	'flatten'
	ewedu	'land, descend'	*kawedu*	'flow, pour down'

However, these words are not entirely identical to the corresponding *õ-* words in their syntax. In particular, I will discuss in more detail the following facts: first, that *õ-* words, as is typical of canonical causatives, are transitive, and second, that *ka-* does not produce transitives, and may produce nominals, not verbs. Transitivity in Nauruan can be determined by the ability to take pronominal object suffixes, and can be overtly marked by the transitive suffix -(*e*)*i*, often on an otherwise bound stem. Causatives with *õ-* either take object affixes directly, or are combined with the transitive suffix -(*e*)*i*.

(26)	a.	*ãt*	'see'	*ãt-uw*	'see-2SG.OBJ'
		eredu	'respect'	*eredu-w*	'respect-2SG.OBJ'
		weiden-ei	'marry'	*weiden-ei-uw*	'marry-2SG.OBJ'
		dad-ei	'touch'	*dad-ei-uw*	'touch-2SG.OBJ'
	b.	*õ-roe*	'make sad'	*õ-roe-uw*	'make sad-2SG.OBJ'
		õ-raro-ei	'burden'	*õ-raro-ei-uw*	'burden-2SG.OBJ'
		õ-rida	'awaken'	*õ-rida-euw*	'awaken-2SG.OBJ'

Contrast this with the behavior of *ka-* words. They can be verbal, as evidenced by the ability to take tense/aspect modifiers, e.g. their compatibility with progressive *oreita* and perfect *ogiten*. If they are verbs, however, they are not transitive: they cannot take pronominal objects. They may take complements, but the complements must be nonspecific, cannot be modified, and cannot be extracted or focused. In this way, words formed with *ka-* bear the hallmarks of semitransitives, with objects incorporated into the verbal complex (cf. Sugita, 1973; Hale, 1998; Margetts, 2008). These properties are illustrated below: the inability to take specific complements (27) and the prohibition on extraction (28). Note that the only way to question the object of a *ka-* word is with an *in situ* wh-word (28d).

(27) a. *kadereder-uw 'clean you', *kamaga-euw 'cause you pain'

b.

nan	abueõ	aiquet	obeni	a	nim	k-eij	ewak
will	take	one	year	I	MOD	ka-build	house

'It will take me a year to build a house'

c.

a	nim	ka-bõg	(*bita)	epe
I	will	ka-flatten	(*DEF)	stone

'I will flatten (this) stone'

d.

a	nim	k-eij	(*aeõ)	ewak
I	MOD	ka-build	(*my)	house

'I will build my house'

(28) a.

ken	ñea	wõ	(*k-)eij?
what	DEM	you	(*ka-)build

'What are you building'?

b.

ken	ñea	wõ	(*k-)ereri?
what	DEM	you	(*ka-)teach

'What is it you teach/*learn?'

c.

goda	ñea	ewak	wõ	oreit	oeij/*k-eij
tall	DEM	house	you	PROG	build/ka-build

'The house you are building is tall'

d.

ka-dereder	ken?
ka-clean	what

'You clean what?'

These restrictions do not hold of õ- words: they are able to take specific complements like other transitives. Furthermore, verbs derived by ka- can further be transitivized with -(e)i, in which case they obtain regular transitive behaviors, and may take "real" (i.e. specific) complements.

(29) a.

k-eritta-i-õ	ñaga	wõ	õũga
ka-surprise-TRANS-1SG.OBJ	when	you	said

'You surprised me when you said that'

b.

e-k-eritta-i-em
NOM-ka-surprise-TRANS-2SG

'you being surprised by someone else'

c.

a	nim	ka-bõg-ei	bita	epe
I	will	ka-flatten-TRANS	DEF	stone

'I will flatten this stone'

	d.	*ken*	*ñea*	*wo*	*k-ereri-ei?*
		what	DEM	you	*ka*-learn-TRANS
		'What do you teach?'			
	e.	*ken*	*ñea*	*wo*	*(*ka-)dereder/ka-dereder-ei?*
		what	DEM	you	*(*ka-)*clean/*ka*-clean-TRANS
		'What are you cleaning?'			

While generally Nauruan allows relatively free N ↔ V zero derivation (see below), it is particularly well-represented in *ka-* words, which often turn up in syntactically nominal contexts, and may take the nominal prefix *e-*. Below are some examples from a collection of stories written down in the 1930s by Head Chief Detudamo. The words *ka-maga* 'pain-causing quality', *e-ka-roe* 'sadness-causing thing', are of the CAUS-QU type.

(30)	*ñabuna*	*rõ*	*gorowoñ*	*atin*	*ean*	*an*	<u>*ka-maga*</u>	*murowa*	*epe*
	DEM	3PL	run	from	in	POSS	ka-pain	DEM	stone
	'and those who run from the pain caused the stones'								

(31)	*teñ*	*oeogida*	*gain*	*amea*	ñea	*ogiten*	*ririñ*	*bita*	<u>*e-ka-roe*</u>	ñea	*ouwak.*
	want	inflict	punishment	MASC	DEF	PF	do	DEF	NOM-ka-sad	DEF	big
	'want to inflict pain against those men who had done something causing great sadness'										

Below are some additional examples (32) where *ka-* words appear as nominals.

(32)	*ate*	'light'	*kate*	'firestarter'
	baba	'break'	*kababa*	'person who breaks things'
	ereri	'teach'	*kereri*	'school; learn'
	jeji	'eat'	*kijeji*	'person who feeds/who shouts'
	pudu	'fall, be born'	*kapudu*	'midwife; child delivery'
	ake	'fight'	*kake*	'collision'
	baka	'bad, wrong'	*kabaka*	'reviling, abuse'
	bojarara	'scented'	*kabojarara*	'scent'

Finally, I turn to the discussion of diachrony underlying these facts.

4. Diachronic scenario

4. 1. The origins of the morphemes

The causative morpheme in Micronesian languages is a reflex of Proto Oceanic (POc) *pa[ka]-, PMc *ka- (Pawley, 1972, 1973; Ross, 1988; Bender *et al.*, 2003). According to Evans (2003, p. 250), the development is an idiosyncratic loss of *pa-:

> *In Micronesian languages, reflexes of* *ka- *function as productive causative prefixes, a function which in other languages is associated with the reflexes of* *pa- *and* *paka-[...] [P]re-Micronesian would have retained Proto Oceanic* *paka- *as a causative prefix. At a later stage an idiosyncratic innovation occurred and the initial syllable was lost from this form leaving* *ka- *as the causative prefix. It is most economical to posit the period of loss as pre-Micronesian because, as far as I know, Micronesian languages uniformly reflect* *ka- *but not* *paka-.*

First, in languages that use the same morpheme for both canonical and non-canonical causative derivations, the latter are clearly innovations relative to the former. If non-canonical uses had been retentions, then Kiribati, Pohnpeian, and other Kiribati-type languages would be expected to show fossilized forms with *ka-* in other uses, but this seems not to be the case, and at least is not reported in grammars. Rather, these languages tend to show highly productive and regular valence-increasing causative *ka-* uses. If the non-valence-increasing uses were retentions, it would be puzzling why several languages independently lost the same sets of meanings without a trace. More generally, there is a consensus in the literature that prototypical causatives grammaticalize first (cf. Kittila, 2009, 2013), and that other uses are later innovations.

Second, the Nauruan facts suggest that the scenario described by the quote from Evans above is not entirely complete. Given the near-regular loss of initial *k in Nauruan (cf. Hughes, 2020), it appears plausible that Nauruan õ- < *ka- while Nauruan *ka-* < *fa-ka-. The idiosyncratic loss of *pa mentioned by Evans would have taken place in Nauruan after the secondary, non-canonical uses of the causative morphemes developed – a case where morphemes diverge phonologically after diverging semantically – but before the development of these secondary uses in other languages. The scenario that *fa-ka in fact survives in Micronesian is further supported by Kosraean, where the causative morpheme *ahk* appears to reflect *fa-ka rather than *ka (Bender *et al*., 2003).

4. 2. The diachronic pathways

Let us take as a starting point a language with *ka-* in its canonical uses, i.e. a Kiribati-type language. A crucial property that enables the next step in the development is the relatively productive V ↔ N zero derivation. This is the case in Nauruan, where the distinction between lexical categories is somewhat blurred by the free conversion between them. The V → N direction is particularly unrestricted: any verb can occur, sometimes with a nominal prefix, in syntactically nominal contexts.

Suppose a canonical causative undergoes V → N zero-derivation. What results is a nominal describing causer quality ('to cause pain' → 'causer of pain'). Causative combined with such a nominalization resembles a nominal version of the CAUS-QU use of the morpheme described for several languages above, including Nauruan. In turn, when this resulting nominal undergoes N → V derivation, it becomes an active verb with a meaning like 'act as a causer of pain', which is precisely the CAUS-QU type used verbally. After telescoping (folding of several intermediate steps into a single step), *ka-* can be reanalyzed as deriving active intransitives from statives, which still bear resemblance to causatives semantically, in that they denote qualities associated with causers, but depart from them syntactically. Further steps of extension result in the ST-TO-ACT type (deriving actives from statives more generally), and the ACT-TO-ACT type (where the affix is extended further to derive active verbs not just from statives but from other active verbs as well).

There are cross-linguistic parallels for this scenario. Similar derivational pathways involving antipassives, causatives, and nominalizations have been observed in West Greenlandic (Fortescue, 1996), Mande (Creissels, 2012), and Sino-Tibetan (Guillaume, 2014, 2015). Guillaume (2015, p. 22) describes the scenario of the two-stage process of the origin of causatives and detransitivizers: "First, the base verb is nominalized to a bare infinitive [...] This nominalization neutralizes the transitivity of the verb. Then a denominal verb is created from this bare infinitive with a transitivity value different from the base verb." Thus, the crucial component of the scenario is the voyage of the derivation along the Duke-of-York, back-and-forth path, V → N → V. The nominalization strips the verb of its inherent valence, so that when it returns to its verbal state, it fails to retain the original transitivity. This is evident in the transitivity differences between words that have undergone the derivation (the *ka-* words in Nauruan, which

are semitransitives—syntactic intransitives but semantic transitives; cf. Margetts, 2008), and words that have not (the *õ-* words in Nauruan, which are real transitives).

Further predictions follow from this proposal. First, if languages differ in the extent of non-causative *ka-* use, there is an implicational hierarchy between the three subtypes: ACT-TO-ACT should imply ST-TO-ACT, which in turn should imply CAUS-QU. This claim bears further investigation beyond grammatical descriptions of Micronesian languages, but the data reported above is at least compatible with it, in that CAUS-QU derivations appear the most productive and ubiquitous.

Second, the "intermediate stop" of the derivation at the nominal stage, apparent in Nauruan, should be evident in other languages too. This is supported in Woleaian, where the nominalizing prefix *ga-* or *ge-* "has the same shape as the causative prefix and may be related to it historically" (Sohn, 1975, p. 117).

(33)	*ffas*	'laugh'	*geffas*	'jokes'
	bboa	'spoiled'	*gabboalag*	'yeast'

Third, the semitransitive behaviour of *ka-* words should also be apparent beyond Nauruan. This is indeed the case in at least Marshallese, as reported by Bender *et al.* (2016, p. 254).

The proposal above should be taken with the usual caveats due to indirect access to Micronesian data outside of Nauruan. However, the picture that emerges from this discussion is relatively consistent: the core, canonical causative uses that add causer/agent arguments to verbs are extended in a particular way in several languages via an intermediate stage of nominalization. The proposals sketched above will require elaboration by looking beyond Micronesian at other Oceanic languages, in particular Polynesian where cognate morphemes display allied uses. Whether those other uses result from a similar pathway remains to be seen.

Acknowledgements

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