On the external relations of Purepecha : an investigation into classification, contact and patterns of word formation

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6. WORD FORMATION AND SEMANTIC TRANSPARENCY IN PUREPECHA

"Right, breaking your leg hurts like hell. HEL, OK? They do it beLOw the knee, 'HEL-LO', get it? They do it twice, twice: 'T(W)O'. HELLO TO. And jigsaw must mean YOU.
HELLO TO YOU!"
(Rimmer to Cat and Lister, 'Thanks for the Memory')

Abstract

In this chapter I investigate the roles and semantic contribution in word formation processes of the two main morphological units in Purepecha: roots and suffixes. Purepecha (isolate, Mexico) is a strongly agglutinating language whose main word formation process is suffixation. Roots can be derived to form nouns, verbs and some minor word classes, but their independent meaning ranges from highly transparent to seriously opaque. Using the 650 fused nouns drawn from Friedrich's (unpublished) Purepecha-English dictionary, I explore the relative semantic status of both roots and suffixes in the language. I discuss the possible classificatory role of the 56 nominalising suffixes identified, focusing on the semantics of the most frequently occurring in order to demonstrate their variability in semantic transparency as well as their possible polyvalence. Through a comparative presentation of nominal classifiers and fused classifier prefixes in four Otomanguean languages, I offer a tentative diachronic pathway for the grammaticalisation of these suffixes in Purepecha. Nonetheless the lexical origin of most of these 'nominalising' suffixes remains somewhat unclear, leaving the way open for a great deal more research into diachronic processes of word formation and the construction of meaning. The opacity of some roots, coupled with their ability to take derivations of multiple word classes suggests an interpretation whereby roots could be considered precategorial rather than verb roots, as has traditionally been the case. Following a discussion of previous analyses, I suggest that these roots could be conceptualised in terms such as √PERCEIVED FOULNESS or √RELATED TO BURNING, rather than as simple translations such as 'to

stink' or 'to burn' in these cases respectively. Such an interpretation would have important consequences for language-internal analysis as well as the production of textual materials, notably dictionaries.

6.1. Introduction

Purepecha (isolate, Mexico) is a strongly agglutinating, mildly polysynthetic language, whose principal word formation process is suffixation. It possesses two main word classes, nouns and verbs, which are differentiated according to the types of suffixes they take following the stem (see Section 1.5.2). In examples (1a-b) the stem is *mi=ta-*, comprising the dependent root *mi-* plus the stem formative morpheme *=ta*, which combine here to give the meaning 'open'. Examples (2a-b) demonstrate an instance of an independent root, here *t'ire-* 'eat', that requires no further morphology before adding word class-specific suffixes.

(1a)	mi=ta-kwa	(1b)	t'u	mi=ta-x-ka=ri
	open=SF-NMZR[140]		2.SG	open=SF-AOR-1/2.S.ASS=2.S
	'key'		'You (sg.) open.'	
(2a)	t'ire-kwa	(2b)	ji	t'ire-a-ka
	eat-NMZR		1.SG	eat-IRR-1/2.S.ASS
	'food'		'I will eat.'	

A dependent root, such as *mi-* in (1a-b), must be accompanied by a stem formative morpheme, after which either nominal or verbal morphology may be added. Chamoreau (2003: 83) offers a clear paradigm of the possible verbal extensions of the root *mi-*, all of which relate to more concrete or more abstract meanings related to 'opening' (3a-e), where the stem formatives are marked in boldface. The inflectional morphemes are identical to those in (1b) and are thus not fully glossed.

[140] As we will see shortly, the label 'nominaliser' (NMZR) is both somewhat misleading and rather vague, but is used here for the sake of simplicity.

(3a)	mi=**ti**-x-ka=ri	'You know'
(3b)	mi=**narhi**-x-ka=ri	'You remember'
(3c)	mi=**na**-x-ka=ri	'You shut away'
(3d)	mi=**ka**-x-ka=ri	'You close'
(3e)	mi=**ta**-x-ka=ri	'You open'

The meaning of all of these stem formatives except one is clear due to their use as suffixes in other categories, even if the semantics of the bipartite stem they form is not necessarily so transparent. In (3a) we find the spatial location suffix *-ti* 'top, upper area' (relating to the top of the face, eyes, and intellectual activity) combined with the root *mi-*, to refer to a state of 'knowing'.[141] Another spatial location suffix appears in (3b), *-narhi* 'principal and flattish area', whose referents include the face, hair, and eyes, and whose combination with a concept of opening can be construed as 'remembering'. As for (3c), the spatial location suffix *-na* 'interior area' offers a composite meaning of 'shut away'. In (3e), the root combines with the causative marker *-ta*, which usually occurs in the fourth slot of the verbal template, although the meaning does not reflect double causation in the sense that it is simply 'to open' rather than 'to make [it] open'. The only so-called stem formative suffix that cannot be defined at this stage is *-ka* (3d), which is also found in the homophonous forms *-ka* '1/2.S.ASS' as well as the standalone lexeme *ka* 'and', although it is unlikely that either of these forms is related to the stem formative.

While the meaning of four of the five stem formative suffixes in (3a-e) is clear, and their compositional meaning when combined with the root is also relatively transparent, we are still left with the further issue of what meaning to assign to the root *mi-*. It is evidently connected to a literal or figurative sense of opening, but the presence of forms also referring to the opposite action - closing - without any clear syntactic markers for reversing the action (assuming that *-ka* does not fulfil that function more broadly in Purepecha morphology) complicates the matter. Moreover, (3c) does not refer to an opening of the chest but a literal or figurative notion of

[141] Note that the spatial location suffixes are translated as nouns but syntactically they are not nominals, rather offering specification of the location of an event or action.

shutting away, again the opposite of opening. The inherent semantic generality of this root makes it difficult, therefore, to assign it a clear independent meaning (see also Adelaar (2005) for a discussion of a similar, although more extreme, case of root underspecification in Muysca, a now extinct Chibchan language of modern-day Colombia). Capistrán Garza (2015: 13) translates *mi-* as '(un)cover', which works in a sense for (3d-e) but the same issues remain when applying such a translation to the more figurative forms. Indeed, while 'referring to opening and closing' may sound clunky, for the time being it is the most accurate translation or representation of its meaning. To label the root *mi-* 'to open' would disallow a reasonable compositional reading of (3c).

In Purepecha, nouns and verbs are differentiated by the suffixes they may take, and indeed it is the suffixes that provide the root with a word class (see also Lucas Hernández, 2014). The verbal template comprises 12 predefined slots following the stem, of which up to six or seven can be filled in any one verb form (Friedrich, 1984). In line with cross-linguistic patterns of affix ordering (e.g. Bybee, 1985; see also Section 2.5), Purepecha stems are immediately followed by six derivational categories, then five inflectional categories, all of which appear in one and only one slot in a strict order. An optional set of subject and object clitics constitutes slot 12. The full list of slots, in order, is as follows: (i) locative, (ii) directional, (iii) causative, (iv) voice/valency, (v) desiderative, (vi) adverbial, (vii) 3.PL.O, (viii) aspect, (ix) tense, (x) irrealis, (xi) mood, (xii) subject/object (see Chapter 1, Table 9). An example including suffixes from categories (i), (ii), (x), (xi) and (xii) can be found in (4).

(4) kwi-parha-pa-a-ka=kini
carry-SP.LOC.long.ext.area-DIR.centrif.-IRR-1/2.S.ASS= 2.SG.O
'I will go carrying you on my back.' (Adapted from Chamoreau, in press)

All verbs are formed according to the 12-place template presented immediately above (although see Section 2.5.1 for a short discussion of alternative templatic orderings). Nouns display more variation, however, when it comes to the suffixes they can take in word formation. The existing literature analyses their internal structure as

comprising a verb root and a nominaliser suffix. Hernández Domínguez (2015: 51), for example, claims that there are three nominalisers, *-kwa*, *-sï* and *-cha,* that he does not differentiate in terms of respective frequency or productivity. We will see presently, as well as in much more detail in Section 4, that this list is much too short. Moreover, the analysis of these suffixes as nominalisers is misleading since nominalisation proper refers to the process of 'turning something into a noun' (Koptjevskaja-Tamm, 2006: 652). Since the element to be 'nominalised' is not a standalone verb (or any other part of speech), the suffixes such as those mentioned by Hernández Domínguez (2015) could be considered to be forming nouns from a precategorial root rather than nominalising a pre-derived lexeme, or word class-specific root (see the discussion for more detail). As such, these suffixes are 'nounifiers' in that they form nouns. However, to avoid inventing new grammatical terminology and to enable comparability across sources and authors, I will retain the term 'nominaliser' here.

I define two types of noun: the first type comprises a stem followed by a productive nominaliser, usually *-kwa* for a wide range of objects and actions of transitive or intransitive verbs (by far the most common nominaliser), or *-ri* for agents. See (5a-b) for an example of each nominaliser combined with the independent root *pire-* 'sing'.

(5a)	pire-kwa	(5b)	pire-ri
	sing-NMZR		sing-AGT.NMZR
	'song'		'singer'

The second type of noun takes the same structure, namely a stem plus a 'nominalising' suffix, but the range of suffixes used is much larger and their semantics are much more opaque. They can be considered synchronically fused forms in which the suffix is a largely unproductive classifying or nominalizing element. As an illustration, take the terms in (6a-b), which are both derived from the root *xïkwa-* 'referring to witchcraft'.

(6a)	xïkwa-pu	(6b)	xïkwa-mi
	witchcraft-NMZR		witchcraft-NMZR
	'spider'		'witch'[142]

While the suffixes *-pu* and *-mi* can only be used to form nouns, some of the suffixes that Chamoreau (2003, 2000) refers to as 'exocentric' can be drafted in to form lexemes from different word classes. Take *-ri*, the suffix introduced above as an agentive nominaliser, as an example. This suffix also occurs in adjectival (7a) and adverbial lexemes (7b), where it is not glossed morphologically since the label 'nominaliser' is evidently not appropriate.

(7a)	tepa=ri	(7b)	incha=ri
	large/heavy/thick=ri		enter=ri
	'fat'		'inside'

Further examples of these suffixes, including an attempt at their semantic categorisation, can be found in Chamoreau (2003: 132-137; 2000: 307-319; see also Foster (1969: 87-89). I will take up the question of their semantic content and weight in Section 6.2, although I will leave a detailed discussion of their polyvalent usage (i.e. in different word classes) for a separate study. It should be noted here already that nouns are typically paid less attention in studies of Purepecha, mainly given the assumption that it is a very 'verby' language (see the overview of root 'verbiness' in Section 6.5.1). Yet nouns clearly contain internal structure that deserves closer attention.

Indeed, the internal structure of nouns (as well as verbs) is not made explicit in the existing Purepecha-Spanish dictionaries (Lathrop, 2007 [1973]; Velásquez-Gallardo, 1978), nor in most other reference works, including examples in grammars and articles. Both of the aforementioned dictionaries list their lexical entries as full words, admittedly as a combination of a root or stem plus one or more suffixes, but

[142] We might, reasonably, expect the agentive noun referring to witchcraft to terminate in *-ri*, as 'singer' in (5b), however its use as an agentive nominaliser is only a strong tendency, not a hard and fast rule.

with no indication as to internal morpheme boundaries. Verbs are generally listed according to the now accepted citation form, which comprises a dependent or independent stem, sometimes plus other suffixes (e.g. voice and/or mood) and the non-finite terminating suffix *-ni*. However, the use of the non-finite suffix is nothing more than a linguistic convention, likely based on the Spanish infinitive model, and does not allow the reader to analyse the individual components of a word, nor their combinatorial semantics. Examples of non-explicit dictionary entries for both a noun and a verb can be observed in (8a) and (8b) respectively. Note that the first line of the example provides the original entry in Velásquez-Gallardo's (1978) dictionary, the second line represents the orthography used in this chapter with morpheme boundaries added, the third is the gloss of the second, while the last is a translation to English of the meaning as given in the dictionary.

(8a)	*kuatás, kuatáshi*[143]	(8b)	*kuatárani*
	kwata=sï		kwata=ra-ni
	kwata=NMZR[144]		kwata=SF-NF
	'tortilla basket, *tazcal*[145]'		'to tire'

By deconstructing each term on a morpheme-by-morpheme basis, it is possible to better understand the relative contribution of each component and how they combine to form a more or less semantically transparent whole. In (8a-b), for example, it proves very difficult to assign concrete meaning to the root *kwata-* given the semantic distance of the two derived terms.

Only Friedrich's (unpublished) dictionary, part of which appears in the appendices of the now out-of-print Friedrich (1971), lists entries by root, followed by possible combining suffixes, thereby enabling the reader to comprehend the internal

[143] Note that multiple spellings exist for the word-final sound [ʃ], including <s>, <sh>, <shi>, <sï>.
[144] The root *kwata-* is not translated as its semantics are difficult to recover on the basis of the lexemes it forms with the addition of the different suffixes. A translation without the addition of a stem formative is also absent from Friedrich's (unpublished) dictionary. I return to this issue of semantic specification in Section 6.2.
[145] The term *tazcal* may have entered Spanish from the Classical Nahuatl *tlaxcalchiquihuitl* 'basket for keeping corn tortillas' (Real Académia Española, http://dle.rae.es/?id=ZGgHbcP).

structure of the word. Yet a closer reading of the internal structure of a Purepecha noun or verb highlights a key issue that I will explore in this paper, namely the relative semantic transparency of both roots and suffixes in the formation of stems and full words, and how much independent meaning both carry. In other words, I seek answers to the question of what the semantic load of roots is, and to what extent are they defined by their accompanying suffixes. More generally I explore what the semantic relationship is between the two elements using a database of nouns (Friedrich, unpublished), a generally under-examined word class in Purepecha.

The rest of this paper is structured as follows. In Section 6.2 I explore the role of suffixes in deriving nouns using a database of around 650 lexemes extracted from Friedrich's (unpublished) Purepecha-English root dictionary. By comparing their relative semantics, I offer a more finely tuned classification for a sub-set of these suffixes (cf. Chamoreau, 2003, 2000). Section 6.3 draws parallels between the classificatory nature of the nominal suffixes in Purepecha and the nominal affixes in Ocuilteco and other, related, Otomanguean languages of Mesoamerica, offering a possible parallel grammaticalization pathway. In Section 6.4 I use data from Friedrich (unpublished) and my own fieldwork data to demonstrate that roots display variable amounts of semantic transparency but nonetheless many would be better represented as more general concepts rather than specific words in either Spanish (the most common metalanguage for translating from Purepecha) or English. I contrast this new proposal with a critical overview of existing accounts of root semantics and word formation in Purepecha in Section 6.5, together with a more detailed discussion of the notion of precategoriality. I offer some concluding remarks in Section 6.6, as well as a number of suggestions for future research.

6.2. The role of suffixes in noun formation

As indicated in Section 6.1, we can identify two main types of noun in Purepecha: (i) synchronically simplex (i.e. lexicalised) nouns that have been derived with a now non-productive, and sometimes semantically opaque suffix, and (ii) synchronically derived (i.e. less lexicalised) nouns, namely those ending in *-kwa* 'nominaliser' and *-ri* 'agent nominaliser' (see examples (5) and (6)). Friedrich (1984: 74) adds nouns in

-ti, also an agentive nominaliser, to this second type, although does not provide any supporting examples.[146] Since the function and semantics of the suffixes in the second noun type are mostly clear, I will focus here on the first type, namely synchronically simplex nouns that are clearly historically complex, containing a root and additional nominalising suffix. It is the semantics of these apparent nominalising suffixes that require further investigation.

Chamoreau (2003, 2000) identifies 23 'exocentric derivational suffixes', that is suffixes appearing at the end of a lexeme which "most frequently serve to indicate the word class of the word thus formed" (Chamoreau, 2000: 307, my translation). Indeed all of these suffixes form nouns, but some can form words of multiple classes, such as adverbs or numerals.[147] I will only make reference to other word classes when the distribution of a particular suffix necessitates it. The nouns in (9) are indicative examples of the root plus synchronically fused suffix type of noun, where the diachronic suffix is indicated as a clitic for clarity.[148]

(9)	kuru=cha	'fish'
	porhe=chi	'pot'
	wi=chu	'dog'
	nana=ka	'young girl'
	atsï=mu	'mud'
	kawi=mxï	'drunkard'
	awa=nta	'sky'
	tsï=nti	'widow'
	kw'iri=pu	'person'
	ire=ta	'town, community'

[146] Friedrich (1984: 74) also states that the agentive nominalisers *-ri* and *-ti* are related to the 'concurrent participles' *-rin(i)* and *-tin(i)* respectively. Chamoreau (in press) analyses these as an agent-oriented present participle (*-rini*) and an active past participle (*-tini*) but suggests no link to the nominalising suffixes.

[147] Foster (1969: 40) argues, however, that numerals are either a sub-class of substantives, or nominals, or one of the seven verbal stem classes (Foster, 1969: 170).

[148] It is fair to assume that the nominalising or classifying suffixes are indeed suffixes rather than part of a di- or trisyllabic noun root based on the stress pattern of the lexemes, where stress falls on the first or second syllable, namely within the root.

Many of these terms are based on roots that can take other nominalising suffixes, sometimes with closely related, or at least comprehensibly linked, meanings as in (10a), other times with semantically very distant meanings (10b). As is clear in these two examples, the root can also be difficult to define, since the meanings derivable from the root can vary quite considerably (see notably (10b)).

(10a)	*ire=ta*	'town, community'
	ire=cha	'king, leader'
	√ire-	'related to living' (cf. also *ire-ka-ni* 'to live, dwell')

(10b)	*kuru=ta*	'foam'
	kuru=cha	'fish'
	kuru=ku	'turkey'
	√kuru-	'?' (cf. also *kuru-nha-ku-ni* 'to pull or scrape from centre of pot')

In both (8a) and (8b), the suffixes *-ta* and *-cha* attach to the root to form fused nouns, although ostensibly their shared semantic contribution is hard to identify. One of the causative markers in Purepecha is also *-ta* yet the nouns in (8a-b) do not seem to have any kind of valency increasing semantics, in contrast to the verbal example provided in (1a-b), nor even any kind of implied agency. Equally, *-cha* refers to an animate entity in both cases, but two very different types of animate. As such, its meaning as 'male' (Chamoreau, 2003: 132) seems to be something of a stretch.[149]

Nonetheless, the variability of meanings present, notably in example (8b), suggest more significant semantic input from the large number of suffixes observable in these synchronically fused nouns, as a means of providing more fine-grained definition to the seemingly underspecified root. However we have already seen, and will see later in more detail, that this account is still somewhat problematic, since the

[149] The other nouns provided by Chamoreau (2000: 307-308) as evidence for the meaning of *-cha* as 'male' are *tempucha* 'husband' and *warhicha* 'spirit that causes death'. The two male human referents seem to support an analysis of *-cha* as a marker of male animate, but I still find the other terms as very weak support for an argument that is only based on two terms.

meaning of the respective nominalising suffixes can also be rather opaque. In his sketch of sixteenth-century Purepecha grammar, Swadesh (1969: 51) presents almost 40 "nominal suffixes", all of which overlap with the 23 identified by Chamoreau (2003, 2000). A combined list of these suffixes, as well as their proposed semantics or classificatory function, with the source included in brackets, either (CC) for Chamoreau (2003) or (MS) for Swadesh (1969) can be found in Table 24. Where a semicolon separates two suffixes in the first column, the first entry is from Chamoreau and the second from Swadesh. A forward slash indicates alternative spellings for the same suffix, according to Chamoreau.

Suffix	**Referents**
-cha	Masculine sex (CC); thing, animal, substance (MS)
-chi; -che	Thing, animal, substance (MS)
-chu	Thing, animal, substance (MS)
-ka	Younger or smaller state (CC); nominal (MS)
-ki-/k'i	Mostly animals (CC); nominal (MS)
-ku	Nominal (MS)
-kwa	Things, foods, bodily organs, people, concepts (CC); condition, action, instrument (MS)
-kwe	Friend, relative (MS)
-ma	Thing (MS)
-mi	Thing (MS)
-mu	Thing, numeral (MS)
-na	Nominal (MS)
-ni	Nominal, time (with numerals) (MS)
-Npa[150]; -m-ba[151]	Thing (MS)
-m-bi	Thing (MS)
-m-bu	Thing (MS)
-Nxï	Quality of a person

[150] Chamoreau (2000: 36) uses the "archiphoneme" /N/ to represent both /m/ and /n/ in preconsonantal position, since the phonological opposition is lost in this environment. However, I will continue to differentiate between the two phonemes orthographically, e.g. *-mpa* and *-nta*, for ease of reading.

[151] Swadesh (1969) does not indicate why he inserts a dash between the initial nasal and the subsequent voiced stop but it is possible, especially given the predominating CV syllable structure, that the 'prenasalised' suffixes may represent the outcome of a formerly disyllabic suffix or pair of suffixes, where a mid or high vowel has been lost. I explore the structure of the set of suffixes in Table 5 in more depth in Section 6.2.1.

-Nta; n-da	Thing (MS)
-Nti; n-di	Thing (MS)
-n-du	Thing (MS)
-nu	Nominal
-pa	Thing (MS)
-pi	Thing (MS)
-pu	Thing, plant (MS)
-p'a	Only in *wap'a* 'child'
-ra	Thing (MS)
-ri	Profession or activity of person (CC); thing (MS)
-ru	Thing (MS)
-rha	Nominal (MS)
-rhi	? (Homonym of SP.LOC 'whole body')
-si/-sï/-shï	Animals, humans, body parts, food
-ta	Thing, material, nominal (MS)
-ti	Mostly human beings or animates (CC); thing, material, nominal, agentive (MS)
-tu	Thing, material, nominal (MS)
-tsi/-tse/-tsï	Animals mostly (CC); thing, animal, substance (MS)

Table 24: Nominalising suffixes in Purepecha and their proposed semantics

Even though she proposes some semantic, and in all cases word class, categories for the suffixes listed in Table 24 (as indicated in the second column), Chamoreau (2003: 132) claims that it is rare for these suffixes to offer additional meaning. Yet despite the prevalence of the vague referent 'thing' for many of the suffixes, Swadesh's (1969) categorisation also suggests that these suffixes offer more than simply word class information to the root, and it is to this issue that I now turn.

6.2.1 Semantics of nominalising suffixes

In order to investigate the semantics of the synchronically fused suffixes with apparent nominalising function more systematically, I compiled a list of such nouns from Friedrich's (unpublished) *Dictionary of Tarascan Words, Idioms, and Expressions*. I discovered this 100-page Purepecha-English dictionary in the Paul Friedrich Papers 1945-1999, held at the University of Chicago Library Special Collections. To my

knowledge it is the only complete Purepecha-English dictionary in existence. Parts of it were published as an appendix to Friedrich (1971), but this work is now out of print. In contrast to the format of the two main lexicographic sources for Purepecha (both to Spanish), namely Velásquez Gallardo (1978) and Lathrop (2007), the principal entries in Friedrich's dictionary are roots rather than infinitives or conjugated verbs. Following each root is a list of suffixes and suffix combinations that can be added to the root in order to derive other verbs, or nouns, together with their meanings. The synchronically fused nouns that form the focus of this chapter are generally listed as separate entries in the work, rather than as a root plus suffix, underlining their status as synchronically fused elements. I collected all instances of fused nouns listed in this work, totalling just over 650, classifying them by semantic field following the World Loanword Database categories (see Haspelmath & Tadmor, 2009). By using a broad sample of lexical items across different semantic domains, I aim to avoid generalising on the basis of sporadic cases and thus be able to draw more insightful conclusions regarding the synchronic and diachronic function of these nominalising suffixes (see Evans & Osada, 2010: 366).

Taking into account a certain amount of orthographic inconsistency, I identified a total of 54 nominal suffixes in the Friedrich dictionary from 679 fused nouns, almost twenty more than those listed in Chamoreau (2000) or Swadesh (1969), as already presented in Table 24. However, 29 of these suffixes occur fewer than five times in the corpus, therefore I have chosen to exclude them from further discussion. The remaining 25 suffixes, together with their respective frequencies, are presented in Table 25.

Suffix	Frequency
ku	129
n(i)	64
ta	64
śʌ/sʌ/śĭ/si/sĭ/śi/shi	54
ri	56
mu	30
pu	27
nta	27
ki/jki	24
tsĭ/tsi	26
ti	21
nku/Nku	11
mpa	9
Ri/rhi	8
sku	8
chu	7
ra	7
ru	7
cha	6
chi	6
mi	6
ka	5
nti	5
shu	5

Table 25: Frequency of 25 most common nominalising suffixes in Friedrich (unpublished)

The reason for the high frequency of *-ku* (n = 129) in Table 25 is that it is the standard object nominaliser (in place of *-kwa*) in the villages where Friedrich conducted most of his fieldwork, namely Cocucho and San José in the *Sierra* or *Meseta Purepecha* (see Section 1.2). As I am interested in the fused suffixes rather than the commonly productive *-kwa/-ku*, I will also not consider the forms in *-ku* in the discussion of the possible provenance and meaning of some of the suffixes that follows.

Three of the suffixes in Table 25 are homophonous with the case marking suffixes *-ni* OBJ,[152] *-rhu* LOC (sometimes also represented orthographically as *-Ru* or *-ru*), and *-nkuni* COM (see Section 1.5.2). Take, for example, *-rhu*, which can be found with nominal locative case function (11a), in place names, in the fossilised form *-ro* (11b), as well as in synchronically fused nouns (11c).

(11a) ana-t'a-ta-s-ti tsintsikata-**rhu**
be.vertical-SP.LOC.vertical-CAUS-AOR-3.S.ASS wall-**LOC**
'He placed him upright near the wall.' (Adapted from Chamoreau, in press)

(11b) Purepe**ro** 'place of the Porhe' < *p'or(h)e-* 'Purepecha' + *-pi* ANTIP + *-rhu* LOC
Turícua**ro** 'dark place' < *tur(h)i-* 'black, dark' + *-kwa* NMZR + *-rhu* LOC
Etucua**ro** 'place of salt' < *etu-* 'salt' + *-kwa* NMZR + *-rhu* LOC

(11c)	ekwa-**rhu**	itsa-**rhu**	shanga-**rhu**
	pile.up-**LOC**	water-**LOC**	walk-**LOC**
	'patio'	'any water source, waterhole'	'road'

All three of the nouns in (11c) relate, unsurprisingly, to a location in the physical world: a patio is a place where one can pile up firewood, a waterhole is a place where water can be fetched, and a road is a place where one can walk. The nouns in *-ru* proper, on the other hand, refer to a wider variety of referents, examples of which can be observed in (12).[153]

[152] The suffix *-ni* is also the non-finite marker in the verbal domain. Due to the complexity inherent in differentiating between homophonous or identical suffixes with the form *-ni*, I shall not treat them in this paper, choosing instead to concentrate on the more diachronically transparent examples.
[153] Neither Chamoreau (2003, 2000) nor Swadesh (1969) separate *-ru* from *-rhu* in their treatment of nominalising suffixes, in contrast to Friedrich (unpublished).

(12)	kampe-**ru**[154]	pite-**ru**	tuku-**ru**
	'a sierra flower, various colours'	'player of native flute'	'owl'

As the examples in (12) demonstrate, the semantics of the suffix are not always so transparent; this contrast is especially prominent when comparing these examples with those in (9c). Swadesh (1969: 51) assigns the rather vague category of 'thing' to nouns in *-ru*. This is understandable insofar as there seems to be no semantic or formal characteristic that connects the three referents: a flower, a human agent and an animal. Moreover, in these cases it is difficult to consider the respective semantic contribution of the suffix vis-à-vis the root, since no separate entry (or, indeed separate meaning) for the three roots - *kampe-*, *pite-* and *tuku-*, can be found in Friedrich (unpublished) or elsewhere. Their status as diachronically fused nouns can be defended by the fact that the stress falls on the second syllable of the root, hence forming the natural boundary with subsequent derivational morphology.

Let us turn now to the comitative suffix *-n(h)kuni*, which displays much less transparent semantics where it appears in fused nouns as *-n(h)ku*.[155] This case marker has a clear origin in the postposition *jinhkun(i)* 'with', which has been reduced both phonetically and structurally to the suffix *-n(h)kuni* in modern Purepecha. The related nominalising suffix *-n(h)ku* is found in 11 fused nouns in the Friedrich corpus although, as the selected examples in (13) demonstrate, their relation to a comitative reading is extremely hard to identify. I have indicated possible roots or related terms after each entry, where appropriate, but the overwhelming impression from these terms is that there is little to unite them as far as the suffix *-nhku* is concerned.

[154] Friedrich (unpublished) notes that this term may be a loan from Spanish, but I can find no evidence for this being the case.

[155] The bracketed (h) indicates that the comitative suffix and nominalising suffix is spelled with both a simple alveolar nasal <n> in some instances and with the velar nasal [ŋ], rendered orthographically as <nh>, in others.

(13)

isi=nku, si=nku	'armadillo'
she=nku	'cherry (tree or fruit)' < *she-* 'to see' (very doubtful)
tu=n(h)ku	'a paralytic (San José)' < *tu-* 'to roll up or over'
tse=n(h)ku	'an edible worm (San José)', likely related to *tsemukwa* 'taste'
ts'e=nku	'a white cocoon, 2" to 4" in diameter, where butterflies develop (San José)' < *ts'e-* 'to test, try out'

Of course, not all of the nominalising suffixes presented in Table 25 also function as case markers. Some are homonymous with spatial location and/or voice suffixes and, as a set, they also constitute additional examples of more and less transparent classifying or nominalising elements on synchronically fused nouns. Let us begin at the more transparent end of the continuum: Table 26 presents the fused nouns in Friedrich (unpublished) terminating in *-mu*. Note that orthography has been regularised and the suffix indicated as a clitic for clarity.

Lexeme	Meaning	Semantic domain (WOLD)
jarhu=mu	a sierra tree, used for brooms	plants
ku=mu	mole	animals
kupa=mu	goad for driving beasts of burden	animals
kutsu=mu	a bush with white flowers (*acetilla*)	plants
kwi=mu	six (cardinal)	numeral
k'wera=mu	thin kindling of dry, pitchy pine	plants
orhe=mu	a sierra tree, with bird fruit, quite large, branches used for packing pottery	plants
urhe=mu	a sierra tree, with bird fruit, quite large, branches used for packing pottery (SJ)	plants
pa=mu	a fairly tall sierra tree, very porous wood, grows among pines	plants
parha=mu	ash tree	plants
pi=mu	palm of the *tierra caliente*	plants
piri=mu	a tree with long very thin truck, a switch of any kind	plants
p'ata=mu	the *carrizo* reed	plants
p'atsi=mu	the *tule* reed	plants
shïncha=mu	a variety of oak in the high sierra, leaves long and wide, grows very tall, valuable wood	plants
shu=mu	mist, fog	physical world
tani=mu	three	numeral
tarhi=mu	a large, willow-like tree	plants
tia=mu	iron, steel	technology
tini=mu	scale (of fish)	animals
t'a=mu	four	numeral
t'pa=mu	tall tree with white flowers	plants
tsurhu=mu	thorn of any fruit or plant	plants
ts'iri=mu	Mexican linden, white wood excellent for guitars, flowers used medicinally ("*flor de tilia*")	plants
wanu=mu	a fairly tall tree with long pods, smooth bark, similar to the *arumba* (SJ)	plants
winu=mu	pine needle	plants
wira=mu	flat stone, as for paving	physical world

Table 26: Fused nouns in *-mu*

Swadesh (1969: 51) claims that nouns in *-mu* refer to things or numerals. Similarly, Chamoreau (2003: 135) notes that *-mu* appears in the numerals *tanimu* 'three', *t'amu* 'four', and *yumu* 'five', none of whose roots (i.e. *tani-*, *t'a-* and *yu-*) can be attributed any independent meaning. The suffix also occurs in the adverb *támu* 'separately' (from *tá* 'separate'), which also has a quantificational-like reading not too distant from the numerals. She also observes that *-mu* is homonymous with the spatial locative suffix that refers to the oral zone or an opening more generally (Chamoreau, 2000: 314). This seems like little more than a passing observation since there is no evidence in Table 26, for example, that the nouns are related to openings or the mouth. Indeed, aside from the three numerals, the fused nouns in *-mu* display a preference for the semantic domain of plants (18/27, or 67%). Yet there is no discernible source for the suffix *-mu* in the lexicon of plants and vegetation, where one might expect to find a generic or prototypical exemplar as the origin of such a classificatory suffix (see, e.g., Pache, 2016 on the grammaticalisation of plant part terms in Chibchan languages). Its prevalence in plant-related terms in modern Purepecha therefore remains difficult to explain.

Let us turn now to a suffix with a less obvious semantic classification, namely *-pu*, which is attested 27 times in the Friedrich (unpublished) corpus, of which 20 instances constitute only the root and this suffix, as listed in Table 27.

Lexeme	Meaning	Semantic domain
antsa=pu	shoots growing, hanging down	plants
ku=pu	gnat	animals
kwere=pu	a small fish (Pátzcuaro)	animals
kwina=pu	a variety of hawk, grey, very aggressive	animals
k'wera=pu	scorpion	animals
k'wipi=pu	wild dove	animals
k'wi=pu	honeycomb	food and drink
k'wiri=pu	person	human body
mist-papu	wildcat	animals
oche=pu	a small *tamal* of fresh field corn	food and drink
sina=pu	obsidian	physical world
sutu=pu	sack or bag	household/technology
shïki=pu	shavings (of wood), outer shell, husk, chaff (of grains)	plants
shïkwa=pu	spider, spider web	animals
tima=pu	bowl of dry gourd (Cocucho)	household/technology
tu=pu	belly button	human body
tsaka=pu	stone	physical world
ts'ki=pu	the stone of any fruit	plants
wawa=pu	bee	animals
wirhi=pu	cradle (usually a small wooden box); small, oblong box for making adobe	household/technology

Table 27: Fused nouns in *-pu*

It is clear from Table 27 that the type of referents covered by *-pu* are more varied than those of *-mu*, with the most common set - animals - comprising less than half of observed tokens (8/20), but considerably more than each of the other six minor attested domains: household / technology (3/20), plants (3/20), food and drink (2/20), human body (2/20), and the physical world (2/20). In contrast to commonly attested numeral or nominal classifier systems, classification on the basis of size, shape or animacy is also not forthcoming, not even one comprising, or analogous to, the three-way distinction relating to round, flat and long objects previously present in Purepecha (see, e.g., Chamoreau, 2013; see also Section 1.5.2). Thus, while there seems to be a

preference for animal terms in *-pu*, it is not possible to claim unequivocally that it is a marker or classifier for animals.

Yet it should be underlined that *-pu* and *-mu* are clearly contributing to the overall meaning of the noun, as the contrasts in (14) demonstrate.

(14)	*ku=mu*	'mole'	*k'wera=mu*	'thin kindling'
	ku=pu	'gnat'	*k'wera=pu*	'scorpion'

The root *ku-* is translated by Friedrich (unpublished) as 'to meet, encounter' but such a translation does not fit with the meanings presented in (14). No definition is offered for *k'wera-*. Yet the semantic opacity of the root is not counterbalanced by semantic transparency on the part of the suffix, since even the rough classification of *-mu* as plant and *-pu* as animal is also insufficient to give the accurate readings of the terms.[156] A similar situation can be observed in (15) with the root *kwi-* 'carry; be seated' (note that it has two entries in Friedrich's dictionary), which does not seem to contribute meaningfully to the nouns derived from it.

(15)	*kwi=mu*	'six'
	kwi=ni	'bird; penis'
	kwi-tsï	'tadpole'

All three of the suffixes presented in (15) also occur as suffixes of locative space, namely *-mu* 'orifice and orifice-edge area', *-ni* (also *-na*) 'interior area' and *-tsï* 'top area'. Yet the semantics of the fused nouns that take these suffixes, not to mention the suffixes themselves (where a separate meaning can be identified), and the semantics of the locative space suffixes show a remarkable lack of overlap. The same can be said for *-nta*, found both as a classifying suffix in 21 fused nouns and as the spatial locative referring to 'around the side of something' (see also Chamoreau, in press). The fused nouns in *-nta* are listed in Table 28.

[156] Equally problematic is the pair *kupa=mu* 'goad for driving beasts of burden' (see Table 29) and *kupa=nta* 'avocado', where *kupa-* has no clear root meaning. Such instances are frequent in Purepecha therefore I will not list them all here.

Lexeme	Meaning	Semantic domain
awa=nta	sky	physical world
eme=nta	the rainy season	physical world
japu=nta	lake, pond	physical world
ka=nta	side	technology
kwiiu=nta	strip of leather for typing yoke to cow's head	animals
kupa=nta	avocado	food and drink
kurhi=nta	bread	food and drink
kutsa=nta	strong storm with rain and wind	physical world
k'ere=nta	filth, body dirt; mountain peak, cliff or steep rocky slope	physical world
k'uma=nta	shadow	human body
k'urhu=nta	tamal	food and drink
papa=nta	goats bells (San Jose), a ball of old clothes about 4" wide, for playing	animals; household
pira=nta	"balls" (archaic, San Jose)	human body
sunu=nta	wool	plants
shunha=nta	pitch, sap, the running sap of conifers	plants
shïra=nta	paper	physical world
shïru=nta	soot	physical world
tama=nta	an old log or tree	plants
tiri=nta	low hued or dull yellow, yellow-reddish earth	physical world
t'unu=nta	trunk of tree	plants
tsumi=nta	corner (on the outside, over 180 degrees)	spatial relations
urhu=nta	a sierra grass used for making hair brushes and brooms	plants

Table 28: Fused nouns in *-nta*

The fused nouns in *-nta* also are not coherent in terms of the semantic domain they represent: 8/22 (around one-third) belong to the domain of the physical world, five to plants, three to food and drink, two to human body, two to animals (one of which can also refer to a household item), and one each to technology and spatial relations. This distribution suggests a minor preference for objects or occurrences in the physical world, and an even more minor one for plants and plant-related terms, but more clearly indicates that the referents are varied.

An example of a set of nouns differentiated in terms of their suffix only is presented in (16).

(16)	k’ere=mi	‘surface of water’
	k'ere=nta	‘mountain peak, cliff or steep rocky slope’
	k'ere=ri	‘board’
	k'ere=sku	‘wing’ (Cocucho)
	k’ere-k’ere-p’-jasï	‘very dirty’

In terms of the semantics of the nominalising suffixes, the aforementioned *-nta* once again relates to the physical world, albeit in a not hugely specific manner (see Table 31). The suffix *-mi*, also found as the suffix of locative space referring to ‘open area with liquid’ (Chamoreau, in press) here also has a water-related meaning, suggesting a connection or common origin for the suffixes, unlike the other spatial locative suffixes addressed above. The suffix *-ri* also occurs as a second person singular person-marking clitic on verbs and as the reduced form *-eri* to mark genitive case, although these functions seem separate from the nominalising function observable here. Finally, the suffix *-sku* is not attested anywhere else in the grammar. While the root *k’ere-* is attributed no separate meaning in Friedrich (unpublished), on the basis of the nouns in (14) we might wish to suggest a meaning relating to a flat surface, either horizontal (e.g. board) or inclined (e.g. slope). The suffixes then provide greater specificity to the nature of this surface.

To sum up, the examples presented in this section, though they only represent a sub-set of all existing nominalising suffixes, demonstrate two main points. First, formal parallels exist between different parts of the nominal system, namely between case markers and nominalising suffixes, and spatial locatives and nominalising suffixes. However, the semantic link between the two ranges between clear (e.g. *-rhu*) and non-existent (e.g. *-nta*). As such, it is probably also not worth ruling out a situation where two (or more) homophonous suffixes with different meanings exist in the grammar. Second, the meaning of a term (here, a noun) ranges from explicit in terms of the semantics of both the root and suffix, the semantics of the root only, or not

really from either (cf. Friedrich, 1984). I will discuss the implications of these findings, as well as a typological parallel in Mesoamerica, in the next section.

6.3. Grammaticalising nouns: A Comparison with Otomanguean

We have observed thusfar that the relative semantic contribution of the root and suffix to the full noun is unclear in many cases and in some cases neither is really definable, thus rendering their meaning and relative semantic contributions opaque. Where the semantics of the suffix are more transparent, we can observe a certain amount of polyvalency, that is the same suffix appears in different functions and, in some cases, also forms lexemes of different word classes. It is likely that in some cases homophonous suffixes exist, for example between the nominalisers/classifiers and the locative space suffixes, since the semantics of the nominalising morpheme and the spatial locative seem unconnected. This observable variation in semantic and formal transparency begs the question: what are these nominalising suffixes, formally and functionally speaking, and what are their origins?

The synchronically fused nominalising suffixes presented in Section 6.2.1 can be divided into two types: (i) those with a clear parallel or origin elsewhere in Purepecha morphosyntax, such as *-rhu*, the locative case marker and nominaliser for location, and (ii) those lacking a parallel or origin elsewhere in the grammar, such as *-nti*, even if a homophonous suffix (for example, of locative space) with a different function also exists. The first type can be accounted for by well-established processes of grammaticalization whereby a noun class marker can be the result of a reinterpretation of a case or number pattern, or of a locative expression (see, e.g., Kilarski, 2013). The second type, however, is strongly reminiscent of the 'class term' type of nominal classifier, defined as "classifying morphemes which participate in the lexico-genesis of a language" Grinevald (2000: 59). Such an analysis is bolstered by examples such as *-mu*, which largely refers to plants (see Section 6.2.1), the most common semantic domain of class terms. However, while this seems like a neat account of the set of suffixes, it does not fully stand up to closer scrutiny. Grinevald (2000: 59) continues her presentation of 'class terms' by stating that they have a clear

lexical origin, such as *-berry* in the English terms *strawberry, raspberry, gooseberry,* etc. The issue we immediately confront is that the lexical origin of most of the fused noun suffixes in Purepecha cannot be identified, even where a semantic preference is identifiable for a given morpheme, such as plants or the physical world. Yet the nominalising suffixes are still functioning in a class term type fashion, insofar as they play a key role in the formation of nouns, sometimes offering these more specific semantics. In order to better understand the diachronic developments leading to this synchronic situation, it is instructive at this point to shift our attention to similar systems of nominal classifier morphemes that exist, in varying states of synchronic fusion, in a number of Otomanguean languages (see also Suárez, 1983: 89).

Many nouns in Ocuilteco (Matlatzincan, spoken in State of Mexico, bordering Michoacán to the east) contain a prefix analysable as a frozen classifier morpheme that has become fused to the root, but whose semantics can be hard to determine (see Muntzel, 1998, 1986). The morphological segmentation of fused nouns can be difficult but the following classifiers, together with their (rough) semantics, have been identified: *ni-* 'generic classifier', *nu-*, 'above, up', *ši-* 'covering, surface, skin', *we-/be-* 'kinship, human roles', as in (17), where they are marked in bold.[157]

(17) **ni-**phi 'foam' **we-**ntu 'man'
ši-tu 'hair' **be-**pe 'thief' (Muntzel, 1986: 73-76)

In addition to these fused, and semantically bleached, classificatory prefixes, Ocuilteco has lost a further series of affixes with a clear nominal classificatory function. These lost affixes (also referred to as 'formatives' by Muntzel (1986: 78)), survive in Ocuilteco's closest relative, Matlatzinca (Matlatzincan), where they are also fossilised. The following affixes have been attested, some with clear semantics: *in-*, *te-*, *-ni*, *-wi*, *-bi*, *-ri*; *xi-* 'covering, sharp', *si-* 'hair, fibre', *sa-* 'tree', *chho-* 'mushroom', *chhú-* 'sacred', and *chi-* 'liquid' (Muntzel, 1986: 78; Cazes, 1971: 204).

[157] A number of others also exist, but their semantics are less clear thus they are not included here. See Muntzel (1998, 1986) for more details.

The presence (in Matlatzinca) and absence (in Ocuilteco) of these classificatory affixes can be observed in (18).

(18)	**Matlatzinca**	**Ocuilteco**		
	čʔi-**ni**	čʔi	'snake'	
	in-no-**wi**	noo	'comal' (clay griddle)	
	hme-**wi**	hme	'tortilla'	(Muntzel, 1986: 78)

While it may be tempting to analyse *-wi* in Matlatzinca as a classifier for flat objects, the two-dimensional shape *par excellence* in languages with nominal (or numeral) classifier systems (e.g. Bisang, 2002), its occurrence with other nouns as diverse as 'water', 'armadillo' and 'blood' disallows such an analysis. Such semantic variation in referents with the same classificatory affix, and the associated difficulties with assigning meaning to either root or suffix, closely resembles the situation found in Purepecha.

San Juan Chiquihuitlán Mazatec (Mazatecan, spoken in Oaxaca) displays a relatively transparent set of classifying elements, whose grammaticalization varies. Many simple nouns begin with *na-*, such as *natsë* 'fly', *nachjun* 'thread' and *najña* 'corncob', which probably functioned as a nominaliser, or general classifier, during earlier stages of the language but has since become completely semantically bleached and morphologically fused to the original noun root. This prefix may be related to the fused generic classifier prefix *ni-/nu-* found in Ocuilteco. In contrast, animals are generally preceded by the pronoun *chu* 'he (animal)', as in ***chu*** *naña* 'dog', while plant names can be preceded by the word *naxu* 'flower', *ya* 'stick' or *xca* 'leaf', exemplified by ***naxu*** *nanchi* 'orchid', ***ya*** *laxo* 'orange tree' and ***xca*** *yuma* 'avocado leaf' (see VandenHoek de Jamieson, 1988: 30-34). This type of classification is more representative of the early stages of grammaticalization of a classifier system, whereby a full lexical item - usually the prototype of a given class - serves as the marker of all nouns of that category.

The system found in Metzontla Popoloca (Popolocan, spoken in Puebla state), on the other hand, displays typical characteristics of a vital synchronic nominal

classifier system and thus one whose classificatory affixes provide clear, systematic semantics to a root. The majority of complex nouns in Metzontla Popoloca are formed from a classificatory component (of which there are 16) and a classified component such as ***nrí-***čą́xà ‘girl’ or ***šù-***čeʔ ‘metate’ (grinding stone; Veerman-Leichsenring, 1991: 335). The classifier also constitutes an independent lexeme, usually the prototypical referent of a certain category, such as *nrí* ‘girl, young woman’ or *šù-* ‘stone’. Sets of roots plus classifiers can be identified, whereby the classifier provides the semantic specificity for a given noun, as in (19).

(19) **ndà-** šéyā ‘custard apple tree’
tù- šéyā ‘custard apple’
sù- šéyā ‘custard apple tree flower’
kà- šéyā ‘custard apple tree leaf’
(Veerman-Leichsenring, 1991: 339)

Of particular note when considering these systems from a comparative perspective is that the classified component (i.e. the noun root) lacks independent semantics and, as such, cannot always be used separately, unlike the classifying element (see above). The roots in (20), √šéyā and √čápì, cannot be translated on their own, a situation we also observed earlier for some Purepecha roots (and suffixes).

(20)

ndà-šéyā	kū-čápì
CLF.tree-šéyā	CLF.animal-čápì
‘custard apple tree’	‘mockingbird’

(Veerman-Leichsenring, 1991: 339)

The Otomanguean languages presented here offer a possible parallel for the diachronic development of the nominalising suffixes in Purepecha, whereby a semantically transparent classifier (which itself was previously an independent lexeme), such as *-mu* for plants, is gradually reanalysed as a marker of nounhood with increasingly weak ‘planty’ semantics, eventually losing any reference to the previous

semantic domain of which it formed part. The obvious drawback in the case of Purepecha is that the origin of many of the suffixes remains unclear which, coupled with a lack of historical attestation prior to the late sixteenth century, leaving the proposed development trajectory somewhat speculative. Even where the suffixes enable semantic oppositions between pairs or multiples of lexemes from the same root to be constructed, their semantics are still not transparent beyond a preference or tendency (see Section 6.2.1), unlike the case of Popoloca.

The complexity inherent in assigning semantics to what I have generally been referring to as nominalising suffixes can also be observed on word types. We saw in Section 6.2.1 that *-mu* appears on fused nouns, numerals and as a spatial locative for the orifice and orifice-edge area. In this vein, let us take the demonstratives *i-nti* 'this (not so close)' and *i-sï* 'this, this way, like this' from the root *i-* 'this', as another case in point.[158] In both instances the suffixes also appear on fused nouns, and *-nti* additionally functions as a spatial locative referring to an 'external and peripheral area' (Chamoreau, in press). The presence of these nominalising suffixes on the demonstrative root *i-* is perhaps not surprising, since demonstratives are traditionally generally categorised as nominals, being able to take case marking and plural marking, for example. This could also explain their presence on numerals and adverbs (see Section 6.4.1) since they are also categorised as sub-classes within the nominals (see Foster, 1969).

As such, I can offer no satisfactory definition or reconstruction for these nominalising suffixes at the present time, other than to suggest that at some point at a much earlier stage of the language they must have possessed more transparent semantics that came to fulfil some kind of classificatory role on nominal elements, including nouns, demonstratives and numerals. Their semantic opacity, coupled with that of many roots, leads us back to Friedrich's (unpublished) early insights into Purepecha structure and semantics, whereby "the actual meaning of any given derived form depends on the context in which it is uttered, or upon the idiomatic specificity". In the next section I will explore the continuum of semantic specificity observable in

[158] A further demonstrative *i-ma* 'that' also exists in Purepecha, and has been drawn in to function as the third person singular pronoun.

Purepecha roots, linking it back to the interpretation presented in Chapter 5, that some roots are more appropriately presented in terms of concepts rather than specific translations.

6.4. Semantic underspecificity in Purepecha roots?

The issue I address in this section and the next is exemplified by the (far from exhaustive) sets of lexemes associated with the roots *kurhi-* (Table 29) and *ja-* (Table 30), whose glosses are generally given as 'to burn' and 'to be' respectively. Note that suffixes whose glosses are uncertain are marked with a bracketed question mark, while those that could not be analysed are marked with a single question mark.

Root	Suffixes	Gloss	Meaning
kurhi-	-kata	PTCP.PST.PASS	burned
	-nta	SP.LOC.around.side.of(?)[159]	bread
	-ch'u-ta	SP.LOC.lower.and.bottom.area-CAUS	to stoke (e.g. a kiln)
	-nhi-ku	SP.LOC.interior.enclosure-NMZR	painful sore throat
	-ra-kwa	CAUS-NMZR	lime (lit. that which makes burn)
	-k'u-xa-ka=ni	SP.LOC.manual-AOR-1/2.S.ASS.1	I burn my hand

Table 29: Selection of derivations of the root *kurhi-* 'to burn'

[159] It is not clear whether the suffix here is functioning as the locative space suffix, as it is glossed, or whether it should be analysed as either (i) the homophonous directional suffix that emphasises an action being in progress, as in *incha-nta-* 'be in the process of entering', or (ii) the equally homophonous nominalising or classifying suffix in words such as *tsá=nta* 'light' (n.) and *xïra=nta* 'book, sheet'. It could be argued that the three instantiations of the suffix constitute semantic extensions of the one suffix (an analysis not incompatible with zero-derivation), with the spatial and nominalizing examples being the closest semantically.

The examples in Table 29 demonstrate that the root, here *kurhi-*, can take various derivational suffixes in order to form verbs (rows 3 and 6), nouns (rows 2, 4, 5) and a participle (row 1).

Root	Suffixes	Gloss	Meaning
ja-	-ma	SP.LOC.open.area.with.liquid	to go, walk, wander about
	-nska	SP.LOC.extended.flat.surface	to be or to make something well (especially referring to buildings)
	-nti	SP.LOC.interior.surface.of.angle.on.vertical.axis	to be or get dirty (referring to floor or ground)
	-rha	SF[160]	to be
	-nts-pi-ri	MOT-ANTIP-AGT.NMZR	servant

Table 30: Selection of derivations of the root *ja-*

Likewise the examples in Table 30 show how derivational suffixes can alter the meaning of the root to form a variety of verb stems (rows 1-4), and nouns (here exemplified only in row 5). Both roots share the feature of, first taking a suffix of locative space, where one occurs, and then, adding valency followed by aspect (here the aorist) and mood/person marking (here first/second person assertive), where appropriate.

However, it should be highlighted that the specificity of the semantics of the two roots presented above varies quite drastically. *Kurhi-* is a semantically transparent, or largely specified, root, as opposed to *ja-*, which is semantically opaque and can thus be considered underspecified. It is traditionally translated as 'to burn', and indeed some of the denotations in Table 29 are more loosely related to the concept

[160] See Foster (1969: 119-120) for a presentation of the 'relocalising' ablaut set in /rh/, to which the stem formative *-rha* here belongs. This set of suffixes occurs, *inter alia*, after verb stems of some of Foster's verb classes, including *ja-*, often translated as 'to be'.

of burning than others, albeit through fairly transparent semantic extensions. Take *kurhi-nhi-ku* 'painful sore throat', for example: here the root related to burning is augmented by a locative space suffix relating to an interior enclosure where the burning takes place, here the throat, and a nominalising/classifying suffix *-ku*. A key feature of this root is that its meaning closely relates to an action or state related to burning, rather than to a more abstract concept; in other words, the root's meaning is clearly effable (see the discussion in Section 6.5.1). It therefore seems more appropriate to translate this root as the concept √RELATED TO BURNING. Another example of this more transparent type can be observed in Table 31 with the root *ero-* √RELATED TO WAITING.

Root	Suffix(es)	Gloss	Meaning
	-ka	verbal thematic, immanent[161]	to wait a while
	-kś(i)	NMZR[162]	*comal* (flat, thin, round hotplate of clay)
	-nti	SP.LOC.external/peripheral.area	to wait indefinitely
ero-	-sta	?[163]	to level off
	-pi-nta	ANTIP- SP.LOC.around.side.of.sth.	to await guests with food, as a *carguero* at a fiesta
	-RD-	RD-	to be waiting with anxiety
	narhi	SP.LOC.principal.flattish.area	

Table 31: The more transparent root *ero-* and a selection of its derivations

It is immediately clear that the majority of meanings in Table 31 are directly related to the concept of waiting, although the link to 'levelling off' and 'comal' is difficult, if not impossible, to identify. With reference to *-ka* in the first row, this suffix is found in the stem formative position with the roots in (21).

[161] This is Foster's (1969:196) terminology. See also Section 6.1 for a short discussion.
[162] Note that I continue to gloss this suffix simply as a nominalizer, despite having demonstrated in Section 6.2.1 that this is somewhat inaccurate.
[163] It is possible that this suffix is historically complex, comprising *-sï* and *-ta*. The same *-sta* ending is found on six nouns in the Friedrich dictionary, including *póksta* 'large clump of earth' and *tsopsta* 'knot in tree'. I discuss potentially complex suffixes such as this, and *-kś(i)*, in Section 6.5.1.

(21) *ire-ka-* ‘to live, dwell’
korho-ka- ‘to make noise, be audible at a distance, something out of sight (trans.)’
washa-ka- ‘to sit down’

Together with the meanings in Table 31, the first two examples in (21) suggest that *-ka* may be related to duration or distance, either temporal or physical. Indeed Foster (1969: 133) explains it as a suffix that defines the verbal sub-classes 3 and 4, with a meaning of prolongation or stasis after the action expressed by the stem. However, its combination with the root *washa-* to form a punctuated activity weakens this interpretation somewhat. A more nuanced understanding of the semantic contribution of the suffixes involved is needed in order to track possible shifts of meaning here, of which Section 6.2 is a first step, in relation to fused nouns specifically.

In contrast, the meaning of *ja-* in Table 30 is much harder to pin down, strongly suggesting it is an opaque or semantically underspecified root. The spatial locatives functioning here as stem formatives, with which the root in rows 1-3 has combined, do not provide clear semantic specificity to produce a clear compositional meaning for the full stem. For example, it is hard to construct the compositional meaning of the root *ja-* plus the spatial locative *-ma* ‘open area with liquid’, instantiated most commonly as mouth, lips, teeth, shin, liquid, or oral function (Chamoreau, in press) into a meaning relating to walking or wandering. While the spatial aspect of *ja-nska-* ‘to be or to make something well’ (especially referring to buildings) is comprehensible, insofar as one can visualise the walls of a building as extended flat surfaces, the ‘making’ (rather than the being) element of the stem is somewhat harder to consolidate. As a root, then, *ja-* has rather more opaque semantics; it is much closer to being ineffable than *kurhi-* above. Nonetheless it seems to incorporate an existential predicative meaning such as ‘to be’, albeit a vaguer type of ‘being’ than this translation would suggest. As such I am reluctant to ascribe any meaning to this root more specific than √STATE OF BEING. Another example of this type of opaque, or underspecified root, can be found in Table 32, where the root *anta-*

is translated by Friedrich as 'approach, arrive, emerge, come', reflecting its polysemous status.

Root	Suffix	Gloss	Meaning
	-kwarhi	REFL	to win, earn something
	-ku	APPL.3.O	to defeat, overthrow
	-kwira	?	to enter, pass boundary
	-ni	NMZR	sunflower
anta-	-pera	RECIP (?)	to pass another, lower things slowly
	-ra	CAUS	to climb, ascend, win
	-ta	CAUS/SP.LOC.flat-vertical	to emerge, come out (as of a pimple; intrans.); to pronounce

Table 32: Example of a semantically more opaque root and a selection of its derivations

In a similar vein to the root *mi-* 'referring to opening or closing' introduced in Section 6.1, *anta-* in Table 32 can represent quite opposite meanings when combined with different suffixes, such as *anta-kwira-* 'to enter, pass boundary' versus *anta-ta-* 'to emerge, come out'. As such, we are faced once again with the dilemma of how to translate the root, or rather how to express its underlying concept. Without the addition of a suffix, the root *anta-* refers to the concept of passing (through) a point or limit. That limit can be more concrete, in the sense of entering into or emerging from, say, a room or other enclosed space, or more figurative, as in the sense of winning (see *anta-kwarhi-*), where a more abstract line has been crossed.

With reference to such semantic assignment, Don & van Lier (2013: 58) assume that a root has an inherent meaning, in the sense of either a basic object or basic action meaning. However, the specificity of that meaning evidently varies in Purepecha, and cannot be claimed to be as fixed and transparent as in English, for example. Yet, if roots are varyingly underspecified semantically, then we could surmise that much of the compositional meaning of a stem (or noun or inflected verb)

must derive from the suffixes, of which Purepecha has a large number (see Section 6.2 for a discussion of the 50-plus nominalising and/or classifying suffixes). Indeed Friedrich (unpubl.) suggests a similar interpretation:

> "In the most general sense, roots ranging from high specificity to extreme vagueness (zero content) are combined with thematic suffi[xes] with high and specific denotation. The result varies from a simple a plus b equals a plus b, to the great majority of cases where there is some idiomatic specialization, where the whole cannot be deduced from the sum of the minimal denotative meaning of the parts."

This lack of clear semantic compositionality, together with their possible polyvalence, was demonstrated in Sections 6.2 and 6.3 by focussing on the opaque nature of the nominalising/classifying suffixes. Chamoreau (in press) claims, however, that stem formative suffixes specifically (which may also be locative space suffixes), whose meaning may also be difficult to pin down, may "change the meaning of the root". On the contrary, I propose that the root's semantics - that is, the more or less vague concept it represents - remains unchanged, but that the subsequent suffix, or combination of suffixes, supplies greater specificity to the compositional whole. A supporting example for this position comes from the sensory domain (22a-b).

(22a) jio-jio-k'u-nti-ni[164]
stink-RD-SP.LOC.manual-SP.LOC.external/peripheral.area-NF
'to smell bad, stink'

(22b) jio-marha-ni
stink-SP.LOC.taste-NF
'to have a bad taste'

[164] Note that only the smell form contains a reduplicated stem. This reflects the standard template for forming basic smell terms in Purepecha but does not alter the semantics such that a comparison with the taste template cannot be drawn. See Section 5.3.3.1 for more detail.

Here the root *jio-* combines with two different sets of locative space suffixes to refer to either perceiving something unpleasant through the nose (22a) or the mouth (22b). As such, the information pertaining to the medium of perception is carried by the suffixes, rendering the root a more generic element that can be translated as 'referring to an unpleasant sensation', or more succinctly an abstract concept of √PERCEIVED FOULNESS (see also Chapter 5). Examples (23a-b) also demonstrate how the suffixes provide specificity to a more generic root (see also examples (3a-e) in Section 6.1).

(23a) tapo-k'u-
catch-SP.LOC.manual
'catch or receive in hands'

(23b) tapo-cha-
catch-SP.LOC.large.narrow.area[165]
'catch in mouth (as of dog)'

That greater semantic load can be carried by suffixes, as demonstrated in (22a-b) and (23a-b), should not come as a surprise to those familiar with Purepecha grammar. The language is characterised by, *inter alia*, a templatic word structure (see Section 2.5.1), whereby meaning-bearing units (i.e. suffixes) can only be added to the right of the root - in a largely fixed order - to derive a new or elaborated meaning. In example (24), the directional morpheme *-pu* indicating movement towards directly follows the stem (root plus the stem formative or voice/valency marker *-ku*[166]), to indicate that the action of cutting happens in this manner. The addition of the progressive aspect marker takes scope over the centripetal cutting action, and finally the person marking indicates who carries out the whole action.

[165] Note that the spatial locative *-cha*, glossed here as 'large narrow area', refers specifically to bodily regions involving the neck, throat, larynx, or penis. It can have an oral function, mainly in a criticising sense, and also refer to grain, in a single non-corporeal sense (Chamoreau, in press).
[166] Friedrich (1984: 67) describes *-ku* as one of three "powerful" suffixes, the others being the causatives *-ra* and *-ta*, which indicates transitivity or focuses the action of a verb toward a specific object

(24) kachu-ku-pu-xa-ti
cut-SF-DIR.centripetal-PROG-3.S.ASS
'He comes cutting' (Adapted from Chamoreau, in press)

Importantly, as demonstrated in Section 2.5.1, each new element added to the right of the root occupies only one slot and has scope over all those elements to its left (see, e.g., Rice, 2011; Bybee, 1985; Foley & Van Valin, 1984). As such, it is fair to expect the stem formative (in the form of a spatial locative, valency morpheme, or other, funcationally unclear suffix) to take semantic scope over the root, after which it will be incorporated into the compositional meaning provided by further derivational and inflectional suffixes.

However, as we - and Friedrich (unpublished; see citation above) - have already observed, the semantic whole of a word can appear greater than the sum of its parts. We find examples such as the fused nouns discussed in Section 6.2.1, whereby the combined semantics of a given root plus suffix(es) does not generate an obvious derivative, semantically speaking. Yet the ability of many roots to take multiple different nominalising/classifying suffixes, as well as suffixes that produce adverbs or numerals as well as verbs when attached to roots, suggests that they do not necessarily belong to one word class only. In other words, it appears difficult to ascribe a word class to these roots, given their multifarious derivational possibilities. I explore this possible polyvalent interpretation, in light of previous analyses of roots in Purepecha, in the next section.

6.5. On the 'verbiness' of roots in Purepecha

A common observation in relation to Purepecha is that it is a verb-dominated language. Foster (1969: 41), for example, explains how "[v]erbs constitute the core of the language, indispensable to the sentence [...] and containing within themselves almost the entire phrase or clause in microcosm [...]." It is true that verbal morphology is extensive and complex, enabling the Purepecha speaker to encode myriad semantic and syntactic nuances potentially in one multi-morphemic word (see also Section 1.5.2.2). Purepecha is therefore both a heavily agglutinating and moderately

polysynthetic language. These two characteristics can be highlighted by the language's complete reliance on suffixes, with little fusion between morphemes, and, *inter alia*, the ability to encode internal and external arguments within the verbal complex (see Chamoreau, 2017). However, a certain amount of disagreement exists regarding the nature of the element to which the suffixes in these agglutinating lexemes attach, namely the root. Many scholars analyse, or simply accept, the root as fundamentally verbal, with other word classes derived from it through nominalisation or deverbalisation (Chamoreau, in press; Capistrán Garza, 2015; Domínguez Hernández, 2015; Capistrán-Garza, 2013; Vázquez Rojas Maldonado, 2012; Villavicencio, 2006; Lagunas, 1984 [1574]). Some remain either agnostic or non-committal as to the class of the root (Lucas Hernández, 2014), while others claim it to be polyvalent, that is not belonging to one single word class (Swadesh, 1969; parts of Foster, 1969). In this section I will present an overview of interpretations of roots in the literature on Purepecha morphology.

Let us begin with the root-as-verbal perspective. Chronologically Lagunas (1984 [1574], cited in Villavicencio, 2006: 63) was the first to take this position, on the basis that one merely had to replace the "infinitive" suffix *-ni* with, for example, *-ri* or *-ti* to create an agentive noun of the action of the verb, or with *-rho* to indicate the place where such an action occurs (see also Section 6.2). The main issue with this interpretation is its over-reliance on Latinate grammatical categories; the use of *-ni* to indicate the infinitive mirrors the *-ar*, *-er*, *-ir* terminations of Spanish verb classes and, in reality, it is a constructed citation form that has entered general usage in dictionaries and grammars as well as in language teaching. It is clear that *-ni* does indicate the non-finite mood, but this is not the sum total of its usage. When a root (or stem) combines with *-ni*, and often also other intervening suffixes, it can occur in one of three contexts: (i) as a main verb that takes TAM marking, (ii) in a complement clause where one participant, generally the agent, is co-referent with the argument of the main clause, and (iii) in a chain-linking clause that is syntactically independent from, but semantically dependent on its surrounding clauses (Hernández Domínguez, 2015: 58). As such, its interpretation as an 'infinitive' marker à la Lagunas is overly restrictive.

Hernández Dominguez (2015: 51) agrees with Lagunas, as well as with the much more recent perspectives of Chamoreau (in press), Capistrán Garza (2015) and Villavicencio (2006), in claiming that most roots are verbal and that "a large percentage of substantives and adjectives come from the verbal root" (citing Villavicencio, 2006: 63; my translation). According to Chamoreau (in press) "[t]he majority of nouns are built from verbal stems with the addition of a nominalizer suffix". In some cases a derivational suffix is required directly after the root and before the nominaliser, such as the causative marker *-ra* or one of the 30-50 spatial location suffixes, e.g. *-nari* 'principal area' in *era-nari-kwa* 'mirror', lit. 'look-LOC.SP.principal.area-NMZR' (idem.). In other cases, however, nominalising or classifying suffixes can attach directly to the root, a situation I discussed in Section 6.2 regarding the construction of fused nouns. In yet other cases, as exemplified in Section 6.4, the same root can directly take both nominal and verbal morphology. In this sense, then, it is hard to formally distinguish separate sets of nominal and verbal roots, as both nouns and verbs can seemingly be formed either directly from a root or require intervening morphology before taking their class-specific morphology, namely TAM inflection or a nominaliser respectively. Yet let me reiterate that various accounts of Purepecha morphosyntax clearly treat roots as inherently verbal.

Indeed part of the root as verbal root analysis, and a way of dealing with the problem of the existence of a wide variety of syntactic structures that are associated with the same verbal morphological structure, is the establishment of root, or verb, classes (see notably Monzón, 2004; Friedrich, 1984; Foster, 1969). Foster (1969: 161-170) identifies seven classes on the basis of morphological and syntactic criteria, as well as providing a semantic definition for each class (indicated in italics), as follows:

1. Transitive stems with no further thematic suffixation, e.g. *exe-ni* 'to see'
   Action-defining, with diffuse behavioural patterns not definable in terms of movements (bodily or otherwise), but an action that may be performed on or toward another, or by an agent, e.g. u- *'to do',* t'ire- *'to eat'.*
2. Intransitive stems with no further suffixation, e.g. *tsa-ni* 'to be hot, sunny'
   Similar meaning to Class 1 but the action is performed by an actor on or for the self, or the actor is indefinite without an object, e.g. kw'i- 'to sleep', *che-* ' to fear'
3. Transitively diagnostic requiring further suffixation, e.g. stems in *-nturhi* 'fragmented'
   Some kind of spatial, temporal or ideational displacement, dislocation or disjunction meaning.
4. Intransitively diagnostic stems requiring further suffixation, e.g. *sharha=ra-ni* 'to shine'
   Meaning involving continuation, suspension or protraction of action/state.
5. Classificatory stems requiring further suffixation, e.g. *ana=nte-ni* 'to be vertically upright'[167]
   Meanings definable in terms of shape not action, e.g. unpa- *'heap of small objects'*
6. Adjectival stems requiring suffixation, whose resolution is intransitive, e.g. *ura-pe-ni* 'to be white'[168]
   Meanings relating to basic or intrinsic characteristics or qualities, e.g. wina- *'strength'*
7. Enumerative stems, either nominal or verbal, where the latter occur with verbal thematic suffixes, e.g. *tsima-ra-ni* 'to be two'
   Numeral meanings, e.g. tsima *'two'*

Friedrich's (1984) classification of verbal roots largely reflects Foster's (1969), as presented above, although it comprises six rather than seven classes, with only the

[167] See also Capistrán Garza (2002) for a more detailed treatment of the class of classificatory verbs.
[168] Foster (1969: 168) identifies, however, two transitive themes, namely *wirhi-pe-ni* 'to turn upside down' (vs. *wirhi-pi-t*i 'round, circular') and *tsïri-pe-ni* 'to present the bridal dress'.

enumerative class missing. His classification also hinges on the transitivity inherent to the root or stem, with classes one to four defined in terms of their boundedness and valency.[169] He defines 'active' roots as referring to an action that passes from an actor/agent to a patient/goal, being instantiated by transitive, causative, jussive and instrumental values. 'Middle' is likewise defined as an action that reflects back on the subject or operates reciprocally between subjects, or is immanent in and/or emerges from within the subject, such as 'to be hard', 'to dance' (Friedrich, 1984: 65). Classes five and six are considered separately with different diagnostics, thus:

1. Free, active, e.g. *pá-* 'carry, take'
2. Free, middle, e.g. *p'ukú-* 'to ripen'
3. Bound, active, e.g. *tsi-tá-* 'loose'
4. Bound, middle, e.g. *hawá-ra-* 'to rise'
5. Shapes, thematised by spatial suffixes, e.g. *irá-* 'round'
6. Four basic colours and basic qualities, e.g. tasty, lazy, strong, thematised by *-pi* or a spatial, e.g. *winha-pi-ti* 'strong'

It should be noted that classes five and six are defined in more semantic terms, albeit with certain morpho-syntactic thematisation, whereas classes one to four rely on morphological and syntactic characteristics only; their semantics are not elaborated. Yet as Foster (1969) already highlights, these classes are not watertight and a certain amount of overlap is admitted or exceptions to a group can be found. Indeed, Monzón's (2004) three-way root classification based on the spatial locative suffixes a given root can take has fairly fluid boundaries, comprising: (i) {Y} roots (form and shift/movement) that are dependent (i.e. require further suffixation before being able to take TAM morphology) and transitive[170] in nature, relating mainly to notions of form and position where the space in question is a location, such as *chaki-* 'swollen,

[169] Friedrich (1984: 65) defines 'active' as referring to an action that passes from an actor/agent to a patient/goal, being instantiated by transitive, causative, jussive and instrumental values. 'Middle' is likewise defined as an action that reflects back on the subject or operates reciprocally between subjects, or is immanent in and/or emerges from within the subject, such as 'to be hard', 'to dance'.
[170] However, these roots are also defined as being generally stative, which does not concur with a transitive reading (Monzón, 2004: 314).

not solid'; (ii) {X} roots, a very diverse group with no unifying semantic or morphological criteria other than space being characterised as a patient, in which two main sub-groups can be identified: one whose root is intransitive with limited combinatorial properties with suffixes of space and voice, and a second which allows any combination, considered transitive; and (iii) {X'}, whose only five roots mostly also belong to the {X} group but space is characterised here as a place rather than a patient. Its small, overlapping membership makes this group peripheral at best. In more general terms, this more restricted classification appears contradictory in parts and can offer no clear morpho-syntactic or semantic properties that distinguish each class from the other.

None of the three classifications described above are able to predict the membership of a root taken alone; only once a form is shown with particular valency-changing or spatial locative morphology can its class membership be identified. Similar to Wares (1956), the assignation of a root to a particular class in these models appears somewhat circular; its independent form alone is not a predictor of its class membership. Indeed, the difficulties inherent in defining verb or root classes from both morpho-syntactic and semantic perspectives suggests that such a classification may not be a productive, or even necessary, endeavour. Indeed, an alternative set of interpretations for the Purepecha root also exists. Foster (1969: 41), contrary to her later stem classification outline (as presented above), states that "[s]tems are generally multivalent; that is, shared by words of more than one form class [i.e. nouns and verbs]." She continues: "Stems of each substantive class [i.e. nouns, pronouns, adjectives, adverbs, and numerals] constitute a stem class (except pronouns and some adverbs) also shared by verbs," (idem.). With reference to suffixes, she claims that they can be either verbal or substantive (i.e. nominal), where verbal suffixes can be shared with other word classes whereas the substantive suffixes only apply to this class, albeit usually to more than one sub-class of substantives (e.g. adverbs; see Section 6.2). In terms of semantic composition she states that "[s]tem morphemes are of very general meaning, describing such semantic areas as direction toward or away from, contact, protrusion, penetration, reversal, etc." (idem.), although she gives no specific examples. More importantly for this chapter, and in support of the argument

for the semantic under-specification of the root, she proposes representing these concepts (i.e. the general stem meanings) with symbolic devices rather than with verbal definitions, as in Figure 13.

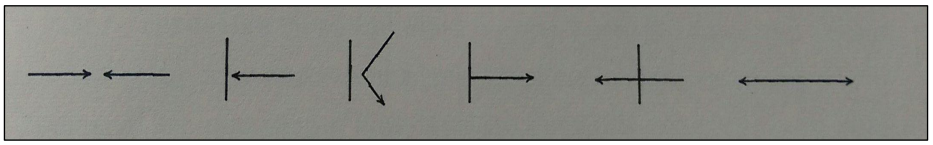

Figure 13: Foster's (1969: 41) symbolic representation of stem morphemes in Purepecha

For Friedrich (1984), roots are less abstract, although still flexible. He proposes that roots fall along a continuum comprising those that function mainly in what he calls the "verbal system" at one extreme to those that operate mainly in the "nominal system" at the other.[171] Other roots sit between these two extremes and, more importantly, "any nominal root can be verbalized to some extent, just as any verbal root can be nominalized at least in some ways" (Friedrich, 1984: 65). This interpretation could lend support, however, to the notion that the root is category-less, or that it can change word class depending on the suffixes that follow.

In his rarely cited work on suffixation in Purepecha, Wares (1956) claims that stem classes[172] can be defined by the suffixes that follow them, thus verb stems are followed by verb suffixes, such as locatives, aspect and person marking, and noun stems are followed by noun plural and nominal case endings. One interpretation of this rather circular definition is that the root is by itself category-less. In order to become a verb stem or noun stem, and then by default a noun or verb, a stem or root requires suffixes. Similarly, despite referring to roots as verbal roots only some of the

[171] It should be borne in mind, however, that he too (like Foster) offers both a polyvalent interpretation of roots and a six-way classification of roots as verbal roots, as indicated earlier in this section.
[172] Wares (1956) prefers the term 'stem' over 'root', although he does not give a clear definition of either in his short grammar sketch. Chamoreau (e.g., in press) distinguishes between a root and a stem in verbal morphology: the former is bare and can take inflectional morphology directly, whereas the latter must be combined with a stem formative before being able to take any subsequent morphology. See also Section 1.5.2. I follow Chamoreau in differentiating between the two units.

time,[173] Lucas Hernández (2014: 123) also claims that "the root by itself does not have these meanings [listed in the table above the citation in the original, not required for our purposes here] and acquires them thanks to the morphemes that attach to it". This view holds much in common with that of Wares (1956; see also Hernández Domínguez, 2015: 47).

We have observed in this section that the status of roots in Purepecha has already been the focus of a reasonable amount of scholarly attention. Some accounts consider roots to be verbal, allowing the formation of nouns through suffixation (i.e. nominalising suffixes), while others view roots as flexible or even polyvalent, namely able to form multiple word classes. Yet the root or verb classifications proposed to date cannot adequately group their members on the basis of morpho-syntactic or semantic properties. As such, a more flexible approach seems potentially viable. Let us now examine flexibility - or more accurately lexical flexibility - in more detail.

6.5.1. Underspecification as a type of lexical flexibility

It is instructive to clarify, at this stage, how I am using the terms 'flexible' or 'flexibility' in relation to Purepecha roots. From the outset, it should be underlined that I am not claiming that Purepecha lacks a noun-verb distinction; rather quite the opposite is true and nouns and verbs constitute the two main word classes in the language (see also Section 1.5). Yet some of the descriptive and typological literature on word class flexibility can be rather vague or confusing, conflating several phenomena under the same term (Evans & Osada, 2005: 38). As such, it is useful here to draw on Van Lier and Rijkhoff's (2013: 2) distinction between the two main types of lexical flexibility.[174] The first type comprises languages whose units - i.e. roots or lexemes - are precategorial or category-neutral until they have been expanded by affixal derivational material. The second type, termed here 'acategorial', comprises units that can belong to two or more word classes, if indeed it is appropriate to posit part-of-speech categories for such languages. I propose that Purepecha belongs to the

[173] I take the fundamentally verbal nature of roots to be implied through this lack of consistency.
[174] But see Evans & Osada (2005), for a more fine-grained (i.e. four-way) typology of flexible languages in the second sense - i.e. purportedly lacking the noun-verb distinction; for the purposes of this paper the two-way typology suffices.

first type of flexible class, namely it is precategorial. To provide support for this proposal, building on the previous section, I will briefly outline how these two types of lexical flexibility differ.

In their treatment of Mundari word classes, Evans and Osada (2005: 362) note that the term *precategorial* "has been used in a variety of ways in the literature, often rather loosely."[175] However, rather than getting bogged down in the minutiae of terminological differences, I choose to define precategoriality in terms of Himmelman's (2004: 129, following Verhaar, 1984) precategorial bound roots, or:

> "[...] lexical bases which do not occur without further affixation or outside a compound in any syntactic function and from which items belonging to different morphological or syntactic categories (nouns and verbs, for example) can be derived, without there being clear evidence that one of the possible derivations from a given root is more basic than the other one(s)."[176]

As such, precategoriality can be considered a feature of roots rather than lexemes and is therefore compatible with the existence of syntactic categorial distinctions between nouns and verbs (amongst others), which is clearly the case in Purepecha.[177] Underspecified objects, here roots, do not fall into one of the traditional word classes because they are "characterized by their multifunctional behaviour or rather the *potential* to develop into various more specific types" (van Lier & Rijkhoff, 2013: 3-4, emphasis in original). In the case of Purepecha, I propose that roots do indeed have the *potential* to become nouns or verbs, but only once word-class specific morphology has been appended. It is worth noting that several different grammatical theories or frameworks, notably Distributed Morphology, assume that "flexible items are provided with some (verbal, nominal, adjectival, etc.) categorial specification (in the

[175] More specifically, they define a language as precategorial when its open-class lexemes can occur in any syntactic position, but in order to function as a predicate-like element, a lexeme must receive further morphological material, according to its functional position (Evans & Osada, 2005: 362).
[176] Himmelmann (2004: 128-129) also offers a four-way distinction between the different scenarios in which lexical bases (roots) can be underdetermined in the Austronesian languages.
[177] The existence of a separate class of adjectives in Purepecha remains a controversial issue. See Section 1.5.2 for a short discussion of the problem and previous analyses.

form of a syntactic slot, a label, a constructional frame, etc.) after they have been retrieved from the mental lexicon," (van Lier & Rijkhoff, 2013: 5). It could be argued that this may be the case in Purepecha, where categorial specification is achieved through the addition of suffixes to a precategorial root.

As for the semantics of precategorial roots, Evans and Osada (2010: 364) claim that "precategorialist treatments typically state that lexeme meanings are ineffable, outside their particular use in predicate or argument slots." There is an element of truth to this statement in the Purepecha context, insofar as some roots are clearly underspecified semantically (see example (3); recall also the case of underspecified roots in Muysca (Adelaar, 2005)) and only take on more transparent, although not necessarily concrete, meaning when expanded with one or more suffixes (see Section 6.4 for a more detailed discussion of the role of suffixes in synchronically fused nouns). I have argued that, in order to represent the meaning of these roots, a conceptual label such as 'RELATED TO BURNING' should be applied, rather than a traditional translation of the type 'to burn' in this instance, but that even the semantically more opaque roots are effable, conceptually speaking. Such an approach prevents both an overly vague interpretation, such as that offered by Foster (1969) in Figure 13, and an overly simplistic reductionist translation, as commonly found in much of the existing literature.

The nature of the second type of lexical flexibility considered here, which I refer to as 'acategorial', underpins a fundamental typological question: do all languages possess a noun-verb distinction? It has been claimed (see notably Whorf, 1956) that humans find the cognitive distinction between objects, usually expressed as nouns, and events, usually expressed by verbs, to be self-evident. At the beginning of the twentieth century, initial evidence was put forward from Mundari (Hoffman, 1903; cf. Evans & Osada, 2005) and Malayo-Polynesian (Sapir, 1921) that refuted this 'self-evident' universal. Later, in his discussion of the bipartite nature of Nootka (Wakashan, California) stems, Hockett (1958: 224) aimed to "disprove the assumption that the contrast between nouns and verb is universal on the level of parts of speech". Rather than presenting a traditional noun-verb distinction, Hockett (1958: 224-225) claimed that Nootka stems were either inflected or uninflected, where the

former could behave syntactically either like nouns or like verbs. This view has also been put forward under the label of 'omnipredicativity' or 'polyvalence'[178], whereby all major word classes are able to function directly as predicates without derivation or a change in semantics (see Evans & Osada, 2005: 359; Lois & Vapnarsky, 2003).

Classical Nahuatl is held up as a prime example of an omnipredicative language (see Launey, 1994 for a full description) since "both nouns and verbs can have equivalent possibilities for being employed in predicate or argument slots" (Evans & Osada, 2005: 360). Languages of the Salishan family have also been analysed this way by some, on the grounds that all full words, including proper nouns, can function as predicates and may be inflected with person markers (see Czaykowska-Higgins & Kinkade, 1997: 35-37, also for counter-arguments from both formal and psycholinguistic perspectives, as well as references for both analyses). Additionally, some (but not all) roots in the Yukatekan Mayan languages are claimed to be multivalent, that is the root can be used as different lexical categories without involving any further derivational processes (Lois & Vapnarksy, 2003). That said, it has been argued for all the languages discussed here, that a formal distinction can still be made between nouns and verbs on the basis that there is not full bidirectional flexibility, in other words that not all nouns can function as verbs and/or not all verbs can function as nouns.[179] Indeed, it is now generally accepted that all languages possess a noun-verb distinction at some level (see Croft, 2003), that is they distinguish both cognitively and syntactically between objects and events. Yet precategoriality remains a possibility for the analysis of roots in Purepecha, albeit one that requires further investigation beyond what this chapter has begun to address.

[178] I have not included the so-called 'Broschartian' analysis of flexible word classes (see Evans & Osada, 2005: 364-365), best known for the case of Tongan, where the placement of a lexeme in a predicating or argument environment is characterised by patterns of semantic incrementation. Broschart's (1997) type vs. token analysis largely which parallels a reference vs predication approach, focussing on the polysemous extensions of lexemes. In the interests of clarity and brevity, I only mention this approach in passing and refer the reader to Broschart's (1997) paper on the topic for more detail.

[179] It is also worth noting that for all the cases presented here, a minimalism-inspired zero-derivation analysis has been avoided. In such an analysis, separate, homophonous terms are posited for a language, e.g. hammer (n.) vs. hammer (v.) in English, and the appropriate syntactic category assigned through zero spell-out of the functional head (see, e.g. Don & van Lier, 2013).

6.6. Concluding remarks

This chapter has attempted to show how the meaning of roots in Purepecha can range from the semantically transparent to the seriously opaque, and introduced the idea that roots could be considered precategorial rather than inherently verbal. Moreover, instead of carrying the contextual information required to form contrastive lexical units, it showed how suffixes are also often semantically opaque, leading to a situation where the compositional meaning of a lexeme is barely derivable simply from its individual components. Suffixes may not even be indicative of word class, rendering their semantics even harder to define. It may be more appropriate, therefore, to define and translate both roots and suffixes, where the semantics are at the opaque end of the meaning continuum, in conceptual terms, as in the aforementioned examples of PERCEIVED FOULNESS or RELATED TO BURNING, rather than attempting to assign or favour an individual meaning in the form of an infinitive, as in traditional dictionary entries. Indeed when compiling dictionaries and grammars, more attention needs to be paid to the role of suffixes in word formation, since they can create meaningful oppositions even where the semantics are opaque.

More specifically, it is clear that the set of fused nouns analysed in this paper comprise a root plus a synchronically unproductive nominalising or classifying suffix, however both the synchronic and diachronic meaning of many of these suffixes remains opaque. While they appear to be functioning similarly to Grinevald's (2000) 'class terms', the lack of obvious origin in an independent lexeme in some cases is both intriguing and frustrating. As such, a great deal more language-internal research, including internal reconstruction and the identification of roots in the proto-language, is required in order to expand the present analysis as well as our understanding of the development of Purepecha as a completely suffixing, agglutinating language. The relative semantic contribution of roots and suffixes could also open the way for a more theoretical interpretation, such as in a Distributed Morphology framework (see, e.g., Harley (2012) for an introduction), but more detailed functional synchronic and diachronic work is required before such an approach could be considered.