

## DESIGN FOR THE NEW REVISION OF ITHKUIL (Version 0.10.1, December 28, 2019) by John Q.

This document updates the previous version 0.9.3.1 and reflects the following changes made since that version:

### Major Changes:

- Formative Slots I through VI have been redesigned, restructured and re-ordered so that both Simple Formatives and Complex formatives are structured identically, with the incorporated stem (taking up Slots I through III) now simply being prefixed as a whole to a Simple formative.
- In simplifying the structure of incorporated roots (they are now one syllable shorter than in previous versions), the formative slot structure no longer differentiates Stem or Specification for an incorporated root — incorporated roots will now be default Stem “Zero” and BASIC Specification. This should suffice in most circumstances, as stem-incorporation (especially Type-2) generally functions as merely a mnemonic heuristic for associating one formative with another for the purpose of identification and lexicalization of new concepts. Nevertheless, if necessary to designate a different Stem or Specification for an incorporated root, there is a new affix available, **SSI – Alternate Stem and Specification for Incorporated Root**.
- The structure of the  $C_A$  complex has been completely redesigned from scratch based on the break-up of Configuration into the constituent parameters of Membership, Structure, and Similarity. Context has been removed from the  $C_A$  complex and will now be shown via the four syllabic stress-patterns.
- A new morphological category, Distinction, has been added, indicating whether a formative is a noun, an unframed verb, or a framed verb, by which the Slot XIII vocalic value can be interpreted as  $V_C$  or  $V_K$ .
- A new CONCATENATIVE adjunct has been created to allow an entire phrase to become a lexicalized gestalt, similar to English hyphenated compounds as in *He always has a **can't-be-bothered** attitude* or *Her **holier-than-thou** sanctimoniousness doesn't impress me*.

### Other Changes:

- The palatal slit fricative /ç/, written -ç-, is (re-)introduced as a phoneme. As a result, a number of Slot infixes and personal reference adjuncts changed.
- Series 3 and 4 of the Standard Vowel-Form Sequence have been changed, affecting the vowel-forms in all vocalic slots of the formative.
- A note has been added following the Short-Form Slot Structure, restricting its usage when the word follows another word ending in a consonant.
- In Sec. 3.6, the nine degrees of the ROC affix (which had replaced the old INTENTIVE Specification) have been completely redesigned.
- Sec. 3.7.2 has been amended re using an epenthetic vowel when infixing an -h- to a  $V_X C_S$  affix if a  $C_C/C_M$  affix has been moved to Slot VIII.
- In Sec. 3.9, Slot IX  $V_X C_S$  affixes no longer show Delineation; instead, place the delineated affix in Slot VI instead or use an Affixual Scoping Adjunct.
- In Secs. 3.11 and 3.12.1, the various Slot XI affixes have been changed to better distinguish Aspect from Mood from Phase/Effect/Level phonetically.
- In Sec. 3.13.2, Footnote 1 under the table has been expanded to provide greater details on when the CNF/PPS -a  $V_K$  affix can and cannot be elided.
- In Sec. 3.12.4, the CCh or FAC  $C_C/C_M$  form -h- changes to -ç- when moved to formative Slot VIII or when shown in Slot 1 of a Modular Adjunct.
- Syllabic stress in adjuncts has been changed to signify the new NOMINAL vs. VERBAL Distinction category.
- In Sec. 4.4, several corrections have been made to the Affixual Scoping Adjunct, and in Sec. 4.5, the carrier adjunct has been simplified.
- It is now possible to refer to two different instances of a personal referent category in one adjunct, e.g., *I'll give some to you [1] and to you [2]*.

## 1.0 PHONOLOGY

### 1.1 Phonemic Inventory

	LABIAL	LABIO-DENTAL	LABIO-VELAR	APICO-DENTAL	INTER-DENTAL	APICO-ALVEOLAR	ALVEOLAR RETROFLEX	ALVEOLO-PALATAL	PALATAL	VELAR	UVULAR	GLOTTAL	LATERAL
STOP	p b			t d						k g		'	
FRICATIVE		f v			ʈ ɖ	s z		ʃ ʒ	ç	x		h	ɭ
AFFRICATE						c ʒ		č j					
NASAL	m			n						ŋ			
LIQUID	FLAP / TRILL						r						
	NON-FLAP												l
APPROXIMANT			w						y		ř		

	FRONT		CENTRAL		BACK	
	unrounded	rounded	unrounded	rounded	unrounded	rounded
HIGH	i			ü	ë	u
MID	e	ö				o
LOW	ä		a			

### 1.2 Pronunciation Notes and Allophonic Distinctions

#### 1.2.1 Vowels:

-**a**- is pronounced [a] or [ɑ], -**ä**- is [æ], -**e**- is [ɛ] or [e] but only as [e] at the beginning of a vocalic conjunct; -**ë**- is [ɤ] or [ə] when stressed but [u] when unstressed; -**i**- is pronounced either [ɪ] or [i] but only as [i] at the beginning of a vocalic conjunct and only as [ɪ] when preceded or followed by -**y**-; -**o**- is [ɔ] or [o] but only as [o] at the beginning of a vocalic conjunct; -**ö**- is [œ] or [ø] but only [ø] at the beginning of a vocalic conjunct; -**u**- is [ʊ] or [u] but only [u] at the beginning of a vocalic conjunct and only as [ʊ] when preceded or followed by -**w**-; -**ü**- as [ʉ] or [y] but only [ʉ] when preceded by -**y**- or -**w**-). Diphthongs followed by -**r** or -**ř** in the same syllable as the diphthong may be pronounced disyllabically for ease-of-pronunciation; when doing so, be sure not to accidentally introduce a glottal-stop between the two vowels.

### 1.2.2 Consonants:

The dental **-n-** assimilates to velar [ŋ] before **-k-**, **-g-**, and **-x-** (but not before **-ř-**); therefore, phonemic **-ñ-** is not permitted before **-k-**, **-g-**, and **-x-**; The fricative **-x-** may be pronounced with either velar or uvular articulation [x ~ χ]; The apico-alveolar-retroflex rhotic **-r-** is a single tap/flap [ɾ], which becomes a trill [r] when geminated; when followed by a consonant in the same word, it may be pronounced as an apico-alveolar-retroflex approximant [ɹ], similar to (but further forward in the mouth than) the postalveolar [ɹ] of standard English; The uvular **-ř-** is an approximant [ʁ] as in colloquial French or German; when geminated it is either [ʁ:] or can be strengthened to a uvular trill [ʀ]. Care should be taken to ensure the pronunciations of **-př-** and **-tř-** are differentiated from **-px-** and **-tx-**. Word-initial or word-final **-ph-**, **-th-**, **-kh-**, **-ch-**, **-čh-** are pronounced as aspirated stops/affricates [p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>, ts<sup>h</sup>, tʃ<sup>h</sup>]. Within a word, they are pronounced as in English *haphazard*, *at-hand*, *backhanded*, *it's here*, and *church hall*.

### 1.3 Orthographic Conventions

The tables on the previous page indicate the romanization system. The following alternatives are available for writing the language in romanized script: The character **ṭ** may be written as **ṭ** or **ṭ**, the character **ḍ** may be written as **ḍ** or **ḍ**, the character **ḏ** may be written as **ḏ**, the character **ṇ** may be written as **ṇ** or **ṇ**, the character **ṙ** may be written as **ṙ** or **ṙ**, and the character **ḷ** may be written as **ḷ** or **ḷ**.

**1.3.1 Indicating Syllabic Stress:** Penultimate stress is unmarked; non-penultimate stress is marked by a diacritic on the vowel carrying the stress, as follows: a vowel with no diacritic takes the acute accent; a vowel with dieresis changes it to a circumflex accent (e.g., **ö** → **ô**). The grave accent is used over the vowel **-i-** when it is unstressed as the initial member of a vocalic conjunct following a consonant (e.g., **-Cia-**, **-Cio**, etc.) — this is to remind the speaker/reader that this **-i-** is to be pronounced long /i:/ in order to distinguish such syllables from syllables of the form **Cy+V** (e.g., *karesya* vs. *karésia*, *ávelkyo* vs. *ávelkio*)

### 1.4 Phonotactics

An updated phonotaxis document will be released when it is ready.

### 1.5 The Standard Vowel-Form Sequence

Slots II, IV, VI, VII, IX, X, XI, XII and XIII of the language's main word-form, the formative, carry vocalic affixes. Most of these Slots either hold nine distinct values, or are a matrix of multiple values where one axis of the matrix carries nine values. As a result, it is convenient as an aid in the memorization of so many vocalic affixes, to have a standard generalized pattern of nine vocalic forms in multiple series, which can then be utilized to populate each of these various Slots. This generalized standard pattern of vocalic forms is shown on the next page.

Despite the number of vowel-forms, the sequence structure is fairly systematic if one analyzes it closely.

## The Standard Vowel-Form Sequence

	Series 1	Series 2	Series 3*	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9
Form 1	a	ai	ia / öa	ao	aya	aye	ayo	ayë	ayu
Form 2	ä	au	ua / aö	ae	awa	awe	awo	awë	awi
Form 3	e	ei	ie / öe	ea	eya	eye	eyo	eyë	eyu
Form 4	ë	eu	ue / eö	eo	ewa	ewe	ewo	ewë	ewi
Form 5	i	ëi	ëu	oë	iwa	iwe	iwo	iwë	iwi
Form 6	ö	ou	uo / iö	oe	owa	owe	owo	owë	owi
Form 7	o	oi	io / uö	oa	oya	oye	oyo	oyë	oyu
Form 8	ü	iu	uë / iä	eä	öwa	öwe	öwo	öwë	öwi
Form 9	u	ui	ië / uä	oä	uya	uye	uyo	uyë	uyu

\* When preceded by **y-**, Series 3 forms beginning with **-i** use their alternate forms instead (e.g., **yöa**, not **yia**), while Series 3 forms beginning with **-u** use their alternate forms if preceded by **w-** (e.g., **waö**, not **wua**).

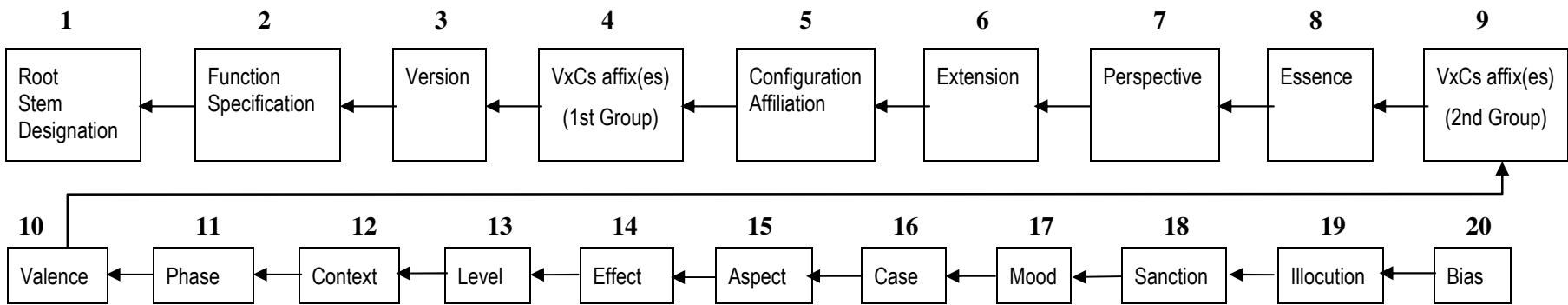
### 1.6 Rules for Inserting a Glottal-Stop or -h- Into a Vowel-Form

Several of the morpho-phonological “slots” which constitute the structure of a formative in the language call for the infixing of a glottal-stop and/or **-h-** into a vowel-form **V**. To do so, follow the rules below:

1. If **V** is a single vowel or diphthong, the glottal-stop or **-h-** is placed after **V**, e.g., **-a** becomes **-aʔ**, **-ai** becomes **-aiʔ**; **-a** becomes **-ah**, **-ai** becomes **-aih**.
2. If **V** is a disyllabic conjunct, place the infix between the two syllables of **V**, e.g., **-ua** becomes **-uʔa**; **-ua** becomes **-uha**.
3. When applying Rule 1 above, if the infix results in a phonotactically impermissible or awkward conjunct, e.g., the following consonant-form is a geminated stop such as **-tt-** or infixation results in an ambiguous form such as **-hr-** (which could be mistaken for a **C<sub>C</sub>/C<sub>M</sub>** affix), then an epenthetic vowel must be added as follows:
  - If **V** is a single vowel, reduplicate this vowel following the infix; e.g., **-a** becomes **-aʔa**; **-a** becomes **-aha**.
  - If **V** is a diphthong, then place the infix between the two vowels of the diphthong (as an exception to Rule 1 above); e.g., **-ai** becomes **-aʔi** instead of the usual **-aiʔ**; **-ai** becomes **-ahi** instead of the usual **-aih**.

## 2.0 MORPHO-PHONOLOGICAL STRUCTURE OF A FORMATIVE

The Slot structure of formatives more or less reflects the hierarchy of morphemes within a formative, i.e., the order in which each morpheme’s semantic information has scope over the preceding morphology as the word sequentially unfolds in speech or writing. This scoping order is shown below:



### 2.1 Slot Structure of a Simple Formative (i.e., No Incorporated Stem Is Present)

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	
—	—	—	'V <sub>V</sub>	C <sub>R</sub>	V <sub>R</sub>	( C <sub>S</sub> V <sub>X</sub> ... ' )	C <sub>A</sub>	(V <sub>X</sub> C <sub>S</sub> ...)	((V <sub>N</sub> / V <sub>T1</sub> / V <sub>M</sub>	(V <sub>P</sub> / V <sub>L</sub> / V <sub>E</sub> / V <sub>T2</sub> )	C <sub>C</sub> C <sub>M</sub> )	V <sub>C</sub> / V <sub>K</sub> )	( ' )C <sub>B</sub> )	[stress]	
Slots I thru III not used in Simple Formatives			Designation + Version + Distinction*	Main Root	Specification + Stem + Function of main root	VxCs affix(es) in reversed form; affix(es) apply to stem but not to C <sub>A</sub> .	Config. + Affiliation + Extension + Perspective + Essence	VxCs affixes	Valence or Aspect or Mood	Phase or Level or Effect or Aspect	Case Scope and/or Mood	Case or Illocution+Sanction as determined by Distinction in Slot IV	Bias	Ppreceded by a glottal stop unless Slot XI is filled or the Slot XIII affix contains a -w- or -y-	4 Contexts
			glottal stop pronounced but not written		vocalic affix	The last V <sub>X</sub> in the series requires a glottal stop to indicate end of Slot.	consonantal form	Apply to main stem + C <sub>A</sub>	Modular Slot Aspect or Mood forms appear only if V <sub>N</sub> Valence = MNO	Modular Slot	consonantal affix	vocalic affix			

\* **Distinction** is a new parameter which indicates whether the formative is nominal or verbal, thus indicating whether Slot XIII is V<sub>C</sub> or V<sub>K</sub>.

## 2.2 Slot Structure of a Complex Formative (i.e., Incorporated Stem Is Present)

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
incorporated stem			Slots IV through XV are the same as Simple Formatives, except for Slot VI which can add an <b>-h-</b> to show Delineation. <sup>2</sup>											
<b>C<sub>d</sub></b>	<b>V<sub>F</sub></b>	<b>C<sub>I</sub></b>												
Designation + Version + incorp. type of incorporated stem <sup>1</sup>	Format of incorp. root	Incorp. Root <sup>1</sup>												
Consonant form beginning with <b>h-</b> , <b>w-</b> , <b>y-</b> or <b>ř-</b>	same forms used for Slot XIII V <sub>c</sub>													

<sup>1</sup> Incorporated roots are automatically Stem “Zero” and BSC Specification; if necessary to indicate a different Stem or Specification, use the new SSI Affix shown in Sec. 3.3.

<sup>2</sup> **-h-** shows positive Delineation (indicating that Slot VII affix(es) apply to an incorporated stem); see Section 3.7.2 for details.

## 2.3 “Short-Form” Slot Structure For Simple VERBAL or FRAMED Formatives<sup>1</sup> (i.e., No Incorporated Stem, VERBAL or FRAMED Distinction Only<sup>1</sup>, and C<sub>R</sub>-Form Permissible in Word-Initial Position)

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
—	—	—	—	<b>C<sub>R</sub></b>	<b>V<sub>R</sub> (')</b> <sup>2</sup>	Slots VII through XV are the same as for Simple Formatives								
				Root	Specification + Function + Stem Add glottal stop to show FML Designation Add <b>-h-</b> to show CPT Version									

<sup>1</sup> If the formative has an associated adjunct whose stress pattern indicates NOMINAL Distinction, then the short-form can be used with a Nominal Formative as well.

<sup>2</sup> See Sec. 3.4.3 for phonological details on adding a glottal-stop and/or **-h-** to Slot IV.

**Note when using a short-form formative:** If a Short-Form formative follows another word ending in a consonant in the same breath-group, and the juncture between the two words causes ambiguity as to which word the juxtaposed consonants belong to, then either the preceding word must add a vowel (e.g., by filling Formative Slot XIII) or the second formative cannot use the Short-Form slot structure.

## 2.1 A Self-Segregating Morphology

The language employs a pitch accent system as the means by which word boundaries may be parsed. The details of this pitch accent system are given below:

1. All unstressed syllables of a word prior to the stressed syllable carry neutral (MID-toned) pitch. Beginning with the stressed syllable, the remainder of the word must carry a single non-MID pitch contour, as described in Rule 2 below.
2. Beginning with the stressed syllable of the word, a word may carry ANY of the following pitch contours at the speaker's discretion: FALLING, HIGH, RISING-FALLING, FALLING-RISING. Additional pitch contours may be used in the following circumstances:
  - If the sentence carries INTERROGATIVE Illocution, the speaker may optionally utilize RISING pitch on the last word of the interrogative clause.
  - For clauses with non-NARRATIVE Register, the first and last word of the register clause may optionally be marked by LOW tone (in which case it is not necessary to utilize the end-register adjunct).

In general, the choice of pitch may match what the speaker is naturally comfortable with using from their own native language, subject to these rules.

3. Once a pitch has been chosen for the stressed syllable, it must be pronounced continuously through to the end of the word without change to a different contour (i.e., each word will have only one non-MID pitch contour).
4. If a word carries word-initial stress (i.e., it does not begin with neutral MID pitch) or is monosyllabic, and is not at the beginning of a breath group, then it must carry a pitch whose initial tone is different than the final tone of the previous word, so that two identical tones are not juxtaposed at the boundary between two words. In practice, this means the following rules apply between two adjacent words within the same breath group (i.e., they are not separated from each other by a pause in speech), where the second word carries word-initial stress or is monosyllabic:
  - When preceded by a word with either FALLING, RISING-FALLING, or LOW pitch, a monosyllabic word or word with word-initial stress must have either FALLING, FALLING-RISING, or HIGH pitch.
  - When preceded by a word with either HIGH, RISING, or FALLING-RISING pitch, a monosyllabic word or word with word-initial stress must have either RISING, RISING-FALLING, or LOW pitch.
5. In unusual situations (e.g., singing a song) when pitch-accent is unavailable or undesirable as a means of parsing word boundaries and the placement of pauses between words is unrealistic, then a special parsing adjunct of the form 'V' may be placed before any word to be parsed, where 'V' represents a single vowel between two glottal stops, the particular vowel indicating the syllabic stress of the following word, as follows:

- 'a' indicates the following word is monosyllabic
- 'e' indicates the word bears ultimate stress
- 'o' indicates the following word bears penultimate stress
- 'u' indicates the following word bears antepenultimate stress
- 'i' indicates the following word bears pre-antepenultimate stress

### 3.0 ANALYSIS OF FORMATIVE SLOTS

#### 3.1 SLOT I: $C_d$ — Designation, Version and Incorporation-Type of Incorporated Stem

This slot is used only with Complex formatives. It shows Designation, Version and Incorporation-Type for the incorporated stem.

$C_d$ — Designation/Version + Incorp. Type of Incorp. Stem		PRC	CPT
Type 1 Incorporation	IFL	h	hl
	FML	ř	hr
Type 2 Incorporation	IFL	w	hw
	FML	y	hy

**Incorporation Type:** There are two types of stem incorporation. Type-1 incorporation implies a circumstantial relationship between the incorporated stem and the main stem (equivalent to placing the incorporated stem into a case-frame instead). Type-2 incorporation is derivational (i.e., lexicalizing), creating a new lexico-semantic gestalt usually requiring a different English translation. This is analogous to English forms like *polar bear*, where the form names a new animal rather than stating where a particular bear originates or is situated. Likewise, English *elephant seal* establishes a whole new lexico-semantic gestalt rather than merely describing some sort of metaphorical relationship between elephants and seals.

#### 3.2 SLOT II: $V_F$ — Format of Incorporated Stem

Format signifies the incorporated stem's semantic relationship to the main stem. The  $V_F$  affix values are the same as the  $V_C$  vocalic Case affixes in Slot XIII. For formatives with no incorporated stem, this slot and the following, Slot III, will be empty.

#### 3.3 SLOT III: $C_I$ — the Incorporated Root

The incorporated root,  $C_I$ , is of the same format as the main root,  $C_R$  (see Sec. 3.5) By default, it is considered to be Stem “Zero”, BASIC Specification and ambiguous as to Function (see Sec. 3.6), with no  $C_A$  information defined. This is usually sufficient, given that stem-incorporation (especially Type-2) generally functions as merely a mnemonic heuristic for associating one formative with another for the purpose of identification and lexicalization of new concepts.

To define a  $C_A$  complex for the incorporate root, use the  $C_A$ -stacking affix (see Sec. 3.7) in Slot VI with positive Delineation (see Sec. 3.7.2).

If necessary to define an alternate Stem and/or Specification for the incorporated root, use the new SSI affix below; it may be placed in either Slot VI (no positive Delineation marking required) or in Slot IX. Alternately, one may use the Affixual Scoping Adjunct (see Sec. 4.4).



-çk	SSI Alternate Stem and Specification for Incorporated Root
1	Stem 1, CONTENTIAL Specification
2	Stem 1, CONSTITUTIVE specification
3	Stem 1, OBJECTIVE Specification
4	Stem 2, CONTENTIAL Specification
5	Stem 2, CONSTITUTIVE specification
6	Stem 2, OBJECTIVE Specification
7	Stem 3, CONTENTIAL Specification
8	Stem 3, CONSTITUTIVE specification
9	Stem 3, OBJECTIVE Specification

### 3.4 SLOT IV: $V_V$ — Designation, Version, and Distinction (of Main Stem)

Slot IV contains a vocalic affix indicating INFORMAL vs. FORMAL Designation, PROCESSUAL vs. COMPLETIVE Version, and the new category of Distinction:

		NOM Nominal	VRB Verbal	FMD Framed
IFL	PRC	a	u	ai
	CPT	e	o	ei
FML	PRC	i	ö	oi
	CPT	ä	ü	ui

**Distinction:** This indicates whether a formative is a noun, an UNFRAMED verb, or a FRAMED verb. Thus Distinction determines whether the vocalic affix in formative Slot XIII is a  $V_C$  case marker or a  $V_K$  Illocution/Sanction marker. (For FRAMED Distinction, Slot XIII is a  $V_C$  case marker and Slot XII is the  $C_C$  Case-Scope marker, while Mood will be shown either in Slot VIII, X, or XI as per Secs. 3.12.3 and 3.12.4). Distinction vocalic markers follow an unrounded (a-e-i-ä) vs. rounded (u-o-ö-ü) vs. diphthong pattern for ease of recognition.

Note that for simple formatives, the  $V_V$  affix will be word-initial and must be preceded by a spoken glottal stop (which is not written in the romanized orthography). In complex formatives this glottal stop is not present since the  $V_V$  affix is preceded by filled Slots I through III.

### 3.5 SLOT V: $C_R$ — The Root

The root is one to six consonants in length and must be phonotactically permissible (e.g., none of the following could be roots: \*-kg-, \*-nč-, \*-zrb-, \*-tpk-, \*-fmst-). No root may contain a glottal-stop, nor can the lone forms -l-, -ç-, -çç-, -çw-, -ř-, -h-, -w- or -y- be roots (however, multi-consonant roots ending in -h-, -w- or -y- are permissible (e.g., -vh-, -gw-, -mpy-), as are conjuncts containing -l-, -ç- and -ř- (e.g., -pl-, -ltr-, -çt-, -kç-, -řfs, -ndř- etc.).

### 3.6 SLOT VI: V<sub>R</sub> — Stem x Specification x Function

Each root has eight associated stems (four for each of the two Designations), four Specifications, and two Functions (STATIVE vs. DYNAMIC).

	STEM 1		STEM 2		STEM 3		STEM "0"		<p><b>"Stem Zero"</b>: These forms are available when necessary to refer to the "stemless" overall conceptual meaning of the raw root, irrespective of a particular stem. For many stems, this will be unnecessary, as the basic overall meaning of the root corresponds to the meaning of Stem One.</p>
	STA	DYN	STA	DYN	STA	DYN	STA	DYN	
<b>BASIC</b>	a	ai	ä	au	ia / öa	ua / aö	ao	ae	
<b>CONTENTIAL</b>	e	ei	ü *	eu	ie / öe	ue / eö	ea	eo	
<b>CONSTITUTIVE</b>	o	oi	ö	ou	io / uö	uo / iö	oa	oe	
<b>OBJECTIVE</b>	u	ui	i	iu	ië / oë	uë / eë	ëi	ëu	

\* -ü- here is an exception to the expected -ë- from the Standard Vowel-Sequence, in order to preserve -ë- as an epenthetic vowel for dual personal-reference adjuncts.

**Specifications** (NOTE: the descriptions below are illustrated using the example stems "ARTISTIC ENDEAVOR", "BELIEF/BELIEVE", and "MEASURE(MENT)")

<b>BSC</b>	<p><b>BASIC</b>: A holistic instantiation of a root, prior to the application of one of the other eight Specifications, essentially encompassing the meanings of the CTE, CSV, OBJ specifications below. For roots representing naturally "activized", "time-unstable", dynamic, or psychologically verb-like notions, the BASIC nominal formative would mean "an instance/occurrence of X", while the BASIC verbal formative would mean "(an instance/occurrence of) X(-ing) happens". For roots representing naturally "reified", "time-stable", stative, or psychologically noun-like notions, the BASIC nominal formative would mean "an X (being present)" or for "non-count" entities, "an (unspecified/certain) amount/volume of X", whereas the BASIC verbal formative would carry a STATIVE interpretation meaning "(an) X be present" / "[there] be (an) X"; the expansion of this meaning verbally would be accomplished using other Specifications and/or DYN Function.</p>
<b>CTE</b>	<p><b>CONTENTIAL</b>: This specification complements the CSV specification below. The physical or non-physical "content" or essence or purposeful function or idealized/abstract/platonic form thereof, as opposed to its mere physical form/shape, e.g., the <i>content of a piece of art</i> [what it represents or is an image/statue of]; <i>the water within a river</i> [regardless of its channel or course]; <i>the communicative content of a message</i> [regardless of the means/medium by which it is conveyed]; <i>something (made of/in) iron</i> [its form/shape as opposed to merely being an example of the substance]; <i>a room as a functional/habitable space, established by its socially communicated purpose or discernible by its design, furnishings, decor, etc.</i></p>
<b>CSV</b>	<p><b>CONSTITUTIVE</b>: The form (physical or non-physical) in which an entity/state/act actually expresses itself, is shaped, or is realized, as opposed to its functional/purposeful content, i.e., "what constitutes X", e.g., <i>a work of art</i> [as constituted by it being a painted canvas, sculpted marble, etc., irrespective of what the image is or what/who the statue is of]; <i>the course of a river</i>; <i>the form/medium (written, spoken, recorded, etc.) of a message</i> [irrespective of what it communicates], <i>something iron (focus on it being of a particular material/substance regardless of its form/shape)</i>, <i>a room as a contained volume of space established by conjoined walls and ceiling</i> [regardless of its purpose, dimensions, layout, design, furnishings, or decor].</p>
<b>OBJ</b>	<p><b>OBJECTIVE</b>: Target or "object" or product associated with the act/state/event, , e.g., <i>what an artist creates, a work of art, the entity/person/institution that forms the object/source of one's belief, what one measures</i> (the object, span, gap, etc. to be measured)</p>

The INTENTIVE Specification from previous versions of this document has been eliminated. It can instead be expressed by the (now redesigned) ROC affix:

-zř	ROC Result / Outcome / Consequences
1	the result/impact/effect on the ERG/EFF Agent from (performing/doing) X
2	the result/impact/effect on the ABS Patient from (performing/doing) X
3	the result/impact/effect on the AFF Recipient from (performing/doing) X
4	the result/impact/effect on the THM argument from (performing/doing) X
5	the result/impact/effect on the INS argument (tools, implements) from (performing/doing) X
6	the result/impact/effect on the CSM argument (resources, consumables) from (performing/doing) X
7	(a piece/instance/amount of) the resulting physical substance from (performing/doing/finishing) X
8	the resulting tangible product from (performing/doing/finishing) X
9	the overall circumstances/situation resulting from (performing/doing) X

**3.6.1 Slot VI for “Short-Form” Verbal Formatives:** Add a glottal-stop to  $V_R$  in Slot VI of a “short-form” verbal formative to show FML Designation. Add **-h-** to show CPT Version. Follow the procedure from Sec. 1.6 when adding the glottal stop or **-h-** or both.

### 3.7 SLOT VII: $C_S V_X$ Affixes plus “Delineation”

This optional slot holds one or more standard  $-V_X C_S$  affixes **in reversed form**:  $-C_S V_X-$ . **NOTE:** Slot VII affixes apply only to the main stem (or the incorporated stem as per Delineation described in Sec. 3.7.2 below). They do not have scope over the  $C_A$  information in Slot VIII or any subsequent slots.

degree	Type 1	Type 2	Type 3
1	a	ai	ia / öa
2	ä	au	ua / aö
3	e	ei	ie / öe
4	ë	eu	ue / eö
5	i	ëi	ëu
6	ö	ou	uo / iö
7	o	oi	io / uö
8	ü	iu	uë / iä
9	u	ui	ië / uä
0	ae	ea	oa

**Type 1:** circumstantial  
**Type 2:** derivational  
**Type 3:** applies to previous  $C_S V_X$  affix only (or the following affix if it is the first in the slot).  
**Degree 0:** unspecified degree; refers to the affix’s semantic general concept as a whole.  
 **$C_A$  stacking:** There are two specialized  $-V_X$  values, **-eo** and **-oe**, used to indicate that the following  $-C_S$  consonant-form is to be interpreted as a  $C_A$  complex (see next page) whose info is stacked or layered on the formative’s primary  $C_A$  complex; **-eo** indicates the  $C_A$  complex applies to the main stem, while **-oe** means it applies to the incorporated stem.  
**NOTE:** The last  $C_S V_X$  affix in Slot VII must carry a glottal stop, so the audience will know where Slot VIII begins. See Sec. 1.6 (page 4) for details on adding a glottal stop to an affix.

**Note:** There are several constraints on the form of a  $C_S$  element beyond standard phonotactic constraints. To avoid being confused with consonant-forms used in other Slots, no  $C_S$  form can contain a glottal-stop or begin with **h-**. Additionally, the following consonant forms cannot occur alone as  $C_S$ : **-h-**, **-l̥-**, **-ç-**, **-w-**, or **-y-**.

**3.7.1 Glottal Stop To Indicate the End of Slot VII:** The last  $-C_S V_X-$  affix in Slot VII must carry a glottal stop so that the listener knows where Slot VII ends and Slot VIII begins. See Sec. 1.6 (page 4) on how to add this glottal stop to the affix.

**3.7.2 Delineation:** “Delineation” refers to whether the affix(es) in Slot VII is/are applied to the main stem or to the incorporated stem. If they apply to the main stem, then delineation is unmarked. However, if they apply to the incorporated stem, this is indicated by changing Slot VII’s required final glottal-stop (see Sec. 3.7.1 immediately above) to an **-h-**. (The rules for adding this **-h-** are described in Sec. 1.6 on page 4.) **NOTE:** If adding **-h-** creates one of the following conjuncts, **-hç-**, **-hl-**, **-hr-**, **-hm-**, **-hn-**, then Rule No. 3 from Section 1.6 must be applied (i.e., an epenthetic vowel must appear after the **-h-** to break up the conjunct), as these conjuncts will otherwise be misinterpreted as  $C_C/C_M$  affixes as described later in Sec. 3.12.4.

### 3.8 SLOT VIII: The $C_A$ complex — 9 Configurations + 4 Affiliations + 6 Extensions + 4 Perspectives + 2 Essences

CONFIGURATION				AFFILIATION		EXTENSION		PERSPECTIVE + ESSENCE		
<b>UNIPLEX</b>	<b>UXS SPECIFIC</b>		[zero]	<b>CSL Consolidative</b>	[zero]	<b>DEL Delimitive</b>	[zero]		<b>NRM Normal</b>	<b>RPV Representative</b>
	<b>UPX POTENTIAL</b>		ʈ	<b>ASO Associative</b>	s	<b>PRX Proximal</b>	t (ʈt)	<b>M Monadic</b>	[zero] (l)	ř
<b>DUPLEX</b>	<b>DPS Similar</b>	<b>DPD Dissim.</b>	<b>DPF Fuzzy</b>	<b>VAR Variative</b>	f	<b>ICP Incipient</b>	k (ʈk)	<b>P Polyadic</b>	l (ls)	ʈ / ʈl / hw* (lz)
				<b>COA Coalescent</b>	š	<b>ATV Attenuative</b>	p (ʈp)	<b>N Nomic</b>	r	h / v / rr (rs)
<b>SEP Separate</b>	lt	rt	řt	<b>Allomorphic Substitutions:</b>		<b>GRA Graduative</b>	g	<b>A Abstract</b>	w (lš)	y (rš)
<b>CND Connected</b>	lk	rk	řk			<b>DPL Depletive</b>	b			
<b>FSD Fused</b>	lp	rp	řp							
<b>MULTIPLEX</b>	<b>MPS Similar</b>	<b>MPD Dissim.</b>	<b>MPF Fuzzy</b>							
<b>SEP Separate</b>	t	n	s (nz)	ʈs → z	ts → c	sš → ž	nf → mv	cy → cc		
<b>CND Connected</b>	k	ň	š (nž)	ʈš → ž	tš → č	šs → j	np → mz	čy → čč		
<b>FSD Fused</b>	p	m	f (v)	ʈf → ɖ	tf → d	sf+[C] → v[C]	ňk → ňz	ňy → mn		
				kg → gg / kɥ*		šf+[C] → vz[C]	nb → mž			
				pb → bb / pɥ*			ňg → ňž			

\* alternate forms to avoid double-geminates such as **-ggll-**, **-bbrr-**, **-ššll-**, etc.

### Notes On the Above Chart:

- Values shown in parentheses are the stand-alone forms (when all other sub-category values are zero).
- The stand-alone Extension values **-lt-**, **-lp-**, and **-lk-** are also used if Configuration and Affiliation are both zero but the Perspective + Essence value is non-zero (so that the Extension values are not mistaken for being Configuration values).
- Gemination is not a productive feature, so resulting geminate pairs consist of separate morphological elements, e.g., **-kk-** = MPS/CND + ICP.

### 3.9 SLOT IX: $V_X C_S$ Affixes

This optional slot holds one or more standard  $-V_X C_S$  affixes. The affix is not reversed as in Slot VII. The  $V_X$  values and types are the same as those of Slot VII, however, the last affix in Slot IX does not take any glottal stop. Unlike Slot VII affixes, Slot IX  $-V_X C_S$  affixes have scope over the  $C_A$  information in Slot VIII.

**NOTE:** Slot IX affixes do not show Delineation (i.e., that the Slot applies to an incorporated stem rather than the main stem). If necessary to show a particular affix applies to an incorporated stem either place the affix in Slot VII with positive Delineation indicated, or use an Affixual Scoping Adjunct (see Sec. 4.4).

### 3.10 SLOT X: $V_N$ or $V_{T1}$ or $V_{M1}$ — Valence or Aspect or Mood

This slot primarily shows Valence. However, if Valence is default MNO, the slot may instead show Aspect or (in certain circumstances) Mood.

$V_N$  Valence infixes

MNO	PRL	CRO	RCP	CPL	DUP	DEM	CNG	PTI	IDC
[zero] / a*	ä	e	ë	i	ö	o	ü	u	ae

\* The alternate MNO value of **-a-** is used ONLY if either Slot XI or XII is filled.

**NOTE:** Both the IMITATIVE Valence and the MUTUAL Valence have been eliminated. For the IMITATIVE use DUPLICATIVE valence instead plus an appropriate SCS affix if necessary. For the MUTUAL, use PARTICIPATORY valence instead plus the new SQP Sequential Participation affix below:

-ct	SQP SEQUENTIAL PARTICIPATION
1	first one, then the other, and so on / alternating between each party / back and forth
2	first one, then the one next to or alongside the first, and so on
3	first one, then the one across/opposite/facing the first
4	first the primary party, then the secondary party, then the tertiary party, and so on
5	alternating between the parties in an agreed-upon/conventionalized/discernible/regular pattern
6	alternating between the parties in a complex pattern (apparently) known to the participating parties
7	alternating between the parties in what seems a random pattern but is actually non-random
8	alternating between the parties in what starts as a random pattern but develops to be non-random
9	alternating randomly between the participating parties

When showing Aspect in Slot X, the vocalic forms used are different than those used in Slot XI (which is why Slot X forms are designated  $V_{T1}$  vs. their Slot XI counterparts designated  $V_{T2}$ ). See the charts for Slot XI below to see the Slot X forms. See Sec. 3.12.1 as to showing Mood in Slot X via the  $V_{M1}$  affix.

**NOTE:** If either Slot XI or XII is filled, Slot X must also be filled (i.e., MNO valence must be marked with its alternate value -a-).

### 3.11 SLOT XI: $V_P/V_L/V_E/V_{T2}/V_{M2}$ — Phase or Level or Effect or Aspect or Mood

This is a modular slot showing either Phase, Level, Effect, Aspect or Mood. Effect conveys whether the speaker considers the utterance to be beneficial, neutral or detrimental to some party or parties. Effect may also be indicated using a  $-V_X C_S$  suffix, an affixial adjunct, or via a personal-reference adjunct.

PHASE $V_P$	
<b>CTX</b>	(wa)
<b>PCT</b>	wä
<b>ITR</b>	we
<b>REP</b>	wë
<b>ITM</b>	wi
<b>RCT</b>	wö
<b>FRE</b>	wo
<b>FRG</b>	wü
<b>FLC</b>	wu

EFFECT $V_E$	
neutral	[zero]
<b>1 / BEN</b>	wai
<b>2 / BEN</b>	wau
<b>3 / BEN</b>	wei
<b>all / BEN</b>	weu
<b>UNK [unknown]</b>	wëi
<b>all / DET</b>	wou
<b>3 / DET</b>	woi
<b>2 / DET</b>	wiu
<b>1 / DET</b>	wui

LEVEL $V_L$	Relative	Absolute
( none )	[zero]	[zero]
<b>MIN</b>	wia	wao
<b>SBE</b>	waö	wae
<b>IFR</b>	wie	wea
<b>DFC</b>	weö	weo
<b>EQU</b>	wëu	woë
<b>SUR</b>	wiö	woe
<b>SPL</b>	wio	woa
<b>SPQ</b>	wiä	weä
<b>MAX</b>	wië	woä

Only one affix appears in Slot XI. To stack multiple  $V_P$ ,  $V_L$ ,  $V_E$ , or  $V_{T2}$  affixes use a Modular Adjunct (see Sec. 4.0) and/or  $-V_X C_S$  suffixes.

See Sec. 3.12.1 for the Slot XI  $V_{M2}$  Mood affix values.

**V<sub>T</sub> Infixes — Aspect** (absence of aspect on a formative is zero-marked). The Slot X **V<sub>T1</sub>** form may be used only if Valence = MNO.

		Slot X <b>V<sub>T1</sub></b>	Slot XI <b>V<sub>T2</sub></b>
<b>RTR</b>	RETROSPECTIVE	a'	ya
<b>PRS</b>	PROSPECTIVE	ä'	yä
<b>HAB</b>	HABITUAL	e'	ye
<b>PRG</b>	PROGRESSIVE	ë'	yë
<b>IMM</b>	IMMINENT	i'	yi
<b>PCS</b>	PRECESSIVE	ö'	yö
<b>REG</b>	REGULATIVE	o'	yo
<b>ATC</b>	ANTECEDENT	ü'	yü
<b>ATP</b>	ANTICIPATORY	u'	yu

		Slot X <b>V<sub>T1</sub></b>	Slot XI <b>V<sub>T2</sub></b>
<b>RSM</b>	RESUMPTIVE	ai'	yai
<b>CSS</b>	CESSATIVE	au'	yau
<b>PAU</b>	PAUSAL	ei'	yei
<b>RGR</b>	REGRESSIVE	eu'	yeu
<b>PCL</b>	PRECLUSIVE	ëi'	yëi
<b>CNT</b>	CONTINUATIVE	ou'	you
<b>ICS</b>	INCESSATIVE	oi'	yoi
<b>SMM</b>	SUMMATIVE	iu'	yiü
<b>IRP</b>	INTERRUPTIVE	ui'	yui

		Slot X Form <b>V<sub>T1</sub></b>	Slot XI <b>V<sub>T2</sub></b>
<b>PMP</b>	PREEMPTIVE	ia' / öa'	yöa
<b>CLM</b>	CLIMACTIC	ua' / äö'	yua
<b>DLT</b>	DILATORY	ie' / öe'	yöe
<b>TMP</b>	TEMPORARY	ue' / eö'	yue
<b>MTV</b>	MOTIVE	ëu'	yëu
<b>SQN</b>	SEQUENTIAL	uo' / iö'	yuo
<b>EPD</b>	EXPEDITIVE	io' / uö'	yuö
<b>PTC</b>	PROTRACTIVE	uë' / iä'	yuë
<b>PPR</b>	PREPARATORY	ië' / uä'	yuä

		Slot X Form <b>V<sub>T1</sub></b>	Slot XI <b>V<sub>T2</sub></b>
<b>DCL</b>	DISCLUSIVE	ao'	yao
<b>CCL</b>	CONCLUSIVE	ae'	yae
<b>CUL</b>	CULMINATIVE	ea'	yea
<b>IMD</b>	INTERMEDIATIVE	eo'	yeo
<b>TRD</b>	TARDATIVE	oë'	yoë
<b>TNS</b>	TRANSITIONAL	oe'	yoe
<b>ITC</b>	INTERCOMMUTATIVE	oa'	yoa
<b>XPD</b>	EXPENDITIVE	eä'	yeä
<b>LIM</b>	LIMITATIVE	oä'	yoä

### 3.12 SLOT XII: **C<sub>C</sub>/C<sub>M</sub>** — Case-Scope and/or Mood

UNFRAMED verbal formatives take the **C<sub>M</sub>** affix to show Mood, whereas nominal formatives take the **C<sub>C</sub>** Case-Scope affix in this slot. FRAMED verbal formatives take both **C<sub>M</sub>** and **C<sub>C</sub>** affixes. The presence of a **C<sub>C</sub>/C<sub>M</sub>** affix in slot XII requires a non-zero value in Slot X. We will first analyze the Mood affixes.

**3.12.1 Mood:** The **C<sub>M</sub>** affix is shown below. The **V<sub>M</sub>** affixes used in Slots X and XII are also shown.

	<b>FAC</b>	<b>SUB</b>	<b>ASM</b>	<b>SPC</b>	<b>COU</b>	<b>HYP</b>
<b>C<sub>M</sub></b>	(h) / ç *	hl	hr	hw	hm	hn
(Slot X) <b>V<sub>M1</sub></b>	ai / au	ei / eu	ëi / ëu	oi / ou	ui / iu	ea
(Slot XI) <b>V<sub>M2</sub></b>	ha	he	hi	hö	ho	hu

See Sec. 3.12.4 for an explanation of how the **C<sub>M</sub>** affix moves to Slot VIII under certain conditions.

\* **FAC -h-** is elided if Slot X is MNO valence and Slot XI is empty/zero. If **C<sub>M</sub>** moves to Slot VIII (see Sec. 3.12.4) **FAC -h-** does not elide and changes to **-ç-** if preceded by a syllable h+vowel (i.e. a Slot VII indicator of positive delineation).

**3.12.2 Case-Scope:** Case is shown in Slot XIII. Formatives showing Case take the  $C_C$  affix in Slot XII to indicate the scope of the case-marked formative over adjacent formatives or the entire clause containing the case-marked formative. This is useful when there is a string of cases modifying another “head” formative;  $C_C$  specifies which formative has scope over which other formative. Like  $C_M$ , the presence of a  $C_C$  affix requires a non-zero value in Slot X.

**$C_C$  Infix values**

<b>CCh</b>	(h) / ç *	X’s is governed by the noun-case of the formative marked $C_C = -hl-$ ; in the absence of such, X’s case is associated with the main verb (or framed verb if within a case-frame).
<b>CCI</b>	hl	X is the “head” whose case governs all $C_C$ -unmarked nouns in the clause (or nouns marked with $C_C = -h/-ç-$ )
<b>CCr</b>	hr	X is the formative to which formatives in the clause marked with $C_C = -çç-$ are associated
<b>CCw</b>	hw	X is associated by noun-case to the formative marked by $C_C = -hr-$
<b>CCm</b>	hm	X’s noun-case associates only with the immediately following formative
<b>CCn</b>	hn	X’s noun-case associates only with the immediately preceding formative

\* **CCh** is elided if Slot X is MNO valence and Slot XI is empty/zero. However, if  $C_C$  moves to Slot VIII (see Sec. 3.12.4) the **-h-** does not elide and changes to **-ç-** if preceded by a syllable h+vowel (i.e. a Slot VII indicator of positive delineation).

As can be seen, the forms of the  $C_C$  and  $C_M$  affixes are identical. However,  $C_M$  only appears on verbal formatives while  $C_C$  appears on nominal formatives (both indicated via Distinction in Slot IV). In the case of FRAMED verbs which must show both Mood and Case-Scope, see Sec. 3.12.3 below.

**3.12.3 FRAMED Relation and showing both  $C_C$  and  $C_M$  affixes in FRAMED verbs:** FRAMED verbs must show Mood in order to distinguish them from a noun since they both take Case markers in Slot XIII. Therefore, FRAMED verbs in default FAC mood do not have the option to zero-mark FAC mood and must show both Mood and Case-Scope simultaneously. To do so, use FRAMED Distinction in Slot IV (which indicates the Slot XII affix is  $C_C$  Case-Scope) while using either the  $V_{M1}$  affix in Slot X or the  $V_{M2}$  affix in Slot XI to show Mood. Alternately, a modular adjunct (see Sec. 4.1) may be used to show either Mood or Case-Scope or both.

**3.12.4 Moving the  $C_C/C_M$  affix to the Slot VIII  $C_A$  Slot:** The  $C_C/C_M$  affix may optionally move to Slot VIII (the  $C_A$  Slot) in the following circumstance: If Slots X and XI are zero-marked and  $C_A$  in Slot VIII is default **-I-** (UXS-CSL-DEL-M-NRM), then the  $C_A$  is replaced by either  $C_C/C_M$  affix in Slot VIII, thus leaving Slot XII empty. (This rule allows the word to be one syllable shorter than usual). Note that when the FAC/CCh form **-h-** moves to Slot VIII it changes to **-ç-** if preceded by a syllable h+vowel (i.e., a Slot VII indicator of positive delineation). Since no  $C_C/C_M$  consonant-form matches any  $C_A$  form, there is no confusion as to whether Slot VIII contains a  $C_A$  form or a  $C_C/C_M$  affix.

(NOTE: See Sec. 3.7.2 regarding when to use Rule 3 from Sec. 1.6 if moving the  $C_C/C_M$  affix to Slot VIII).

Note also that the Slot X-XI-XI complex can never be mistaken for a  $-V_X C_S$  affix, because its associated consonant-forms are distinct from any  $C_S$  form.



### IMPORTANT NOTE REGARDING SLOTS X, XI, AND XII

As described in the sections above, Slots X, XI and XII operate in a complex interdependent manner with many rules and restrictions determining what values can appear in a particular slot based on what values are in the adjacent slot. These rules and restrictions are necessary to allow so many different morphological categories to be displayed in a flexible manner while avoiding ambiguity. However, there is a drawback to having such rules and restrictions, in that use of these slots often requires extra syllables to be displayed that might otherwise be elided, the primary example being the requirement that Slot X be filled (even with the otherwise elidable MNO default valence) if either Slot XI or XII is filled. Another example would be the inability to take advantage of the rule in Sec. 3.12.4 above to move the **C<sub>M</sub>** or **C<sub>C</sub>** affix to Slot VIII simply because there is a non-zero Phase or Effect affix in Slot XI.

Consequently, the reader should be aware that showing Phase, Effect, Level, Aspect, Mood or Case-Scope via a Modular Adjunct (see Sec. 4.1 below) rather than in a Formative, will often be the more phonologically efficient way of conveying these categories. For example, compare the following two ways of saying the same thing:

#### **ukčulawiha**

PRC/IFL/VRB-‘be.tall’-STA/OBJ-[default C<sub>A</sub>]-MNO-ITM-FAC-CNF/PPS  
*‘being something intermittently tall’*

#### **wi ukčul**

ITM PRC/IFL/VRB-‘be.tall’-STA/OBJ-[default C<sub>A</sub>]-CNF/PPS(ult.stress)  
*‘being something intermittently tall’*

### 3.13 SLOT XIII: $V_C$ or $V_K$ — Case or Illocution+Sanction

Nominal formatives and FRAMED verbal formatives take Case. UNFRAMED verbal formatives take Illocution + Sanction instead (see Sec. 3.13.2 below).

**3.13.1 Case:** The following are the 68 noun cases with their  $V_C$  case marker. Case-accessor and inverse-accessor  $V_X C_S$  affixes are also given. Note that the  $V_X$  value of these accessor affixes is the same as the corresponding  $V_C$  case marker, this being an exception to the standard  $V_X C_S$  format.

TRANSRELATIVE CASES			$V_C$	DESCRIPTION	case-accessor affix Type-1 = -ll; Type-2 = -rr	inverse accessor affix Type-1 = -lw; Type-2 = -ly
1	THM	THEMATIC	(a) <sup>1</sup>	The (usually inanimate) party which is a participant to the verbal predicate which does not undergo any tangible change of state. Semantic role: CONTENT.	party acting as the THEME/CONTENT of X	that of/for which X functions as the THEME/CONTENT
2	INS	INSTRUMENTAL	ä	The entity acting as means utilized by an explicit or implicit agent to implement/carry out the effect/impact of an act/event. Semantic role: INSTRUMENT.	the INSTRUMENT/MEANS by/via which X occurs	that by/via which X is the INSTRUMENT/MEANS
3	ABS	ABSOLUTE	e	The party that/who is the target of, and/or undergoes, the effect/impact or change of state as a result of a tangible act/event. Semantic role: PATIENT.	the PATIENT to which/whom X happens	that which happens/is done to the PATIENT X
4	STM	STIMULATIVE <sup>2</sup>	ë	The party/entity/idea/thought/memory/situation or mental state which triggers an unwilling, affective response in another party. Semantic role: STIMULUS.	that which is the affective STIMULUS of X	that of/for which X is the affective STIMULUS
5	AFF	AFFECTIVE	i	The party who undergoes an unwilling, affective experience, e.g., coughing, sneezing, feeling hot/cold, trembling, experiencing sensory input (tactile, olfactory, visual, aural, gustatory), proprioceptive states, psychological/emotional states, reflex reactions such as cringing, yawning, ducking, screaming in fright, etc. Semantic role: EXPERIENCER.	the EXPERIENCER or undergoer of X (as an affective experience)	that which the X undergoes as an affective experience
6	EFF	EFFECTUATIVE	ö	The party who initiates a chain of causal events or who induces another party to act as an agent (specifiable via the ENB affix). Semantic role: ENABLER.	the ENABLER initiating an event chain leading to X	the event (chain) that the ENABLER X initiates
7	ERG	ERGATIVE	o	The animate party or inanimate force which initiates/causes an act/event which creates a tangible effect or change of state in a patient. Semantic role: AGENT or FORCE.	the AGENT who/that X's	that which the AGENT or FORCE X does/initiates
8	DAT	DATIVE	ü	The party which is the (intended) recipient of a verb of transference, transmission, or communication; the party at/to which a physically transferred entity, transmitted information, or a communicable entity is directed. Semantic role: RECIPIENT.	the RECIPIENT of X or of the act of X	that which the RECIPIENT X receives
9	IND	INDUCIVE	u	The party who is the patient who undergoes the tangible effect, impact, or change of state of an act/event initiated/caused by that self-same party. Semantic role: AGENT+PATIENT.	the AGENT who/that X's him-/her-/itself	that which the AGENT X initiates/does to him-/her-/itself

<sup>1</sup> The THEMATIC -a affix can be elided as long as the resulting word is not monosyllabic (which would be interpreted as a verbal formative with CNF/PPS Illocution/Sanction).

<sup>2</sup> Ithkuil's DERIVATIVE case is renamed the STIMULATIVE and now only shows the STIMULUS of an affective response; inanimate agential FORCES now take the ERGATIVE or EFFECTUATIVE cases (the inanimate status of the agent is sufficient to distinguish its semantic role as FORCE rather than AGENT).

APPOSITIVE CASES			V <sub>c</sub>	DESCRIPTION	case-accessor affix Type-1 = -ll; Type-2 = -rr	inverse accessor affix Type-1 = -lw; Type-2 = -ly
10	POS	POSSESSIVE	ai	The party which has alienable (i.e., removable or severable) possession of another noun in the sense of having physical control or oversight of that noun, whether by chance circumstance or deliberate manipulation.	the alienable/circumstantial possessor of X	that which X alienably or circumstantially possesses
11	PRP	PROPRIETIVE	au	The party having alienable possession of another noun in the sense of quasi-permanent contextual control, ownership or oversight, whether by societal recognition, social convention, law, purchase or decree, which mere physical separation does not sever.	the owner of X; that to which/whom X belongs	that to whom/which X belongs; that which X owns
12	GEN	GENITIVE	ei	The party which has inalienable (i.e., irremovable, non-severable) possession of or association with another noun in the sense of having that noun as an inherent or intrinsic attribute, characteristic, physical part, or genetic (i.e., familial) bond.	the inalienable possessor of X	that which X inalienably possesses
13	ATT	ATTRIBUTIVE	eu	The party which inalienably experiences the effects of, or otherwise has an affective (see the affective case above) relationship with another noun, either as a temporary or permanent attribute, characteristic, or experience, whether physical or psychological, objective or subjective in nature.	that to which/whom X is an attribute/characteristic	that which X has as an attribute/characteristic
14	PDC	PRODUCTIVE	ëi	The party which is the creator, author or originator of another noun.	the originator/author/creator of X	that which X authored/created or originated
15	ITP	INTERPRETIVE	ou	The party acting as the subjective interpretational context of another noun, that is the noun by or through which another noun is subjectively considered, interpreted or described, e.g., <i>Monet's Paris</i> , <i>my baseball team</i> (as spoken by a fan).	the party X by / thru which / whom something is subjectively interpreted / considered	that which is subjectively considered, described or interpreted by/thru X
16	OGN	ORIGINATIVE	oi	The party which is the literal or figurative source of another, or which is the native location, origin, or usual locative context for another.	the original or inherent location/source of X	that of which X is the original or inherent source/location
17	IDP	INTERDEPENDENT	iu	The party which has a coordinated, tandem, complementary or mutually dependent relationship with another. The relationship between the two nouns can be thought of as reciprocal in nature, i.e., each noun implies the other or needs the other to exist within its natural context	that with which, or to which, X has a complementary relationship	that which is the complementary relationship shared with X
18	PAR	PARTITIVE *	ui	Indicates a quantitative or content-to-container relationship between the two nouns, e.g., <i>a cup of coffee</i> , <i>a box(full) of books</i> , <i>a train(load) of refugees</i> , <i>twelve chairs</i> .	that of which X is its apportioned or enumerated contents	that which is X's apportioned or enumerated contents

\* The PARTITIVE will now only appear in apposition to another noun; it will no longer operate independently to mean "some/a portion of X". For this latter meaning, one must utilize the DGR, PTW, PTT, EXN, SUF, EXD, CNM, FEA/3 or similar affix, or incorporate X in PARTITIVE Format into a noun referring to the container, amount, or degree of X.

ASSOCIATIVE CASES			V <sub>c</sub>	DESCRIPTION	case-accessor affix Type-1 = -ll; Type-2 = -rr	inverse accessor affix Type-1 = -lw; Type-2 = -ly
19	APL	APPLICATIVE	ia / öa	The entity/act/event which constitutes the circumstantial, potentially one-time, temporary purpose of another entity/act/event. 'for the (circumstantial/temporary/one-time) purpose of X', 'being used (temporarily/circumstantially) as X'	the purpose/function/use to which X is circumstantially put	that which has X as its circumstantial, temporary use/function/purpose
20	PUR	PURPOSIVE	ua / aö	The entity/act/event which constitutes the inherent/innate/intrinsic purpose of another entity/act/event. 'for the (dedicated) purpose/function of X'	the intrinsic/inherent/innate purpose of X	that which has X as its intrinsic, inherent, innate purpose
21	TRA	TRANSMISSIVE	ie / öe	Renamed from the BENEFACTIVE in Ithkuil, this case indicates the party for which/whom an entity/act/event occurs or is transmitted, with the intention that the entity/act/event be beneficial/detrimental to the named party. 'for (the benefit/detriment of) X'	that which/whom the intended benefit/detriment from X is for	that which is the intended benefit or detriment of (receiving/being impacted by) X
22	DFR	DEFERENTIAL	ue / eö	The entity for whose sake, or out of deference/respect to whom, an act/event occurs. 'for X's sake', 'out of deference for X', 'out of respect for X'	the one for whose sake, or out of deference/respect to whom, X occurs	that which occurs or is done out of respect/deference, or for the sake of, X
23	CRS	CONTRASTIVE	ëu	The party for which something is substituted, or of which another party/entity takes its place; 'instead of X', 'as a substitute for X', 'in place of X'	that which substitutes for X or takes X's place	that for which X is substituted or whose place X takes
24	TSP	TRANSPOSITIVE	uo / iö	The party on whose behalf something is/occurs.	that on whose behalf X occurs/is	that which is (done) on X's behalf
25	CMM	COMMUTATIVE	io / uö	The party in exchange for which, a reciprocal or complementary act/event occurs; e.g., <i>He paid 100 dollars <b>in exchange for the tickets.</b></i>	that which is received in an act of exchange	that which is relinquished in an act of exchange
26	CMP	COMPARATIVE	uë / iä	The party being compared to another, translatable as 'as compared to', 'as opposed to,' 'versus'; with verbs it translates as 'whereas' or 'while' (in its synonymous usage to 'whereas'). Examples: <i>She chose the red one <b>as opposed to the others.</b> Sam drives a van <b>versus Joe,</b> who prefers a truck, At the party, she danced <b>while/whereas I ate.</b></i>	that which is according to or pursuant to X; that which occurs as per, or in conformance to X	that, according to or pursuant to which, or as per or in conformance to which, X is/occurs
27	CSD	CONSIDERATIVE	ië / uä	The entity according to which, another entity is, or an act/event occurs.	that which is according to X	that which X is according to

ADVERBIAL CASES			V <sub>c</sub>	DESCRIPTION	case-accessor affix Type-1 = -ll; Type-2 = -rr	inverse accessor affix Type-1 = -lw; Type-2 = -ly
28	CON	CONCESSIVE	ao	identifies a noun or phrase which gives rise to an implicitly expected result which does not occur. This translates in many ways such as 'despite,' 'in spite of,' 'notwithstanding,' 'although,' 'regardless of,' 'no matter what,' etc. Examples: <i>In spite of his stupidity, he passed the test;</i> <i>The law notwithstanding, I will stand my ground;</i> <i>No matter how ignorant (they may be), they are welcome,</i> <i>Although a foreigner, we will let him in.</i>	that, in spite of or regardless of which, X occurs/is	that which is/occurs in spite of or regardless of X
29	AVR	AVERSIVE	ae	Identifies a source or object of fear and/or avoidance. With nouns, it translates expressions such as 'for fear of,' 'in order to avoid,' or 'in avoidance of.' With verbs, it would translate English 'lest.' Examples: <i>She finished her plate for fear of my wrath, I traveled by night to avoid the sun. Hide the children, lest the clowns find them.</i>	that, in aversion to which, X occurs/is	that which is/occurs in avoidance or fear of X
30	CVS	CONVERSIVE	ea	Identifies an exception. When the exception is to a hypothetical situation, it translates as 'unless' in verbal phrases, and 'without' for nouns, e.g., <i>Without peace, this society is doomed;</i> <i>We'll be safe unless the clowns find us.</i> If applied to a real or actual situation, it translates as 'except (for),' 'but for,' 'but (not),' 'excluding,' 'if not for,' 'if it wasn't for,' 'if it wasn't on account of.' <i>If not for the rain, we would have had a good time;</i> <i>She loves everybody except clowns;</i> <i>All pets are vermin, excluding dogs;</i> <i>He eats almost anything but (not) spinach.</i>	that, if not for which, or but for which, or except for which, X (would) occur(s)	that which would be/occur but for, or if not for, or except for X
31	SIT	SITUATIVE	eo	Identifies a noun as the background context for a clause without implying any direct causative relationship between the background context and the associated or consequent act/state/event. It translates in many ways, e.g., <i>Because of war, our planet will never be able to join the Federation;</i> <i>Given the presence of clowns, we must accept the corruption of our children;</i> <i>With my plan, we will defeat the enemy.</i> Other translations include: 'inasmuch as / insofar as / to the extent that / taking X into account / in view of the fact that / given that / considering'.	that, because of which, or given which, X occurs/is	that which is/occurs because of, on account of, or given, X
32	FUN	FUNCTIVE	oë	Identifies a noun used to describe/characterize the manner in which an act/event/state occurs or exists, e.g., <i>She dances gracefully;</i> <i>The boys ate with gusto;</i> <i>That clown is speaking nonsense;</i> <i>Father speaks with such fortitude.</i>	the manner in which X is/occurs	that which is/occurs in a manner described or characterized by X
33	TFM	TRANSFORMATIVE	oe	Identifies the outcome or final state of a process, often translatable by 'to,' 'until,' or 'into' in the sense of reaching a final state after undergoing some transformation. Examples: <i>The house burned to ashes,</i> <i>Mother reached a state of tranquility,</i> <i>The clowns will turn our children into slaves,</i> <i>Her father drank himself to death.</i>	that into which, X transforms/changes	that which is/occurs as a result of the transformation of X
34	CLA	CLASSIFICATIVE	oa	identifies a noun as a basis for arranging, sorting, classifying, or counting, e.g., <i>Place them in groups of three,</i> <i>The workers arranged the tables in rows,</i> <i>He lay down lengthwise,</i> <i>Can you count by fives?,</i> <i>I will sort them by color.</i> Also identifies the basis for recurring increments, e.g., <i>month by month;</i> <i>day in, day out;</i> <i>box upon box,</i> <i>clown after clown.</i>	the basis by which X is arranged, sorted, patterned or counted	that which is arranged, sorted, patterned, or counted by/via X
35	CSM	CONSUMPTIVE	eä	Identifies the entity consumed or used as a resource as a result of, or as a concurrent part of a process, e.g., <i>She cooks with tomatoes,</i> <i>The clown fed her an apple,</i> <i>He reads by candle(light).</i>	that by which X is consumed or used up	that which is consumed in the process of X
36	RSL	RESULTATIVE	oä	Identifies a result/consequence, translatable as 'resulting in X,' 'with X as a consequence', etc.	the result/consequence of which, X occurs/is	that which results from or is a consequence of X

SPATIO-TEMPORAL I			V <sub>c</sub>	DESCRIPTION	case-accessor affix Type-1 = -ll; Type-2 = -rr	inverse accessor affix Type-1 = -lw; Type-2 = -ly
37	LOC	LOCATIVE	aya	entity identified as the location of X or where X occurs; 'at / in / on / by X'	where X occurs/is (situated); X's location	that which is located, situated, or occurring at X
38	ATD	ATTENDANT	awa	entity in whose presence something is/occurs	that in whose presence which, X is/occurs	that which is situated or occurring in X's presence
39	ALL	ALLATIVE	eya	entity toward which another entity is moving/approaching	where X is headed/going toward	that which is headed toward X
40	ABL	ABLATIVE	ewa	entity away from which another entity is moving/receding	where X is coming from or moving away from	that which is coming from or moving away from X
41	ORI	ORIENTATIVE	iwa	entity (often a body part or sub-component) which serves as the "face" or surface or "front" or "head" of an entity in terms of external communication or interaction, or which serves as the forward "end" of a spatially orientated axis aligned to a vector of motion in terms of directional movement.	that which serves as X's orientational interface	that which is oriented, facing in the direction designated by X
42	IRL	INTERRELATIVE	owa	signifies the directional/temporal orientation or position of an entity relative to another, i.e., a noun relative to whose position in space or time another noun is being described for purposes of spatial/temporal orientation, e.g., <i>He turned his back <b>on me</b>, It lies just west <b>of the house</b>, Tell me when the parade starts <b>relative to my arrival</b>.</i>	the place/time relative to which, X is/occurs	that which occurs relative to the place/time designated by X
43	INV	INTRATIVE	oya	Identifies a noun as being the spatio-temporal boundary point of a span or volume of space or a period of time, i.e, either the starting point or the ending point of a span of time or space. English translations include: 'as of X' / 'since X' / 'until X'; for spatial contexts, translates as "between there and here" / "between here and there")	the place/time since/until/between which, X is/occurs	that which occurs since, until, or between the place(s)/time(s) designated by X
44	NAV	NAVIGATIVE	uya *	entity whose literal or metaphorically inferred long axis serves as the direction of another entity's path, course, arc, or trajectory of translative motion	that which serves as X's directional trajectory, path or way	that which is traveling along the directional trajectory, path or way designated by X

\* Note that the last four groups of cases, Spatio-Temporal I, Spatio-Temporal II, Relational I, and Relational II, each contain only eight rather than nine cases. As a result, vowel-form No. 8 of the nine forms of the generalized standard vowel-sequence is not used in these four groups of cases.

SPATIO-TEMPORAL II			V <sub>c</sub>	DESCRIPTION	case-accessor affix Type-1 = -ll; Type-2 = -rr	inverse accessor affix Type-1 = -lw; Type-2 = -ly
45	ASS	ASSESSIVE	aye	Specifies the increment of space or time or unit by which a contextual ratio of measurement is created, e.g., <i>He charges <b>by the minute</b>. It travels at 90 kilometers <b>per hour</b>. He earns \$25 <b>per book</b>.</i>	the spatial, temporal, or unit basis for the ratio by which X is measured, allotted, etc.	that which is measured via a ratio based on a spatial, temporal, or unit increment X.
46	CNR	CONCURSIVE	awe	indicates a "temporal locative" meaning 'at or during the time of X', i.e., the point or stretch in time at or during which an entity or an act/event exists or occurs.	when X is/occurs	that which is/occurs at a certain time X
47	PER	PERIODIC	eye	identifies the span of time / time frame at some point(s) during which, separate events, repetitions, or durationally segmented acts or states take place. Examples would be <i>He wrote the novel <b>in six months</b>, These clowns can corrupt your child <b>within a few days</b>, The woman has been ill a lot <b>this year</b>, <b>For the last several concerts</b>, my voice has been deteriorating.</i>	the time period or event during which X occurs	that which is/occurs during or within a time period X
48	PRO	PROLAPSIVE	ewe	signifies the duration of an act, condition, or event, i.e., how long it takes or lasts, e.g., <i>He prayed <b>through lunch</b>, It rained <b>all night</b>, It took <b>three days</b> for the fever to break, She sang <b>for an hour</b>.</i>	(the time period or event constituting) the duration of X	that which lasts, endures, or takes up an amount of time X
49	PCV	PRECURSIVE	iwe	Identifies an entity acting as a point in time prior to which an act, condition, or event occurs, e.g., <i>'this city <b>before the war</b>', 'a presentation <b>preceding the banquet</b>'.</i>	the act/event or point in time, prior to which, X occurs	the act/event or point in time which is/occurs prior to X
50	PCR	POSTCURSIVE	owe	Identifies an entity acting as a point in time after which, following which, subsequent to which, an act, state, or event occurs, e.g., <i>'this city <b>after the war</b>', 'a presentation <b>following the banquet</b>'.</i>	the act/event or time, after/following which or subsequent to which, X occurs	the act/event or time which is/occurs after or following or subsequent to X
51	ELP	ELAPSIVE	oye	identifies the amount of time that has passed or is expected to pass between the contextual present and the time of the act, condition, or event being spoken of. It corresponds to English '...ago' or '...from now'. Examples would be <i><b>Four years ago</b> I was a student; <b>Going back three generations</b>, women could not even vote; <b>Four years from now</b>, I will be a student; <b>Looking ahead three generations</b>, clowns will rule the world; I will be home <b>in three days</b>; Little did he know that <b>two months later</b> he'd be a rich man. The past vs. future distinction is determined from context, any aspectual morphology, or may be specified with the new TPL affix.</i>	the amount of elapsed time between X and a past or future act/event/time	the act/event/state which occurs X amount of elapsed time between then and the contextual present.
52	PLM	PROLIMITIVE	uye	Signifies the spatio-temporal boundary point of a span of time or space during which or within which something is expected to or must occur or be situated. Equivalent to English phrases:  by the end of X / within the period ending in X / within the period ending with X / before X is over / before X is up / inside of (the period signified by) X	the time/event by which time X is/occurs	the act/event or point in time which is/occurs by the time of X

RELATIONAL CASES I			V <sub>c</sub>	DESCRIPTION	case-accessor affix Type-1 = -ll; Type-2 = -rr	inverse accessor affix Type-1 = -lw; Type-2 = -ly
53	REF	REFERENTIAL	ayo	Identifies the general referent of another formative, translating such English terms as 'about,' 'regarding,' 'concerning,' 'in regard to,' 'in reference to,' 'pertaining to,' or 'as for.'	that which X is about or to which X pertains/is in regard	that which pertains to X or which is about or in regard to X
54	COR	CORRELATIVE	awo	Indicates an abstract general relationship, association, or conjunction between one formative and another, including subjective, contextual, metaphorical, or symbolic associations. It translates general phrases such as 'relative to,' 'in relation to,' 'in correlation with,' 'in association with,' e.g., <i>career goals, the soup of the day, the direction of that road, The elapsed time relative to the distance determines the winner, Our next topic is sex and/in art</i> (i.e., the relationship between art and sex).	that which X is associated/relative to or in relation to	that which is associated with or relative to X
55	CPS	COMPOSITIVE	eyo	identifies a noun as being the literal or figurative substance or component(s) of which another is made, composed, formed, built or comprised. Example of usage would be <i>That statue was carved out of marble, She owns three gold(en) coins, We were caught in a web of lies, I use a wooden ladder, It was a house of cards, Three suits comprise his wardrobe, Joe detests styrofoam cups.</i>	that of which X is made/composed or consists of	that which consists of, is made of, or is composed of X
56	DEP	DEPENDENT	ewo	identifies as formative as being the basis of a dependency phrase on which another formative or phrase acts as the contingency, translatable as ' <b>...if the circumstances regarding X are such to allow/warrant it</b> ' where the final "it" refers to the original contingency noun/phrase whose existence/occurrence is (at least in part) determined by or contingent upon the dependency phrase. The exact nature of the dependency can be specified using the new DPC affix.	that upon which the existence/occurrence of X depends	that whose existence or occurrence depends on X
57	PRD	PREDICATIVE	iwo	Identifies the non-causal basis, foundation, sustenance (literally or figuratively), or required existential condition for another noun or clause, translatable by the phrases 'based (up)on,' 'dependent (up)on' or 'relying on.' Examples of use are <i>a book dependent on a publisher, a man relying on charity, laws based in reason, success supported by corruption.</i>	that upon which X relies or is based upon	that which relies on or is based upon X
58	ESS	ESSIVE	owo	Identifies the role or name by which an entity is known or contextually identified. It translates English 'as/like' in the sense of naming or reference to the an entity's functional identity, e.g., <i>They called him a clown, The woman entered the club as an equal of any man, We consider you our only hope, Treat her as/like a princess</i> (because she is one), <i>He talks like a child</i> (because he is a child)..	that whose role is X, or what/who is named (as) X	that, in whose role/name, X is/occurs
59	ASI	ASSIMILATIVE	oyo	Identifies a formative used as a context for analogy or metaphorical comparison to another formative; translatable as 'as/like' meaning 'as if (it were) X' in the sense of comparison or analogy between one thing and another that it is not, e.g., <i>She sings like a bird, ; Treat her as/like a princess</i> (= as if she were a princess), <i>He talks like a child</i> (even though he's an adult).	that which/who is/does like or as (it were) X	that, as if it were which, X is/ occurs
60	CFM	CONFORMATIVE	uyo	The entity pursuant to which, as per which, or in conformance with which, another entity is, or an act/event occurs.	that which is pursuant to, as per, or in conform-ance with X	that which X is pursuant to or in conformance with



RELATIONAL CASES II			V <sub>c</sub>	DESCRIPTION	case-accessor affix Type-1 = -ll; Type-2 = -rr	inverse accessor affix Type-1 = -lw; Type-2 = -ly
61	ACT	ACTIVATIVE	ayë	Identifies the EXPERIENCER of a modal state, such as obligation, necessity, desire, hope, expectation, wishing, being able to, etc. functioning as the “subject” of a modal(ized) verb governing a hypothetical state (i.e., what is wanted, needed, expected, able to be done, etc.)	the one who experiences a modal state of X	The modal state which X experiences
62	SEL	SELECTIVE	awë	Identifies a contextually recurring time-period, as well as a string of recurring entities, e.g., <i>I visit him every three days; Each year, I travel to the Clown Planet; He works nights; By day, she is an artisan; The clowns visit us on Sundays; ...every third book; ...every green one.</i>	the recurring entity/period on/for/with which X occurs	that which is/occurs on a recurrent schedule or iteration X
63	COM	COMITATIVE *	eyë	Identifies a formative that accompanies another, translatable as ‘(along) with’. When used with PARALLEL or COMPLEMENTARY valence, signifies that the formative is being used in the same (or a complementary) way or is undergoing the same (or a complementary) activity as the other formative it is associated with (i.e., the meaning of the CONJUNCTIVE case in lthkuil).	that which accompanies X	that which X accompanies
64	UTL	UTILITATIVE	ewë	Identifies a formative in the process of being used while some other activity or state is in progress. It does not imply the INSTRUMENT of an act as does the instrumental case. Examples: <i>the gun-wielding man, the umbrella-toting pedestrian, a girl with backpack (on).</i>	that which circumstantially uses/utilizes X	that which is used/utilized circumstantially by X
65	DSC	DESCRIPTIVE	iwë	Identifies a formative as describing another formative in an adjectival manner, translatable as ‘characterized/describable as being like X; characterized/describable as having the quality/qualities of X’	that which is characterized or describable by/as X	that which characterizes or functions as a description for X
66	RLT	RELATIVE	owë	Identifies a formative (or case-frame) as constituting a relative clause associated with the preceding formative (or whatever formative is indicated by the DCD affix as being the head of the relative clause).	that which identifies or distinguishes X from other parties	the party identified by or distinguishable by X
67	TRM	TERMINATIVE	oyë	Identifies a noun as being the goal of an act/event, e.g., <i>We seek a new planet; a desire to see his homeland; an academy for (making) champions</i>	X’s goal; what X pursues as a goal	the goal X;
68	VOC	VOCATIVE	uyë	Signifies a noun being used in direct address.	—	—

\* The CONJUNCTIVE case has been eliminated. Use the COMITATIVE case + PARALLEL or COMPLEMENTARY valence instead.

### 3.13.2 V<sub>K</sub> — Illocution and Sanction

Illocution and Sanction appear on UNFRAMED verbal formatives (nominal formatives or FRAMED verbal formatives take a V<sub>C</sub> case affix in this slot instead). The V<sub>K</sub> vowel-forms follow the Standard Vowel-Form Sequence, the formative’s Slot IV Distinction marker serving to differentiate them from the V<sub>C</sub> case vowel-forms. Additionally, a tenth series of vowel-forms ending in -**ö** signifies “null” (i.e., unspecified) Sanction.

#### V<sub>K</sub> Illocution & Sanction infixes — 9 Illocutions x 9 Sanctions

	PPS	EPI	ALG	IPU	RFU	REB	CJT <sup>5</sup>	EXV	AXM	[null] <sup>6</sup>
<b>CNF</b>	(a) <sup>1</sup>	ai	ia / öa	ao	aya	aye	ayo	ayë	ayu	ayö
<b>INF</b>	ä	au	ua / öö	ae	awa	awe	awo	awë	awi	awö
<b>ITU</b>	e	ei	ie / öe	ea	eya	eye	eyo	eyë	eyu	eyö
<b>REV<sup>2</sup></b>	ë	eu	ue / eö	eo	ewa	ewe	ewo	ewë	ewi	ewö
<b>HSY</b>	i	ëi	ëu	oë	iwa	iwe	iwo	iwë	iwi	iwö
<b>USP<sup>3</sup></b>	ö	ou	uo / iö	oe	owa	owe	owo	owë	owi	owö
<b>DIR</b>	o	oi	io / uö	oa	oya	oye	oyo	oyë	oyu	oyö
<b>IRG<sup>4</sup></b>	ü	iu	uë / iä	eä	öwa	öwe	öwo	öwë	öwi	öwö
<b>DEC</b>	u	ui	ië / uä	oä	uya	uye	uyo	uyë	uyu	uyö

<sup>1</sup> The CNF/PPS affix -a is elided if phonotactically permissible. Note, however, that if eliding the affix leads to ambiguity in discerning which word a word-final (or word-initial) consonant belongs to, then the affix cannot be elided, e.g., *taksa* becomes *taks*, but if *taksa* is followed by another word such as *fetru* in the same breath group, then the elision cannot take place, since the phrase *taks fetru* cannot be sufficiently distinguished from *tak sfetru*.

<sup>2</sup> REV = a NEW REVELATORY illocution; an assertion based on a dream, vision, altered mental state, or strong emotional or cognitive bias not based in reality.

<sup>3</sup> USP = UNSPECIFIED illocution is new to this language; used to deliberately omit specifying the provenance of an assertion.

<sup>4</sup> INTERROGATIVE illocution may alternately be shown by rising pitch accent on the final word of an interrogative clause (in which case a CNF illocution form is used).

<sup>5</sup> Ithkui’s THEORETICAL sanction is renamed the CONJECTURAL in this language.

<sup>6</sup> Null sanction is used if the speaker wishes to leave Sanction unspecified. **NOTE:** if Sanction is shown via -V<sub>X</sub>C<sub>S</sub> affix, Slot XIII displays default CNF/PPS value (-a).

**NOTE:** The POTENTIATIVE illocution introduced in a previous version of this document has been eliminated; instead use USP illocution in conjunction with an appropriate modality affix or formative indicating a hope/wish/desire/exhortation, etc.

Hortatives (“if only.../were it so that...”) are expressed by the combination of DIRECTIVE Illocution + COUNTERFACTUAL Mood. Assertions based on long-term (i.e., unverifiable) memories, should utilize the CONFIRMATIVE illocution in conjunction with either the VRF/3, VRF/6, or VRF/9 affix.

### 3.14 Slot XIV: C<sub>B</sub> — Bias

A word-final C<sub>B</sub> consonantal Bias suffix is optional. If present, Slot XIII must be filled. To prevent the Slot XIII+XIV form from being mistaken for a V<sub>x</sub>C<sub>S</sub> affix it must be immediately preceded a glottal stop unless Slot XI is filled or Slot XIII contains a V<sub>c</sub>/V<sub>K</sub> form which contains a -w- or -y-.

Each Bias suffix has the same consonant-form as an associated lexico-semantic root. The lexical roots and stems associated with each Bias category are pronounced as written, with their consonant forms of normal length. However, these roots are phonologically structured to contain continuant and sonorant consonants, so that when they are used as Slot XIV suffixes, and especially when functioning as autonomous adjuncts, they may be pronounced in an artificially prolonged fashion. Additionally, those Bias forms that end in a voiceless stop or voiceless affricate may artificially emphasize this final consonant via phonetic aspiration or even an ejective pronunciation.

Bias adjuncts function as an autonomous consonantal adjunct, much like English “supra-segmental” interjections such as “Phew!”, “Damn!”, “tsk-tsk”, “Pssshhh”, “huh?”, “meh”, “hmmm”, etc.

The Bias suffixes are listed below. Their associated roots/stems will appear in version 0.2 of the Roots document.

<b>DOL</b>	<b>DOLOROUS</b>	řřx	<i>‘Ow!’ ‘Ouch!’</i>
<b>SKP</b>	<b>SKEPTICAL</b>	rnž	<i>‘Yeah, right!’ ‘Oh, sure! Like anyone’s supposed to believe that!’</i>
<b>IPT</b>	<b>IMPATIENT</b>	zzv	<i>‘C’mon!,’ ‘What’re you waiting for?’ ‘so...already!’ as in the sentence ‘So dance already!’</i>
<b>RVL</b>	<b>REVELATIVE</b>	mmǀ	<i>‘No wonder...!’ or ‘So that’s why...!’ ‘A-ha!....’ ‘Well, well, well!....’</i>
<b>TRP</b>	<b>TREPIDATIVE</b>	llč	<i>‘Oh, God...’ ‘Oh, no!....’ ‘Oh, dear!’ [fear-based]</i>
<b>RPU</b>	<b>REPULSIVE</b>	šštǀ	<i>‘Yuck! Ew! How gross!’</i>
<b>DES</b>	<b>DESPERATIVE</b>	mřř	<i>‘I don’t know how to say this, but...’ ‘I’m afraid that....’ ‘I’m sorry to have to tell you, but...’</i>
<b>DPB</b>	<b>DISAPPROBATIVE</b>	ffx	<i>‘I don’t like the fact that...’ ‘It</i>

<b>PSC</b>	<b>PROSAIC</b>	zzt	<i>‘Meh... (said in disappointment)’ ‘How ordinary!’</i>
<b>CMD</b>	<b>COMEDIC</b>	pǀǀ	<i>‘Funny!’ ‘LOL’</i>
<b>PPV</b>	<b>PROPOSITIVE</b>	sl	<i>‘what if...’ ‘It could be that....’ ‘Consider this: ...’ ‘Posit the following: ...’ ‘Assume for the sake of argument that....’</i>
<b>SGS</b>	<b>SUGGESTIVE</b>	ltç	<i>‘How about...’ ‘We could...’ ‘Might I suggest...’</i>
<b>DFD</b>	<b>DIFFIDENT</b>	cč	<i>‘sorry, but...’ ‘It’s nothing. It’s just...’</i>
<b>SEL</b>	<b>SELECTIVE</b>	rrm	<i>‘Look at it this way...’ ‘As I see it,...’ ‘In my opinion,...’ or ‘From my point of view,...’</i>
<b>EUP</b>	<b>EUPHEMISTIC</b>	vvt	<i>‘Let’s just say that....’ or ‘Well, let me put it this way....’</i>
<b>CRR</b>	<b>CORRECTIVE</b>	ňț	<i>‘that is to say...,’ ‘What I mean(t) to</i>

			<i>bothers me that....' 'Unacceptable!'</i> <i>'I hate it!'</i>
<b>CTP</b>	<b>CONTEMPTIVE</b>	kšš	<i>'What nonsense!' or 'What bullshit!'</i>
<b>EXA</b>	<b>EXASPERATIVE</b>	kçç	<i>'Dammit!' 'Look, don't you get it?...' 'Look, I'm trying to tell you....'</i>
<b>IDG</b>	<b>INDIGNATIVE</b>	pšš	<i>'The nerve!' or 'How dare...!?'</i>
<b>DIS</b>	<b>DISMISSIVE</b>	kff	<i>'Is that it?' 'Big deal!' 'So what!?'</i>
<b>DRS</b>	<b>DERISIVE</b>	pfç	<i>'How foolish!' 'How silly!' 'Look at how foolish/silly/ridiculous this is!'</i>
<b>PSM</b>	<b>PESSIMISTIC</b>	ksp	<i>'Yeah, like it really matters that...'</i> <i>'Pfft! What's it to me?'</i>
<b>DUB</b>	<b>DUBITATIVE</b>	mmf	<i>'Hmm, not likely.' 'I doubt it.'</i> <i>'Sounds fishy to me' 'I don't trust this/it/him/her/them...'</i>
<b>IVD</b>	<b>INVIDIOUS</b>	řřn	<i>'Why does he/she/they get to... and I don't?!' 'How unfair (that I don't get to...)!'</i>
<b>DCC</b>	<b>DISCONCERTIVE</b>	gzj	<i>'I'm not sure about this.' 'I don't feel comfortable about this.' 'I'm feeling out of my element here.'</i>
<b>STU</b>	<b>STUPEFACTIVE</b>	ļļč	<i>'Woah!' 'Holy, bejeezus!' 'What the...!' 'Jeez, Louise...!'</i>
<b>FSC</b>	<b>FASCINATIVE</b>	zzj	<i>'Cool!' 'Wow!' 'Awesome!'</i>
<b>IFT</b>	<b>INFATUATIVE</b>	vvr	<i>'Praise be to...!' 'Oh, thank God for...!' 'There's nothing more sacred/holy/important than...!'</i>
<b>EUH</b>	<b>EUPHORIC</b>	gzz	<i>'(Sigh) What bliss!'</i>

			<i>say is... 'I mean....'</i>
<b>APB</b>	<b>APPROBATIVE</b>	řm	<i>'(That's) OK' '(That's) alright'</i> <i>'(That's) good' '(That's) fine' 'Very well' 'Sure'</i>
<b>IRO</b>	<b>IRONIC</b>	mmž	<i>'Oh, nice!' 'Just great!' 'Well, now, isn't this lovely!'</i>
<b>PSM</b>	<b>PRESUMPTIVE</b>	nnř	<i>'It can only mean one thing..., 'and that's that!' 'and that's all there is to it!' or 'There's no two ways about it,....'</i>
<b>GRT</b>	<b>GRATIFICATIVE</b>	mmh	<i>'Ah! What bliss...!' 'Oh, there's nothing like....' [physical pleasure only]</i>
<b>SAT</b>	<b>SATIATIVE</b>	ff	<i>'How satisfying...!' 'At last, the pleasue of knowing/being/seeing/doing....'</i> <i>[psychological/emotional pleasure/satiety only]</i>
<b>PPX</b>	<b>PERPLEXIVE</b>	llh	<i>'Huh? What do you mean...? What the hell? 'WTF!?' 'You gotta be kidding me!'</i>
<b>CTV</b>	<b>CONTEMPLATIVE</b>	gvv	<i>'I wonder how..., 'that's odd..., 'I don't get it..., 'or a quizzical 'hmmmm.'</i>
<b>PPT</b>	<b>PROPTIOUS</b>	mll	<i>'it's a wonder that' as in It's a wonder he didn't break a bone in that fall.</i>
<b>SOL</b>	<b>SOLICITATIVE</b>	ňňs	<i>'please'</i>
<b>RAC</b>	<b>REACTIVE</b>	kll	<i>'My goodness! 'Wow!' 'Amazing!'</i>
<b>COI</b>	<b>COINCIDENTAL</b>	ššč	<i>'What a coincidence!'</i>
<b>FOR</b>	<b>FORTUITOUS</b>	lzp	<i>'It's just as well that...' or 'All's well that ends well...'</i>
<b>ANN</b>	<b>ANNUNCIATIVE</b>	đrr	<i>'Guess what!' or 'Wait till you hear'</i>

<b>DLC</b>	<b>DELECTATIVE</b>	žž	<i>'Whee!'</i>
<b>ATE</b>	<b>ATTENTIVE</b>	ňj	<i>'Well, whaddya know...'</i> <i>'Well, will you look at that...!'</i> <i>'Well, go figure...'</i> <i>'Who would've thought...?'</i> <i>'Well I'll be!'</i>
<b>RNC</b>	<b>RENUNCIATIVE</b>	mzt	<i>'So much for...!'</i> <i>'There goes...!'</i>
<b>MND</b>	<b>MANDATORY</b>	mšk	<i>'take it or leave it,'</i> <i>'this is your last chance,'</i>
<b>EXG</b>	<b>EXIGENT</b>	rrs	<i>'It's now or never!'</i>
<b>ISP</b>	<b>INSIPID</b>	lçp	<i>'Meh... (said due to lack of interest)'</i> <i>'How boring/tedious/dull!'</i>
<b>ADM</b>	<b>ADMISSIVE</b>	l̩	<i>'Mm-hm'</i> <i>'Uh-huh'</i> (said as mere acknowledgement that something said has been heard, with deliberate avoidance of any implied agreement with or assent to the statement)
<b>APH</b>	<b>APPREHENSIVE</b>	vvz	<i>'I'm worried...'</i> <i>'I've got a bad feeling about this...'</i>

			<i>this!</i>
<b>OPT</b>	<b>OPTIMAL</b>	ççk	prolonged <i>'so'</i> or <i>'totally'</i> as in <i>'I so don't care!'</i> or <i>'That is totally not what I meant.'</i>
<b>ASV</b>	<b>ASSERTIVE</b>	rrj	<i>'I'm telling you...'</i> , <i>'I told you so!'</i> , <i>'You see?!'</i>
<b>IPL</b>	<b>IMPLICATIVE</b>	vll	<i>'of course,'</i> <i>'after all,'</i> <i>'needless to say.'</i>
<b>ACC</b>	<b>ACCIDENTAL</b>	lf	<i>'As luck would have it...'</i> <i>'Fate has decided that...'</i> <i>'What luck!'</i>
<b>ANP</b>	<b>ANTICIPATIVE</b>	lst	<i>'I'm looking foward to this!'</i>
<b>ACH</b>	<b>ARCHETYPAL</b>	mçt	<i>what (a) ...!;</i> <i>how . . .!;</i> <i>Boy! Did (does) X ever ...</i>
<b>VEX</b>	<b>VEXATIVE</b>	ksk	<i>'How annoying!'</i> <i>'What a bother!'</i> <i>'What a pain!'</i>
<b>DEJ</b>	<b>DEJECTIVE</b>	zzg	<i>'(sigh)'</i> [of dejection/disillusionment]

**NOTES:** Ithkuil's LITERAL Bias has been eliminated: use HG1/1 or HG1/4 affixes instead. Ithkuil's CYNICAL Bias is also eliminated: use IRO or SKP Bias instead. To express *'in a manner of speaking,'* *'so to speak,'* or *'for all intents and purposes'* see the (to-be-)revamped HG1 and HG2 affixes. The non-intensive use of Ithkuil's INDIGNATIVE Bias is also eliminated; instead use SOLICITIVE Bias on a request that the addressee repeat themselves.

### 3.14 Slot XIV: Syllabic Stress — Context

The four Contexts are now shown by the four syllabic stress-patterns as follows:

<b>EXS</b>	EXISTENTIAL	penultimate stress
<b>FNC</b>	FUNCTIONAL	ultimate stress

Monosyllabic formatives are considered morphologically to have penultimate stress (i.e., EXS Context). If there are an insufficient number of syllables to show a non-

<b>RPV</b>	REPRESENTATIVE	antepenultimate stress	EXS Context, syllables may be added by forgoing use of the Short-Form formative structure, by not eliding the Slot XIII vocalic affix, or by filling in Slots X, XI, and XII with their default MNO-CTX-FAC/CCh values.
<b>AMG</b>	AMALGAMATIVE	pre-antepenultimate stress	

## 4.0 ADJUNCTS

There are several types of adjuncts: a modular adjunct corresponding to formative slots X, XI and XII, an affixual scoping adjunct by which to give detailed information about  $V_X C_S$  affixes, a case-stacking adjunct, a single-affix adjunct, a carrier adjunct, a register adjunct, and two personal-reference adjuncts.

**4.1 Modular Adjunct** (Primary purpose: to show Valence, Phase, Level, Effect, Aspects, Mood and Designation plus Version.

This adjunct has three modular slots for any combination of Phase, Level, Effect, Aspect, or Mood, including multiple Effects or multiple Aspects. It can be applied to the main stem or the incorporated stem and can optionally show Valence as well. The tell-tale sign of this adjunct is the absence of any full consonant forms; only **-w-**, **-y-**, **-ç-**, the glottal stop or a conjunct with initial **-h-** will be present.

If Slot 3 is filled, Slots 1 and 2 may be elided. The presence of Slot 4 requires Slot 3 be filled. If Slot 2 contains  $V_N$  or  $V_{M1}$  then Slot 3 may be elided, but not if Slot 2 contains  $V_{T1}$  (since words cannot end in a glottal stop, except parsing adjuncts). Examples: *o*, *hwe*, *e'wia*, *hlai'wi*, *yu*, *uwo'yó*, *çawe'wói*.

### Modular Adjunct

1	2	3	4	5
' or $C_M / C_C$	( $V_N / V_{T1} / V_{M1}$ )	( $V_P / V_L / V_E / V_{T2} / V_{M2}$ )	( $'V_P / 'V_L / 'V_E / 'V_{T2} / V_{M2}$ )	<b>Stress</b> [if word is multisyllabic]
Mood or Case-Scope from formative Slot XII	Valence or Aspect or Mood from formative Slot X	Phase or Level or Effect or Aspect or Mood from formative Slot XI	Phase or Level or Effect or Aspect or Mood from formative Slot XI (must be preceded by glottal stop)	penultimate stress = [Distinction as shown by formative] ultimate stress = NOMINAL Distinction

### Notes on Modular Adjuncts:

- Whether Slot 1 is  $C_M$  or  $C_C$  is determined by syllabic stress in Slot 5. When showing FAC Mood or CCh case-scope in Slot 1, use **ç-**, not **h-**.
- For FRAMED verbs, which must show both Mood and Case-Scope, this can be readily accomplished by showing Mood ( $V_{M1}$ ) in Slot 2, preceded by the  $C_C$  affix in Slot 1 (which must be interpreted as Case-Scope since Mood is shown in Slot 2), e.g., *hwoi* = CCw Case-Scope + SPC Mood.
- If using a modular adjunct to show Mood alone with no other categories, use the Slot 2  $V_{M1}$  form, rather than the Slot 3  $V_{M2}$  form (to avoid confusion with a Carrier adjunct below).
- NOMINAL Distinction (i.e., ultimate stress) is used only shown when the associated formative is in “short-form” structure but is not a verb. A monosyllabic adjunct is considered to morphologically carry penultimate, not ultimate stress.

## 4.2 Case-Stacking Adjunct

The case-stacking adjunct from previous versions has been eliminated. Instead, use the new case-stacking  $V_xC_s$  affix, **-rl**, whose  $V_x$  value, like case-assessor affixes, is the same as the Slot XIII  $V_c$  value of the particular case. This affix can in turn become an adjunct via the Single-Affixual Adjunct in Sec. 4.3 below.

### 4.3 Single-Affixual Adjunct

<b>1</b>	<b>2</b>
<b>(h)</b>	$V_xC_s$ <b>(a)</b>

This affix applies a single  $V_xC_s$  affix to a stem only, not including its  $C_A$  complex. If the affix applies to both stem and  $C_A$ , infix a glottal-stop to the  $V_x$  portion (per the rules in Sec. 1.6). If  $C_s$  cannot phonotactically occur in word-final position, add an epenthetic final **-a**. If the affix applies to an incorporated stem (i.e., positive Delineation), stress the final syllable if the word is di- or tri-syllabic, or add a stressed word-final **-á** if monosyllabic.

If there is no epenthetic final **-a** or final stressed **-á** on this adjunct, then the initial **h-** in Slot 1 may be elided. However, if there is a final **-a** or **-á**, then the initial **h-** is required to distinguish the word-form from a personal reference adjunct. Examples: *ač*, *iaks*, *he'etra*, *a'últ*, *owerl*, *hesma*

### 4.4 Affixual Scoping Adjunct (Primary purpose: detailed application of $V_xC_s$ affixes, including scoping over other morphological elements)

This adjunct provides slots for  $V_xC_s$  affixes for both a stem only and a stem plus its  $C_A$ , and, unlike formatives, allows each  $V_xC_s$  affix to individually indicate whether it applies to the main or incorporated stem. It also details the scope of the  $V_xC_s$  affix slots over the formative's other morphological slots. The adjunct's tell-tale sign is the initial **çç-** or **çw-**. Slots 1 and 2 are mandatory. Examples: *çças*, *çwosté*, *ççexta'waikrá*, *çwi'aplogvehôm*.

#### Affixual Scoping Adjunct

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>çç- / çw-</b>	$V_xC_s...$	( $V_s$	( <b>w / y / h / 'w / 'y / 'h</b>	$V_xC_s...(a)$ ) )	<b>Stress</b>
Slot 2 vs. Slot 5 switch		Scope of Slot 2	Scope of Slot 5		
<p><b>çç</b> = Slot 2 applies to stem only, not to <math>C_A</math> (like formative Slot VII); Slot 5 (if present) applies to stem and <math>C_A</math> (like formative Slot IX).</p> <p><b>çw</b> = reverse of above: Slot 2 applies to stem and <math>C_A</math> and Slot 5 (if present) applies to stem only and not to <math>C_A</math>.</p>	<p>add glottal stop to each <math>V_x</math> that applies to incorp. stem (see Sec. 1.6)</p>	<p><b>(a)</b> = Slot 2 has scope over equivalent Slot (i.e., VII or IX) affixes within the formative</p> <p><b>e</b> = Slot 2 is subordinate to equivalent Slot (i.e., VII or IX) affixes (as if it were at the beginning of the equivalent formative Slot)</p> <p><b>o</b> = Slot 2 has scope over the entire formative as a whole (used only with <b>çw-</b> in Slot 1)</p> <p><b>i/u</b> = Slot 2 has scope over the entire formative as a whole as well as other adjacent adjuncts (used only with <b>çw-</b> in Slot 1)</p>	<p><b>w/y</b> = Slot 5 has scope over equivalent Slot (i.e., VII or IX) affixes within the formative</p> <p><b>h</b> = Slot 5 is subordinate to equivalent Slot (i.e., VII or IX) affixes (as if it were at the beginning of the equivalent formative Slot)</p> <p><b>'w/'y</b> = Slot 5 has scope over the entire formative as a whole (used only with <b>çç-</b> in Slot 1)</p> <p><b>'h</b> = Slot 5 has scope over the entire formative as a whole as well as other adjacent adjuncts (used only with <b>çç-</b> in Slot 1)</p>	<p>add glottal stop to each <math>V_x</math> that applies to incorp. stem (see Sec. 1.6)</p>	<p>penultimate stress = [Distinction shown by formative]</p> <p>ultimate stress = NOMINAL Distinction [used only if associated formative is "short-form" and is not a verb]</p>

#### 4.5 Carrier Adjunct

This is a “shortcut” for a full carrier stem, providing Case information only. It is to be used when the identity/nature of the foreign word(s) or proper name following the adjunct are already known to the audience. The tell-tale sign of the adjunct is the initial **h-** with no subsequent consonant forms. The end of the proper noun or foreign phrase can be indicated by the adjunct form **ëh(u)**, if necessary.

<b>h</b>	<b>V<sub>c</sub></b>
	Same as Formative Slot XIII

**NOTE:** The Distinction for a Carrier Adjunct is NOMINAL and Case-scope is **CCh**. If the name or foreign term is a verb or has non-default Case-scope, use a full carrier-stem.

Examples: *ha, hei, hoa*

#### 4.6 Concatenative Adjunct

This adjunct is essentially a specialized form of the carrier adjunct above, in that it provides Case information as a “short cut” to Formal Stem Zero of a Carrier Root. Formal Stem Zero of the Carrier Root serves a special function to apply meta-level grammatical information to the entire subsequent phrase as a whole. This is similar to a case-frame, except that where case-frames function solely as an equivalent to subordinate clauses in Western languages, Formal Stem Zero of the Carrier Root causes the phrase to become a conventionalized, (quasi-)lexicalized gestalt. It thus serves as an equivalent to English phrasal gestalts (often hyphenated), as in the following examples:

***Hey, shit-for-brains!** Stop your **stumbling-around-in-the-dark** behavior and watch how the **know-how-to-get-things-done** guy gets it done!*

*“Let the kid try, he’s from the neighborhood.” “**O-oh! ‘He’s from the neighborhood!’**” [said sarcastically with a “big deal/so what?” tone of voice]*

*Is that the actor who starred in that **aliens-invade-but-die-after-discovering-chocolate** movie?*

<b>çç</b>	<b>V<sub>c</sub></b>
	Same as Formative Slot XIII

**NOTE:** The Distinction for a Concatenative Adjunct is NOMINAL and Case-scope is **CCh**. If the concatenated phrase is a verb or has non-default Case-scope, use a full carrier-stem in Formal Stem Zero instead. The end of the concatenated phrase may be signalled by the same adjunct form used with the carrier adjunct: **ëh(u)**. The tell-tale sign of this adjunct is the initial **çç-** with no other consonant form. Examples: *çça, ççei, ççoa*

#### 4.7 Register Adjunct



These adjuncts are marked by a word-initial vowel-form followed by **-h(a)**. A non-NARRATIVE register clause may be pronounced with low pitch on the last word of the clause, in which case the register clause does not require the end-register final adjunct listed below. If the word/phrase within the register is a proper name or foreign word/phrase, indicate this by ending the register clause using the CAR end-register adjunct *ëh*.

### Register Adjunct

Register		Initial Adjunct	Final Adjunct
<b>DSV</b>	<b>DISCURSIVE</b> (direct speech)	ah(a)	(ahu)
<b>PNT</b>	<b>PARENTHETICAL</b> (parenthetical aside)	eh(a)	(ehu)
<b>COG</b>	<b>COGITANT</b> (silent/subjective thoughts)	oh(a)	(ohu)
<b>EXM</b>	<b>EXEMPLIFICATIVE</b> ('for example, ...')	öh(a)	(öhu)
<b>SPF</b>	<b>SPECIFICATIVE</b> (proper name of preceding referent) *	ih(a)	(ihu)
<b>MTH</b>	<b>MATHEMATICAL</b> expression in the mathematical sub-language	uh(a)	(uhu)
<b>CAR</b>	<b>CARRIER-END</b> end of term/phrase governed by carrier stem/adjunct	—	(ëh(u))

\* If the identification of the preceding referent is not a proper name, use PNT register instead.

## 4.8 Personal Reference Adjuncts

There are thirteen personal reference categories. Each personal-referent affix distinguishes three Effects, NEUTRAL, BENEFICIAL and DETRIMENTAL, indicating whether the speaker considers the subjective context of the utterance to be beneficial, detrimental, or of neutral/unknown/unspecified impact to the referent.

		EFFECT			
		NEUTRAL	BENEFICIAL	DETRIMENTAL	
<b>1m</b>	monadic speaker	<b>l</b>	<b>r</b>	<b>ř</b>	“I”
<b>2m</b>	monadic addressee	<b>s</b>	<b>š</b>	<b>ž</b>	“you (sg.)”
<b>2p</b>	polyadic addressee	<b>n</b>	<b>t</b>	<b>d</b>	“you (pl.)”
<b>ma</b>	monadic animate 3 <sup>rd</sup> party	<b>m</b>	<b>p</b>	<b>b</b>	“he” / “she” / “they (sg.)”
<b>pa</b>	polyadic animate 3 <sup>rd</sup> party	<b>ň</b>	<b>k</b>	<b>g</b>	“they (pl.)”
<b>mi</b>	monadic inanimate 3 <sup>rd</sup> party	<b>z</b>	<b>ř</b>	<b>đ</b>	“it”
<b>pi</b>	polyadic inanimate 3 <sup>rd</sup> party	<b>l</b>	<b>f</b>	<b>v</b>	“they (inanimate)”
<b>Mx</b>	mixed animate/inanimate 3 <sup>rd</sup> party	<b>x</b>	<b>c</b>	<b>ž</b>	mixed animate+inanimate, e.g., “s/he+it”, “they+those”, “it+they”, “those+s/he”, etc.
<b>Obv</b>	Obviative/Resumptive	<b>th</b>	<b>ph</b>	<b>kh</b>	3 <sup>rd</sup> -party other than most recently referenced (used with SWR affix)
<b>IPa</b>	impersonal animate	<b>tç</b>	<b>pç</b>	<b>kç</b>	“one” “you” “people” “a person” (French “on”; German “man”)

<b>IPI</b>	impersonal inanimate	<b>nç</b>	<b>mç</b>	<b>ñç</b>	“something” “a thing” “things”
<b>Nai</b>	Nomic animate or inanimate	<b>lç</b>	<b>rç</b>	<b>řç</b>	NOMIC 3 <sup>rd</sup> -party, e.g., a referent as a generic concept; all examples of X through time
<b>Aai</b>	Abstract animate or inanimate	<b>rr</b>	<b>č</b>	<b>j</b>	ABSTRACT 3 <sup>rd</sup> -party, e.g., an idea, a concept, a situation

#### 4.8.1 Single-referent or Dual-referent personal reference adjunct

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
( 'V <sub>C2</sub>	(C <sub>2</sub> )	(ë) )	C <sub>1</sub>	V <sub>C1</sub>	<b>Stress</b>
Case of Personal Referent B, or in absence of Referent B, to add (i.e.,stack) a 2nd Case on to Referent A same affixes as formative Slot XIII	Personal Referent B	epenthetic vowel if necessary	Personal Referent A (if present)	Case of Personal Referent A. Same affixes as formative Slot XIII	<b>penultimate</b> = default <b>ultimate</b> (used only in the absence of Referent B) = Slot 5 instead represents V <sub>k</sub> , to give Referent A a verbal meaning

Examples: *to, aite, zua, ilkui, opëlse, ismá, eapné.*

The tell-tale sign of this adjunct is its (V-)C-V or V-C-ë-C-V structure which is unlike any other word-form (Formative Slot VI has no V<sub>R</sub> value -ë-). A single referent and its case marker may be placed in either the A Slots or the B slots (e.g., either *ut* or *tu* is valid for 2m-IND). Combinations are permissible in the C<sub>1</sub> slot of a single-referent adjunct, e.g., *olms* ‘I, (s)he, and you’-ERGATIVE. For dual-referent adjuncts, the C<sub>1</sub>+C<sub>2</sub> conjunct can consist of up to 3 individual referents per slot, where the epenthetic -ë- vowel is used to separate C<sub>1</sub> from C<sub>2</sub> conjunct if necessary.

For example, *olši* ‘1m/NEU/ERG-2m/BEN/ABS, or compare the word *ilsmëkñü* [1m/NEU+2m/NEU+ma/NEU]/ABS - [pa/BEN+mi/BEN]/DAT with the word *ilsëmknü* [1m/NEU+2m/NEU]/ABS - [ma/NEU+pa/BEN+mi/BEN]/DAT. Note that this adjunct allows a single-referent personal referent, if placed in the A slots, to show Illocution+Sanction information, thus creating a verbalized adjunct (whose meaning is the same as the verbal meaning of a personal-reference stem as shown in Sec. 4.8.3 below).

Note also that for personal referents other than the MONADIC speaker ‘I’, if represented by a single consonant, it is now possible to show two separate (i.e., different) instances of that referent in one category by placing one instance of the consonant in the Referent A slot, and another in the Referent B slot (creating a phonological geminate), e.g., *üppü* [ma/BEN/DAT] ‘to him/her and to (a different) him/her’, *äzzie* [mi/INS - mi/TRA] ‘with it and for (a different) it’.

#### 4.8.2 Combination Personal-Referent Adjunct with Case-Stacking

This adjunct is available when needed to add Designation, Specification, -V<sub>X</sub>C<sub>S</sub> suffix information or a second case (case-stacking) to one of the combination Personal Reference forms (e.g., for non-combination single-referent forms, one may use this adjunct or the new Personal-Reference root explained in Sec. 4.7.3).

The tell-tale signs of this adjunct are the Slot 4 consonant-forms appearing in what looks like the  $C_A$  slot of a Simple Formative (these four forms are not possible  $C_A$  forms). Examples: *sletma*, *etkesna*, *olsuokméx*, *ibneišnalmúi*.

1	2	3	4	5	6	7
( $'V_V$ )	$C_1 + C_2 (+ C_3)$	$V_C$	$tm / sn / km / šn$	( $V_X C_S \dots$ )	( $V_{C2}$ or $V_K$ or epenthetic $-a$ )	<b>Stress</b> *
Designation + Version + Distinction *	Combination Personal Referent	Case of Combination Personal Referent	Specification		2nd (stacked) case of Combination Personal Referent or an Illocution+Sanction affix to give a verbal meaning	<b>penultimate</b> = default; if Slot 6 is $-a$ , it represents epenthetic $-a$ . If Slot 6 is present but not $-a$ , it represents $V_{C2}$ or $V_K$ depending on the Distinction shown in Slot 1
from Formative Slot IV		from formative Slot XIII	$tm$ = BSC $sn$ = CTE $km$ = CSV $šn$ = OBJ	$V_X C_S$ suffix 1 (2, 3, ...)	same affixes as formative Slot XIII	<b>ultimate</b> = ( $-a$ ) in Slot 6 represents $V_{C2}$ or $V_K$ depending on the Distinction shown in Slot 1

\* Distinction in this adjunct does NOT apply to any associated formative; rather, it serves in conjunction with ultimate syllabic stress to indicate whether Slot 6 of the adjunct represents a stacked case,  $V_{C2}$  (if Distinction is default NOMINAL), or  $V_K$  (if Distinction is VERBAL), which gives a verbal meaning as described in Sec. 4.7.3. If Slot 6 is unfilled or epenthetic  $-a$  (i.e., stress is default penultimate), and Designation and Version are default IFL/PRC, then Slot 1 may be elided if the Slot 2 consonant-form is phonotactically permissible in word-initial position. Also: If  $-a$  in Slot 6 represents  $V_{C2}$  or  $V_K$ , this  $-a$  can be elided if phonotactically permissible, its presence shown solely by ultimate syllabic stress, e.g., the above example *olsuokméx*.

#### 4.8.3 The Two Personal Reference Roots: **-B-** and **-D-**

There are two personal-reference roots, for use when it is necessary to express the concept of a particular personal referent as a full formative. The first of these roots, **-B-**, refers to animate referents, while the second root, **-D-**, refers to inanimate or mixed (animate plus inanimate) referents. Note that the stems themselves refer to personal referent categories irrespective of number, therefore the meaning of each stem changes depending on its Perspective. Consequently, I have delineated the meaning of each stem for each of the four Perspectives in the tables below.

<b>-B-</b> ‘ANIMATE PERSONAL REFERENT’			
	STEM 1	STEM 2	STEM 3
<b>MONADIC</b>	1m — “I” = monadic speaker	2m — “you (sg.)” = monadic addressee	ma — “he/she/‘they(sg.)’ = monadic animate 3rd party
<b>POLYADIC</b>	1p — “we” = polyadic speaker (i.e., party speaking for oneself and others -- whether inclusive or exclusive of addressee)	2p — “you (pl.)” = polyadic addressee	pa — “they(pl.)” = polyadic animate 3rd party
<b>NOMIC</b>	“I” as a timeless manifestation, i.e., speaking of oneself in a hypothetical or timeless context	“you” as a timeless manifestation, i.e., speaking of the addressee in a hypothetical or timeless	IPa — “one” = impersonal animate (e.g., French <i>on</i> , German <i>man</i> )

		context [whether monadic or polyadic]	
<b>ABSTRACT</b>	“all that I am”, “all that makes me <i>me</i> ”, “everything about me”	“all that you are”, “all that makes you <i>you</i> ”, “everything about you” [whether monadic or polyadic]	“all that (s)he/they are”, “everything about him/her/them” [whether monadic or polyadic]

<b>-D-</b> ‘INANIMATE or MIXED ANIMATE + INANIMATE PERSONAL REFERENT’			
	<b>STEM 1</b>	<b>STEM 2</b>	<b>STEM 3</b>
<b>MONADIC</b>	mi — “it” = monadic inanimate 3rd party	mObv — Obviative/monadic, referring to a previously mentioned monadic party (use SWR affix to specify if necessary)	mMx — mixed monadic animate+ monadic inanimate, e.g., “I and it”, “you(sg.) and it”, “s/he and it”,
<b>POLYADIC</b>	pi — “them/those” = polyadic inanimate 3rd party	pObv — Obviative/polyadic, referring to a previously mentioned polyadic party (use SWR affix to specify if necessary)	pMx — mixed polyadic animate+inanimate, e.g., “we+it”, “I+those”, “you(sg.)+those”, “you(pl.)+it”, “they+those”, “it+they”, “those+s/he”, etc.
<b>NOMIC</b>	IPi — “something”, “a thing”, “things” = impersonal inanimate referent	Nai — “it” as a nomic referent, e.g., a referent as a generic concept; all examples of X throughout time	IPx — impersonal animate+inanimate “one+something”, “people and things”
<b>ABSTRACT</b>	“all that it/they are”, “everything about it/them” [inanimate, whether monadic or polyadic]	Aai — “it” as an abstract referent, e.g., an idea, a concept, a situation	“everything and everyone”, “all that is”, “everything about the world”

The Specifications of the two roots above are illustrated below for Stem 1 of **-B-**:

<b>-B- INFORMAL:</b> [generic personal referent]; <b>FORMAL:</b> ‘[the personal referent’s] identity’		
	<b>STEM 1 Nominal meaning</b>	<b>STEM 1 Verbal meaning</b>
<b>BASIC</b>	‘I (myself)’	‘to be me/to be myself’, ‘to do/act what/how I do [because it’s me]’
<b>CONTENTIAL</b>	‘I (myself)’ (as being my personality, mind, psyche, sentient thoughts, psychological sense of individuality, or “essence”; irrespective of my physical body)’	[same as above applied to CONTENTIAL meaning at left]
<b>CONSTITUTIVE</b>	‘I (myself)’ (as my physical body/embodiment/person, irrespective of personality, mind, psyche, sentient thoughts, psychological sense of individuality, or “essence”)	[same as above applied to CONSTITUTIVE meaning at left]
<b>OBJECTIVE</b>	‘entity with/on which I act or with which I associate (i.e., place, thing, person, etc. with/in/on which/whom I [inter-]acts)’; ‘something/someone from/in my life/niche/environment’	‘to be an entity in my life/niche/environment; to be something/someone that/who is in my life/niche/environment’

The INFORMAL designation of the above stems refers to the referent in a temporary, incidental, or “situation-at-hand” context. The FORMAL counterparts refer to the party in an iconic, archetypal, quasi-permanent context; for the above stem this would translate as ‘*my identity*’.

## 4.9 The Parsing Adjunct

See Section 2.1, paragraph No. 5 (on Page 7) for a description of this specialized adjunct.

### 4.10 Recommendation on the Pronunciation of Adjuncts

Certain short monosyllabic or two-syllable adjuncts are likely to be identical in form to the initial syllables of many formatives. Typically these would be words such as single-referent personal reference adjuncts, the carrier adjunct, and a short monosyllabic modular adjunct. While adherence to the parsing rules in Sec. 2.1 is theoretically sufficient to distinguish these short words from the initial syllables of a subsequent formative, the author nevertheless recommends that such adjuncts be pronounced either with falling-rising or rising-falling tone, to maximally distinguish them phonetically from the initial tone (likely to be mid-tone) of a following formative.

## 5.0 MISCELLANEOUS DESIGN NOTES

### 5.1 Rethinking the use of RECIPROCAL Valence

The translation of sentences where the two parties in the reciprocal relationship are named by one referent, will now require use of the SBS suffix on the referent to indicate that separate parties within the named referent are participating in the reciprocal relationship, otherwise, the party named will be assumed as a whole to constitute one “side” of the reciprocal activity. The following examples illustrate how this use of RCP valence and the SBS suffix will function:

Write-RCP they-IND.

TRANSLATION: ‘*They write* (to an unnamed party and that other party presumably writes back).’

Write-RCP they-IND-SBS/1.

TRANSLATION: ‘*They write to each other.*’ [i.e. , one member of the ‘they’-referent writes to another member of the ‘they’-referent and vice-versa]

If it is necessary to specify a specific case-relationship for one or both parties in the reciprocal relationship, it will be necessary to name the parties separately so that appropriate cases can be assigned. For example:

write-RCP (S)he-IND you(sg.)-TSP

TRANSLATION: *You (two) write on behalf of each other.* (LITERALLY: *(S)he writes on behalf of you and vice-versa.*)

talk-RCP man-IND child-DAT clown-REF

TRANSLATION: *The man and the child talk to each other about the clown.* OR *The man and the child discuss the clown.*

talk-RCP they-IND clown-REF

TRANSLATION: *They talk about the clown (with somebody else).* OR *They discuss the clown( with somebody).*

talk-RCP they-IND-SBS/1 clown-REF

TRANSLATION: *They talk to each other about the clown.* OR *They discuss the clown.*

If necessary to specify that the reciprocity is of a “back (and forth)” nature, where first one party initiates an action which is subsequently paralleled back to the first party, one should utilize ITC aspect. Furthermore, one can use the ITN affix and/or Phase to provide additional detail if necessary. Additionally, the SWR affix can be utilized to specify that a referenced formative is the same as one of the reciprocal parties, e.g.,

talk-RCP man-IND child-DAT man-REF-SWR/5

TRANSLATION: *The man and the child talk to each other about the man* [i.e., the man being talked about is the same man who is talking with the child].

## 5.2 “Tense”-Like Connotations of Various Aspect/Extension Combinations

The following Aspect + Extension or Aspect 1 + Aspect 2 combinations are now formalized to indicate “tense”-like information on a verb:

RTR Aspect + DEL Extension = ‘has been / has done’

RTR Aspect + PRX Extension = ‘has been (doing) [and may still be (doing)]’

RTR Aspect + ICP Extension = ‘began to be’ / ‘began doing’

RTR Aspect + ATV Extension = ‘finished being / finished doing’

RTR Aspect + GRA Extension = ‘gradually developed into being/doing’

RTR Aspect + DPL Extension = ‘gradually stopped being/doing & is/does no longer

RTR Aspect + PCS Aspect = ‘just now finished being/doing’

RTR + HAB Aspects + DEL Extension = ‘used to be/do but no longer’

RTR + HAB Aspects + PRX Extension = ‘used to be/do and may still be (doing)’

PRS Aspect + DEL Extension = simple future tense

PRS Aspect + PRX Extension = ‘will be/do & may already be (doing)’

PRS Aspect + ICP Extension = ‘will begin to be’ / ‘will start doing’

PRS Aspect + ATV Extension = ‘will finish being/doing’

PRS Aspect + GRA Extension = ‘will develop into being/doing’

PRS Aspect + DPL Extension = ‘will gradually stop being/doing’

PRS Aspect + PCS Aspect = ‘just about to be/do’

PRS + RTR Aspects = ‘will have’ (e.g., *By then he will have done it.*)

PRS + HAB Aspects + DEL Extension = ‘will now be (doing) but not yet’

There is also a new suffix for specifying when an event occurs relative to another event or relative to the contextual “present” of an utterance. This new affix may be used on its own or in conjunction with the existing TPP affix to provide specific tense-like information.

-It	RTI — Relative Timeline Indicator
1	<p>X is/occurs after the relative/contextual present of a statement (as may be defined by TPP affix) but is considered completed or no longer applicable after-the-fact from the speaker’s present viewpoint, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>Flowering plants <b>had not yet developed</b> / <b>were yet to develop</b> during the Cambrian geological period</i> (but they have developed since).</li> <li>• <i>The enemy’s code <b>will still be unbroken</b> / <b>will have yet to be broken</b> by the time they attack us</i> (but it will be eventually broken)</li> <li>• <i>The boy <b>later realized</b> / <b>had not yet realized</b> the clown was lying about the Clown Planet</i> (but he realizes it now). (TPP/3)</li> </ul> <p>(Note how English translations of this affix may require use of a negative not present in the original.)</p>
2	<p>X is/occurs after the relative/contextual present of a statement (as may be defined by TPP affix) and its occurrence is still outstanding/impacting the speaker’s present viewpoint, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>Hurry! The bus <b>is yet to depart</b> / <b>has not yet departed</b>.</i> (lack of TPP affix implies present context)</li> <li>• <i>By leaving your seat just now to get a soda, you’ve <b>missed (seeing)</b> / <b>have not seen</b> the magician do his disappearing act.</i> (TPP/4)</li> <li>• <i>The boy <b>hasn’t (yet) realized</b> the clown was lying about the Clown Planet.</i> (TPP/3)</li> </ul> <p>(Note how English translations of this affix may require use of a negative not present in the original.)</p>
3	<p>X continues to occur or have an effect in the relative/contextual present or has begun during or prior to the relative/contextual present and will continue into the future of that same relative/contextual present, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>She <b>was (still) sleeping</b> when I left the apartment.</i> (TPP/3 or TPP/4)</li> <li>• <i>She’ll <b>(still) be sleeping</b> when I arrive.</i> (TPP/6 or TPP/7)</li> <li>• <i>Civilizations rise and fall but the Euphrates River <b>keeps rolling along</b>.</i> (NOMIC or TPP/5)</li> <li>• <i>I’ve <b>been watching</b> TV all day.</i> (lack of TPP affix implies present context)</li> <li>• <i>We’ll <b>be watching</b> the apartment all night.</i> (TPP/7)</li> </ul>
4	<p>X continues to occur or have an effect in the relative/contextual present or has begun during or prior to the relative/contextual present and will continue into the future of that same relative/contextual present, but does not continue into, or have a retrograde effect/impact on the speaker’s contextual present, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>She <b>was (still) sleeping</b> when I left the apartment.</i> (TPP/3 or TPP/4) (but she’s no longer sleeping now)</li> <li>• <i>She’ll <b>(still) be sleeping</b> when I arrive.</i> (TPP/6 or TPP/7) (but she’s not sleeping yet)</li> <li>• <i>I’ve <b>been watching</b> TV all day.</i> (lack of TPP affix implies present context) (but I’m not doing so now)</li> <li>• <i>We’ll <b>be watching</b> the apartment all night.</i> (TPP/7) (but we’re not doing so yet)</li> </ul>
5	<p>X has been/done so in the past and will again in the future, but not being/doing so at present, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>the <b>once-and-future</b> king</i></li> <li>• <i>I <b>did it before</b> and I <b>will do it again</b>.</i></li> </ul>
6	<p>X begins to be/occur before the relative/contextual present of a statement (as may be defined by TPP affix) and continues to be/occur during that same relative/contextual present but does not impact the speaker’s contextual present, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>The band <b>had started playing</b> / The band <b>was now playing</b> (then, but no longer).</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <b>The war will have begun.</b> (TPP/6 or TPP/7) (then, but not now).</li> <li>• <i>Doby the (one-and-only) sentient dinosaur (due to a freak mutation), <b>had watched</b> the giant meteor approach his home, whose name 65 million years later would be Chicxulub, with a sense of dread.</i> (TPP/1)</li> </ul>
7	<p>X begins to be/occur before the relative/contextual present of a statement (as may be defined by TPP affix) and continues to be/occur during that same relative/contextual present, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>The band <b>has started playing</b> / The band <b>is now playing</b>.</i></li> <li>• <b>The war will have begun.</b> (TPP/6 or TPP/7)</li> <li>• <i>Dody the (one-and-only) sentient dinosaur (due to a freak mutation), <b>watched</b> the giant meteor approach her home, whose name 65 million years later would be Chicxulub, with a sense of dread.</i> (TPP/1)</li> </ul>
8	<p>X is/occurs before the relative/contextual present of a statement (as may be defined by TPP affix) and the consequences of its occurrence are still outstanding/impacting the speaker's present viewpoint, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>The bus <b>had (already) departed</b> when/by the time I arrived.</i> (TPP/3)</li> <li>• <i>The bus <b>will have (already) departed</b> by the time I arrive.</i> (TPP/7)</li> </ul>
9	<p>X is/occurs before the relative/contextual present of a statement (as may be defined by TPP affix) but is considered completed or no longer applicable after-the-fact from the speaker's present viewpoint, e.g.,</p> <ul style="list-style-type: none"> <li>• <i>The river <b>had (already) dried up</b> when/by the time the settlers arrived.</i> (TPP/2 or TPP/3)</li> <li>• <i>The Sun <b>will have (already) gone nova</b> when/by the time we develop interstellar ships.</i> (TPP/8)</li> </ul>