

Austronesian expressives and the lexicon^{*}

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The study of the form-function matching of 'expressive' items in five Austronesian languages shows us that the native lexicon (i) is patterned by reference to (violations of) output constraints; (ii) consists of a 'core' and a 'peripheral' part which do not make up separate subgrammars; and (iii) can select grammatically marked morphemes as optimal.

It is a classic observation that the native lexicon consists of core and peripheral items (cf. Trubetzkoy 1969 [1939]: 254, Uhlenbeck 1949, Fudge 1970). Core lexical items are referential elements whose primary function is to refer to entities, events, and concepts. They minimally include body part, kinship and color terms, and are grammatically unmarked forms. Peripheral items, on the other hand, may be grammatically marked, or even 'ungrammatical'. They include morphemes for sense impressions such as onomatopoeics, ideophones and phonestemes, but also names, and words with negative connotations. These items, which have an added evaluative, subjective meaning, are referred to as 'expressives' in this paper.¹ Illustrations are the following English pairs, where the first item is a common referential element, and the second an expressive: *the lunchroom – the Sizzle, breast – boob, walk – stagger*.

The hypothesis of this paper is that expressive lexical items match a marked semantics with a marked form in a significant way. In order to test this thesis, the notion of markedness must be translated into sets of structural and semantic diagnostics. This is done in section 1. I then use these in section 2-6 to analyse the structural and semantic aspects of the lexical items of five Austronesian languages. Expressives in Kambera, as the language with which I am most familiar, are discussed in detail in section 2. More cursory evidence is presented from Javanese in section 3, Kedah Malay (West Malaysia) in section 4, Tetun (Timor) in section 5, and Ilocano (Philippines) in section 6.² The general implications of the findings are discussed in section 7.

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¹ Traditionally, expressive elements are seen as sound symbolic forms, on a par with, for example, onomatopoeia and phonestemes. Below we will see that the class is much larger, and includes forms that are not sound-symbolic.

² Other Austronesian languages for which similar evidence is available are Balinese, discussed extensively in Clynes 1995, 1998; and West Tarangan (Southeast Maluku), discussed in Klamer (1999b).

1. Formal and semantic markedness

In general, expressives are structurally more marked than normal lexical items. Ideophones are an illustration of this: they often use marked segments and/or violate phonotactic constraints of a language, display very little or exceptional morphology and show a relative absence of syntax (Mithun 1982, Childs 1994, among others). Standard definitions of markedness consider segments and lexical items as marked if they are infrequent, occur in a restricted set of contexts, and are structurally complex. Obviously, structural complexity and frequency are correlated: a frequent item that occurs in a variety of contexts is usually structurally unmarked, a infrequent item with a restricted number of contexts is marked.

In a constraint-based model of language such as Optimality Theory, linguistic structure is defined as a set of constraints. In such a model, we define the structural markedness of lexical items in terms of the number and type of constraints they violate. The violated constraints may be phonological, morphological, or syntactic.³ Expressives are formally less constrained than core lexical items, i.e. they violate constraints that are obeyed by core lexical items.

A constraint that is systematically violated by expressive items is the constraint on Semantic Transparency (Klamer 1999a, 1999b), a constraint that refers to the universal tendency that linguistic items prefer a direct, one-to-one matching of form and meaning:

1. Semantic Transparency: Match form and meaning one-to-one

meaning	A
form	X

The following lexical phenomena illustrate how this constraint can be violated, as represented by diagrams (we will see examples of this type of constraint violation in Kambera and Ilocano expressives, which employ a circumfix or empty affix):

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| * | A | | | | | | | | | | | | | | | | | | | | | | | | |
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³ For reasons of space, the discussion in the paper will be limited to phonological and morphological constraint violations, but in principle all types of constraints could be relevant as markedness values for the lexical items in a particular language.

Other types of constraints violated by expressives are constraints on phonological markedness and traditional ‘morpheme structure conditions’. The latter type can be reformulated as constraints on the alignment of morphological and prosodic categories (cf. Booij 1999). Below we will see examples of how expressives violate these types of constraints.

The meaning or semantics of expressive items is usually marked in the sense that it is less general and less prototypical⁴ than the meaning of unmarked items, and more determinate and differentiated (cf. Battistella 1990). For instance, ideophones are often quite specific, evoking concrete imagery. An illustration are the two Kisi (Niger-Congo) rice-beating ideophones: *gbun gbun* ‘rice beaten by one person’ and *pim pim* ‘rice beaten by two or more people’ (Childs 1994: 188). As a result of their semantic specificity, expressive items have less ability to combine with other features, so the range of contexts in which they appear is smaller than for unmarked items. Unmarked items, on the other hand, are capable of having a general interpretation. They can substitute the marked items in some contexts, while the reverse is not true.

In line with the proposals in Clynes (1995, 1998) and the crosslinguistic evidence discussed there I have translated the notion of semantic markedness into the following three specific semantic types:

3. **Sense:** lexicalisations of vivid sense impressions: sound, touch, taste, smell, feeling, emotion and sight (including lexicalisations of movements of the body and of body parts). E.g. Kambera *tòku* ‘knock, bang’ (sound), *holap* ‘be weak, limp, flabby’
Name:⁵ personal or place names, hypocoristic names, terms of endearment; names for plants and animals E.g. Kambera *pirih* ‘k.o. parrot’, *helap* ‘kind of fish’
Bad:⁶ lexical items with negative connotations or referring to undesirable (mental, bodily, atmospheric) states and referents. E.g. Kambera *nyimba* ‘be blocking the way’

In what follows we consider whether, and how, the Sense, Name and Bad type marked semantics is matched with a systematic violation of one or more structural constraints of a language, and what this tells us about the structure of the lexicon and its interaction with other modules of grammar.

2.0 Kambera

2.1 Kambera phonotactics

⁴ That is, properties are more conceptually complex, and hence more marked, the less closely they reflect attributes of prototypical or experientially more basic categories (Battistella 1990: 27, 41-44).

⁵ Names often reflect audible or visible characteristics of the named person or animal (e.g. body shape, call, movement), plant names often reflect typical shapes of (parts of) the plant. In Mundang (Niger-Congo), animal and plant names are part of the expressive vocabulary (Elders 1999). In Estonian, bird names are expressive, and in Finnish too, to some extent (Antilla 1976). In Greek, nicknames pattern with the expressives (Joseph 1997).

⁶ In many languages, words with bad or negative connotations formally pattern with the expressive items, for example in Japanese (Kita 1997:98, Hamano 1998), Balinese (Clynes 1995, 1998), Greek (Joseph 1997), Malay, West Tarangan and Dutch (Klamer 1999b).

Before discussing the forms that deviate from Kambera phonotactics, we look at the unmarked patterns first. The unmarked root form in Kambera is a (trochaic, disyllabic) foot. This form covers approximately 50 % of the roots:

4. Root = Foot = $\sigma\sigma$

Not all CVCV roots are equally unmarked, however – their markedness may vary according to their segmental make-up, as we will see below.

The Kambera segments can be distinguished into marked and unmarked ones. The vowels /i, a, u, e, o/ are unmarked; they occur in all types of roots. The vowels [E, □] (represented as è, ò) and the super-short high vowel [ù] only occur in ideophonic roots, and are thus marked. The short low vowel [A] (represented as à) is considered marked too, though it has a wider distribution: it also occurs in normal roots (cf. below). We describe the general dispreference for the marked vowels in Kambera as a constraint against such vowels:

5. * /ù, è, ò, à/ “Don’t be /ù, è, ò, à/”

The Kambera consonants are represented in Table 1 below. The prenasalised and implosive stops are structurally more complex than the simple stops, and thus structurally more marked:

Table 1. Kambera consonant segments

	lab	alv	vel	glot
voiceless stops	p	t	k	
voiced implosive stops	≡ (b)	└ (d)		
voiced affricate		dZ (j)		
nasals	m	n	N (ng)	
prenasalised stops	mb	nd	Ng (ngg)	
prenasalised affricate		ndZ (nj)		
fricative				h
liquids		l, r		
approximants	w	j (y)		
prenasalised approximants		nj (ny)		

In addition to structural complexity, the relative frequency of the consonants in common CVCV(C) roots was used to establish which of the consonants are the marked ones. Root-initially, the prenasalised affricate /nj/ and prenasalised glide /ny/ are the least frequent (330 forms or 9.1% of 3617), whereas the glides and /w, y/ and the prenasalised /ny/ are the least frequent second consonants (9 forms or 1,2 % of 756). We can state the dispreference for /nj, ny/ as root-initial consonants as a negative alignment constraint, where the left edge of a root is prohibited to align with a /nj/ or /ny/:

6. “Align (*/nj, ny/, L, M, L)”

As root-initial consonant the /t, p, r/ are the most frequent (917 or 25.35 % of 3617 considered forms had /t,p,r/ as initial consonant), and as consonant of the second syllable: /t, k, h/ (243 or 32.14 % of a total of 756 considered forms). (More detailed figures can be obtained from the author).

This information was used to compile a two data sets for a statistical comparison of the semantics of structurally marked and unmarked CVCV roots. The set is given in the Appendix and the statistical test discussed in section 2.3.

The fact that the canonical Kambera root is CVCV, and closed syllables are dispreferred, can be formulated as the following alignment constraint:

7. Align (V, R, M, R) “Align right edge of a root morpheme with a vowel”

This constraint penalizes closed syllables in output forms, and epenthetic (‘paragogic’) vowels [u] ‘repair’ the Kambera lexical roots that end in a closed syllable. In this way, an original coda becomes the onset of an additional (third) syllable in the output form:

8. /pu.duk/ --> [pu.du.ku] ‘kiss’

In the following subsections (2.2–2.5) we will see how the four constraints discussed in this section are systematically violated by the expressive elements of Kambera.

2.2. The markedness of ideophonic roots

Kambera ideophones refer to sounds, motions and sights. They can thus be classified as belonging to the semantic type Sense, described in section 1.

Illustrations:

9. Kambera ideophonic roots

<i>ngùru</i>	‘sound of murmur’	<i>ndòri</i>	‘silent’ (show no reaction)
<i>mbùtu</i>	‘thudding sound’	<i>pàdi</i>	‘quiet, silent’ (without sound)
<i>hèri</i>	‘tearing noise’	<i>reu</i>	‘sound of talking’
<i>tòru</i>	‘rattling sound’	<i>yidi</i>	‘shivering motion’ (in dislike)
<i>nggòru</i>	‘crack’ (of thunder)	<i>wàdi</i>	‘blink’
<i>tòku</i>	‘knock’, ‘bang’	<i>ngàdu</i>	‘nod’ (motion)
<i>ndùru</i>	‘roll’ (of thunder)	<i>linji</i>	‘jumping motion’
<i>pàka</i>	‘smack’	<i>nggidi</i>	‘shivering motion’ (of cold)
<i>mbàti/mbàli</i>	‘dripping sound/motion’	<i>tila</i>	‘convulsion’
<i>mbùku</i>	‘snap’, ‘tap’	<i>ndiku</i>	‘jerk’ (to get loose)
<i>mbèri</i>	‘rasping, grating sound’	<i>tàta</i>	‘vibrate, shake’
<i>bèsu</i>	‘click’ (w. cheek)	<i>jila</i>	‘gleam, flash’
<i>dòtu</i>	‘click’ (in back of mouth)	<i>rèri</i>	‘emit light, sparkle’ (fire, ring)

Syntactically, the ideophonic roots are exceptional because they can only surface in the position of a quote in a special quotative construction (cf. Klammer 1999a). Phonologically, they are exceptional because they contain the marked vowels [E, □, A] and the short high vowel [ù]. These vowels do not occur elsewhere in the language, except for /A/, which is used in a number of non-ideophonic roots as well, for instance:

10. *tàka* ‘arrive’, *nyàmba* ‘to worship’ (Onvlee 1984), *pàpu* ‘pluck X’, *màka* ‘be able to’ *dàngu* ‘with, and’, *pàdang* ‘experience X’ *nyàra* ‘look for X’ (Klamer 1998:14)

Hence, the generalisation is *not* that marked vowels always occur in ideophones, but rather that ideophones contain marked vowels. We will return to this observation in section 7.

Morphologically, the ideophonic roots are special because they are the only root forms that, in order to be used as verbs, must be derived by circumfixation or reduplication (rather than prefixation, suffixation, or zero, as ‘normal’ roots). The circumfix for ideophonic roots is *ka*—*k*:

11. *mbùtu* ‘thud’ (sound) ***ka.mbùtu.k*** ‘(fall) with a thud’
jila ‘flash’ (sight) ***ka.jila.k*** ‘gleam; flash (as lightning)’
12. *Hili odah -ya* *na hapapa* ***ka.mbùtu.k***—*danya* *da marara*
again stroke-3s the side (fall) thudding -3p the gold
‘Again (he) stroke the (horse’s) side, thudding the gold fell out’
13. *Na- ka.jila.k* *na uma*
3s- gleam the house
‘The house shines’ (e.g. because of new paint)

Circumfixes like *ka-k* violate the constraint on Semantic Transparency, because two forms represent one meaning. In addition, words derived with a circumfix violate the Kambera constraint against root-final coda’s. In sum, Kambera ideophones show a correlation between semantic and structural markedness: the forms match their semantic specialness with a systematic violation of three important structural constraints of the language.

On the basis of this evidence we may be tempted to conclude that the lexical periphery, of which the ideophones are a part, is a demarcated subpart of the Kambera native lexicon, i.e. that the lexicon contains an ‘expressive’ subgrammar. However, in the following sections we will see that it is not possible to define such a subgrammar. The class of Kambera expressives is larger than the ideophones only, and also contains items whose structure only differs only gradually from the rest of the lexicon.

2.3. Marked CVCV lexical items

In the previous section we saw how semantically marked Kambera ideophones are also structurally marked. In this section we address the reverse question: are phonologically marked lexical items in Kambera also semantically marked?

A set of phonologically marked items are the CVCV roots with initial consonants /nj/ and /ny/. The distribution of the semantically expressive elements in the test sets is: C1=/nj/: N=45, 28 Expressive, 17 Unclassified; C1=/ny/: N=24, 16 Expressive, 8 Unclassified. The control set gives us information about the amount of roots that are phonologically *un*marked, but semantically expressive. The distribution of the semantically expressive elements in the control set is: N=40, 12 Expressive, 28 Unclassified. The

frequency of the expressives and unclassifieds in the test set is compared to their frequency in the control set, resulting in the figures in Table 2 and 3.

Table 2. Marked structure C1=/nj/

	Unmarked	C1=/nj/	Totals
Expressive	12	28	40
Unclassified	28	17	45
Totals	40	45	85

Table 3. Marked structure C1=/ny/

	Unmarked	C1=/ny/	Totals
Expressive	11	16	27
Unclassified	29	8	37
Totals	40	24	64

Chi-square tests indicate that there is a very low possibility (1 out of 100) that the expressive/ unclassified distribution in the test sets is produced by random-effects. We therefore conclude that the use of marked initial consonants /nj/ and /ny/ shows a statistically significant correlation with the marked semantics of the words they are part of.

Note, however, that the correlation is not absolute. For example, the items in the Kambera pronominal paradigm all start with a /ny/, but of course, they are not semantically expressive: *nyungga* ‘I’, *nyumu* ‘you (sg.)’, *nyuna* ‘he’, *nyuma* ‘we (excl.)’, *nyuta* ‘we (incl.)’, *nyimi* ‘you (pl.)’, *nyuda* ‘they’.⁷ The structural markedness of /ny, nj/-initial roots is thus not exclusively linked to semantic expressiveness, and the marked CVCV roots show a gradual rather than a categorical lexical pattern.

2.4. Kambera CVCVC roots

The majority of Kambera roots is CVCV, but there is also a large number (approximately 30%) of CVCVC roots. Though not marked in terms of frequency, these roots are structurally marked: they have a third consonant as a coda, and data from prosody, reduplication and language games suggests that this additional consonant is not fully integrated into the root template, i.e. that they are prosodically complex (Van der Hulst & Klamer 1997, Klamer 1998, ch. 2). Illustrations:

14. Some Kambera CVCVC roots

tehik ‘sea’, *uhuk* ‘sit’, *nggidik* ‘tremble’, *kaik* ‘whine’ *padang* ‘field’, *muhung* ‘be rotten, gone bad’, *unung* ‘drink X’, *watar* ‘corn’, *tangar* ‘watch X’, *winggir* ‘turn around (intr.)’ *ka-lipar* ‘be lame’, *engal* ‘k.o. tuberous plant’; *ka-bunggul* ‘short’, *banjal* ‘leave X, put away X, store X’, *mungal* ‘fall out, slip out, slip off’, *helap* ‘k.o. sea fish’; *holap* ‘weak, limp, flabby’; *jakap* ‘walking of a tall, imposing man’; *langgap* ‘crowl’ *bàbat* ‘bamboo slat (part of loom), turn (off); *ma-ngadat* ‘be afraid’

⁷ Crosslinguistically, we find that pronominal paradigms often have a marked phonological form, but this is for different – usually, historical – reasons than expressives. The same is true for loans.

akat ‘have bad character’ *hoput* ‘be very angry, put out’, *pirih* ‘kind of parrot *Trichoglossus heamatodus*; *duruh* ‘continue X’, *punduh* ‘skip, jump’, *pàlih* ‘lick mouth/lips’

We express the structural markedness of CVCVC roots in term of a violation of the alignment constraint in (7) ‘Align the right edge of a root morpheme with a vowel’. The question is now whether such marked forms have a marked semantics. A sample of 145 CVCVC roots with /p/ as initial consonant was considered, of which 71 % turned out to be expressives, leaving 29% unclassified:

Table 4. The final consonant of CVCVC roots, CI=/p/ (based on Onvlee 1984)

C3	k	N	l	r	h	t	p	Totals
Expressive	46	7	14	14	11	11	0	103
Unclassified	8	18	2	7	2	5	0	42

In general, then, the presence of a coda in a Kambera root correlates with semantic expressiveness.⁸ This finding is supported by facts from related (Central Malayo-Polynesian) languages of Roti and Timor: Sound imitations in Roti and motion verbs in Roti and Timor end in /k/ (Jonker 1906:333). In Dengka and Oenale (Roti), final liquid consonants mark words (nouns/verbs) describing motions (Jonker 1906:341-342)⁹, and Middelkoop (1950) gives as one of the two functions of the final consonant /m/ in languages of Timor that it is a marker of plant/tree names:

15. Oenale: *kaur* ‘nod’, *kakaler* ‘shake one’s head’
 Dengka: *nggonggal*, Oenale *nggonggonggar* ‘shake something’
 Dengka: *kapel*, Oenale *kaper* ‘beckon’
 Dengka: *lenggal* ‘open itself’, *lofal* ‘come loose, snap’
 Timor: *ekam* ‘pineapple’ *nisum* ‘fruit-bearing *gebanga* tree’
nanum ‘kind of *ficus*’ (Middelkoop 1950:393-394)

Finally, note again that the correlation between formal and semantic markedness is not absolute: final consonants are not exclusively expressive elements, they may have other functions as well – both in Kambera and in the languages of Timor and Roti.

2.5. Formally derived forms with the morphologically empty prefix *la-*

Kambera has a limited number of formally derived words with the prefix *la-*. They are illustrated in 16). None of them (except *la.lei*¹⁰) has a root form that is still

⁸ The two consonants with the highest frequency in Table 4 are /k, N/. This is because these consonants have derivational functions as well: the final /k/ is part of the circumfix *ka-k* used to create ideophonic verbs, and the nasal morpheme /N/ is a productive applicative and verbalising suffix, among other things (Klamer 1998, section 6.2). This also explains why /k/ occurs mainly in expressive items, an /N/ in mainly non-expressive items.

⁹ Jonker analyses the final consonant as a fossilised ‘emphatic marker or adverb’ *la*, which at that time was still in use in the related language Termanu (Jonker 1906:342).

¹⁰ Only the derivation *la.lei* ‘be married (to a woman)’ has an independently used root form *lei*, which, however, means ‘husband (coarse)’ (not ‘wife’) (*mbapa* is the common term for ‘husband’).

used independently, and the argument to analyse them as complex forms is therefore purely formal.¹¹

16. Kambera words with the ‘empty’ prefix *la*—

<i>la-lei</i>	‘be a husband’	<i>la-mbungur</i>	‘flower spec.’ <i>Datura factuosa</i>
<i>la-ngora</i>	‘wipe off’	<i>la-mboya</i>	‘name of medicinal plant’
<i>la-wihir</i>	‘turn one’s back, give way to X’	<i>la-wungu</i>	‘tree sp. with hard wood’
<i>la-mihi</i>	‘clean away X’	<i>la-wina</i>	‘bean sp.’ <i>Cajanus Cajan</i>
<i>la-manga</i>	‘be weak’	<i>la-nggapa</i>	1. ‘tree with thin bark’ 2. ‘very thin’
<i>la-mbiri</i>	‘look sleepy’	<i>la-ngira</i>	‘tree sp. used for canoes’
<i>la-muji</i>	‘suck’	<i>la-ngaha</i>	‘tree sp.’ <i>Barringtonia asiatica</i>
<i>la-nggori</i>	‘burp’	<i>la-yia</i>	1. ‘ginger plant’ 2. ‘brother in law’
<i>la-ngidip</i>	‘hickup, ‘gasp’	<i>la-hona</i>	‘red onion’
<i>la-ngudu</i>	‘be in a heap’	<i>la-bawa</i>	‘white onion’
<i>la-nggeha</i>	‘be thin’	<i>la-mbàku</i>	‘civet cat’
<i>la-wújur</i>	‘with bended back’	<i>la-wora</i>	‘iguana’
<i>la-nggudu</i>	‘tie w. feet together’	<i>la-nggudu</i>	‘tuberous plant sp.’ <i>Toca palmata</i>
<i>la-mbonga</i>	‘deep large hole’	<i>la-ngàdi</i>	‘type of coral’
<i>la-mbaru</i>	‘centipede’	<i>la-ngiha</i>	‘gums’
<i>la-pàpu</i>	‘ulcer in armpit/groin’		

The majority of the *la*-derivations belong to a restricted set of semantic categories. The nouns are mostly plant or animal names, the verbal forms mostly denote a position or state of the body, and movements/sounds that are related to the mouth. The prefix *la* itself has no independent meaning. We can express the marked status of this ‘empty’ prefix as a violation of the Semantic Transparency constraint: the empty prefix is a form with no meaning.

Summing up, there is a significant relation between semantic and structural markedness in Kambera, not only in ideophones, but also in ordinary CVCV roots which happen to begin with a marked initial consonant, in roots with a final lexical consonant, and in words with an empty prefix.

3. Javanese

In his study of Javanese morpheme structure, Uhlenbeck (1949, 1978) observed that functionally ‘peripheral elements’ such as loan words, dialectal morphemes, expressive morphemes, abbreviations of personal names, onomatopoeia, adhortatives, archaic elements, names of plants and animals, deictic morphemes and ‘Krama’ [=high register] morphemes have ‘peculiar’ structures (Uhlenbeck 1978:32).

Unmarked Javanese root morphemes are bivocalic, or disyllabic feet. Morphemes with one vowel (CVC, CV, CCVC) are ‘expressive-affective’ and ‘plastic-dynamic’ (Uhlenbeck 1978: 33 [1949:83-88]), e.g. *brug* ‘sound of stamping, falling of heavy object’ (Uhlenbeck 1949:85). Root morphemes with three syllables are loanwords or ‘morphemes with an expressive-affective character’ or ‘names of plants and animals’ (Uhlenbeck 1949:190-202, 1978:34)

¹¹ Phonotactically, they are identical to morphologically complex words rather than root forms: they consist of a root (foot) plus an unstressed prefix syllable /Ca/ (Klamer 1998, sections 2.2, 2.3).

¹². Illustrations: *nl* ↔ *mburah* ‘scattered haphazardly’, *mbiyayah* ‘muddled/mixed up/messy’ *d* ↔ *rkuku* ‘kind of wild pigeon’, *kuwawu* ‘coconut beetle’ (Uhlenbeck 1949: 194, 199). Expressives thus violate a constraint that roots must be disyllabic feet, see (18).

Expressives also violate a constraint on vowel quality. Normally, vowels have two allophones: an ATR/tense vowel (*á, ó*) in open syllables and an RTR/lax vowel (*à, ò*) in closed syllables, as in (17a). In expressive items, this pattern is reversed (Uhlenbeck 1949:31, 69, 80; 1978:34, 136), as in (17b).

17. a. *lárá* ‘sick, ill’ vs. *bàrà̀n* ‘thing’
 lóró ‘two’ vs. *bòrò̀n* ‘stupid’ (Uhlenbeck 1949:40)
 b. *s[í]n* ‘sound one makes to call a cat’
 w[ú]t ‘expression of fright etc.’ (Uhlenbeck 1949:69)

Finally, expressives may have a special phonetic quality: roots with a dental /t/ onset are often expressive (Uhlenbeck 1978:34): *j* ↔ *n* *t* *ot* ‘firm, stocky (of body)’, *j* ↔ *rt* *ot* ‘sound of creaking’ (Uhlenbeck 1949:46).

To sum up: Javanese expressives violate at least one of the following three constraints:

18. Root = F = $\sigma\sigma$ “Roots are disyllabic feet” (Uhlenbeck 1949, 1978)
 19. * V C] σ “Avoid tense/ATR vowel in closed syllable”
 |
 [ATR/tense]
 20. * σ [t /] “Avoid dental /t/ as onset”

Thus, in Javanese expressives, structural markedness and semantic markedness are matched, too.

4. Tetun

Tetun (Timor, Van Klinken 1997) is another Austronesian language that prefers roots consisting of two syllables, (21). ‘In a corpus-derived list of 3012 unique lexemes (excluding homonyms, full reduplications, compounds and exclamations), 55 % of entries had two syllables, 43% three syllables, and 2% four syllables’. Trisyllabic words consist of one disyllabic foot and an extrametrical syllable (Van Klinken 1997:16, 16-18). Prosodic compounds exist, but morphologically simple lexemes (roots) are prosodically simple words.

21. Root = PrWd = F = $\sigma\sigma$

Four-syllable roots violate the constraints in (21). The following nine forms are given as illustrations (Van Klinken 1997:17):

22. *akitou* ‘dove’ *bibiliku* ‘drum’ (noun)
 baokae ‘kind of sea shell’ *labadain* ‘spider’

¹² Loan words and abbreviations also violate this constraint (Uhlenbeck 1949:86, 199).

<i>kaibók</i>	‘leaf vegetable’	<i>tualekik</i>	‘wake songs’
<i>sibalebok</i>	‘parsley’	<i>liurai</i>	‘executive noble’
<i>maufinu</i>	‘danger’		

Note that seven of these forms are semantically expressive (Name, Bad). If this small list of items is indeed representative for the class of four-syllable lexemes in Tetun, it suggests that in this language, too, semantic expressiveness is matched with a violation of a structural constraint – here a constraint against prosodically complex roots.

5. Kedah Malay

Another Austronesian language reported to have expressive elements with special phonotactic properties is Kedah Malay (spoken in West Malaysia, Collins 1979). Illustrations of some relevant markedness constraints are:¹³

23. * V_{NAS} “Avoid lexical nasal vowels”
 * /r/ “Avoid trilled liquids”
 * σ [R] “Avoid uvular fricative [R] in onset position”

Expressives feature nasal lexical vowels, [r] and onset [R] very productively:

24. *p[ð]*/ “sound of stone tossed against a tree trunk”
p[r] ang ‘sound of piece of crockery falling on cement & shattering’
[R]op [R]op [R]op ‘sound of walking on dry moss in fallow rice field’

Kedah Malay expressive elements thus systematically violate markedness constraints that core lexical items of this language would obey.

6. Ilocano

Ilocano (Phillipines, Rubino 1999a, b) roots are usually disyllabic CV(C).CV(C), (25). There are less than a handful of monosyllabic roots: *wak* ‘crow’ and *waw* ‘thirst’ (Rubino 1999b). Three- or four-syllable roots represent repetitive or rustling sounds, as in (26). The forms are all monomorphemic.

25. Root = F = $\sigma\sigma$

26. *sa. ?id.dek* ‘hiccup’ *sa. ?ib.bek, sa. ?in.nek* ‘sob’
ta.rat.tat ‘sound of typing’ *ka.ra.sa.kas* ‘rustling sound of leaves’
dis.su.or ‘waves breaking’ *ka.ra.si.kis* ‘rustling sound of bamboo’
sa.ra.i.si ‘waterfall’

Ilocano also has special morphological operations to derive expressive words from roots, e.g. the ‘onomatopoeic’ affix C₁a (Rubino 1999a:7). (Note that the derived forms are all trisyllabic.)

¹³ Besides the phonetic markedness of expressives, Kedah Malay expressives also have a special morphology (affixation, reduplication), for details, cf. Collins 1979.

<i>bi.tog</i>	‘thump’	<i>bab.tu.og</i>	‘thumping sounds’
<i>bi.set</i>	‘fast sound’	<i>bab.se.et</i>	‘darting out; spank’
<i>ki.reb</i>	‘wave crash’	<i>kak.re.eb</i>	‘sound of crashing waves’
<i>ki.tol</i>	‘click’	<i>kak.tu.ol</i>	‘clicking sounds (heels)’
<i>di.por</i>	‘crumbling’	<i>dad.pu.or</i>	‘crumbling or rumbling sound’
<i>dis.su.or</i>	‘waterfall’	<i>dad.su.or</i>	‘sound of falling with a thump’

Trisyllabic roots are not necessarily expressive: *dil.la.wit* ‘instant, brief period of time’, *sa.rung.kar* ‘visit’, *ʔu.bu.ʔub* ‘fumigate’ (Rubino 1999b).

In sum, Ilocano expressive forms couple marked structural features with a marked semantics, but the distinction is not categorical: non-expressives may be formally marked too.

7. Conclusions and discussion

Austronesian expressive elements show a significant correlation between formal and semantic markedness: they are semantically special and also systematically violate one or more of the structural constraints of a language. Similar observations have been made for expressive elements in e.g. Estonian and Finnish (Antilla 1976); in the African languages Hausa, Zulu, Ewe, Wolaitta, Didinga and Ciluba; in the Australian languages Jaminjang, Warrura, Gooniyandi, Gunin/Kwini; and in Quechua (Symposium on Ideophones in Köln, January 1999). This indicates that the lexicon is a dynamic entity which is – at least partly – shaped by reference to information from other linguistic modules.

Expressive lexical items are optimal forms in their own right, even when they are formally marked. ‘Optimal’ is thus not always identical to ‘least marked’. In standard interpretations of Optimality Theory, it is assumed that EVAL (the ‘evaluator’ of all generated surface forms) selects as optimal form the one that is most harmonic with the hierarchy of output constraints, and minimally violates those constraints. In this paper we have seen evidence that this is true for the *core* items in the native lexicon, but that *peripheral* items such as expressives systematically refer to certain classes of constraint violations, and may be based on different constraint rankings.

How can the observed core-periphery distinction in the native lexicon be formally accounted for? Some current approaches to lexical stratification describe lexical substrata by a linear ordering of phonological markedness constraints and a varying dominance position of faithfulness constraints within that ordering (see e.g. Féry 1999). But an analysis where lexical stratification depends on the ranking of phonological constraints, only accounts for the phonological markedness of expressives and leaves their morphological (and/or syntactic¹⁴) marked features unaccounted for.

¹⁴ Apart from the marked phonological and morphological structures discussed in this paper, expressive items often employ special syntactic constructions. An example is the use of certain ‘taboo’ nouns as emphatic negative polarity items in English *I don’t give a shit/fuck* and Dutch *I snap er geen bal/kloot/zak van*, lit. ‘I understand not a ball/testicle/scrotum (i.e. nothing) of it’ (cf. Postma, to appear). Expressiveness can even be marked paralinguistically, e.g. by a marked orthography to signal salience in texts (cf. Clynes 1998). It seems that the matching of expressive semantics and (linguistic) structure involves a very general, *non-linguistic* principle. In Klammer 1999b I propose that this principle is diagrammatic iconicity; for other proposals, see Zwicky & Pullum 1987, Clynes 1998.

In addition, a constraint ordering approach to lexical stratification always makes the crucial assumption that the core-periphery distinction is categorical: words of one stratum are distinguished from words of the other stratum by a special feature that activates different constraints and/or triggers different constraint rankings, and this feature is never found in items of the other stratum.

In such an approach, the presence of a low vowel would be the characteristic formal feature whereby Kambera ideophones would be distinguished from the core lexical items. Ideophones would then have a low vowel in their lexical representation, and a special faithfulness constraint would be connected to the expressive semantics of the ideophones. This faithfulness constraint ('IDENT (low)') would be ranked above the 'normal' constraint against low vowels (*low):

(27) IDENT (low) > *low

In this way the semantically expressive input forms with the special feature [low] are allowed to surface, while non-expressives, lacking that feature, are not. Clearly, this account only works if there is a unique feature that distinguishes expressives from non-expressives.

In the case of the Kambera ideophones this may be defensible, if we take the fact that the low vowel /a/ is *not* exclusive for ideophonic roots as an exception to the general pattern. But in most of the other cases considered above the formal distinction between expressives and non-expressives was a significant tendency. In other words, often there is no unique structural feature that distinguishes the semantically marked forms from the unmarked ones. In fact, structurally marked forms can be semantically unmarked and vice versa. In the constraint-ranking approach this possibility is ruled out.

And finally, this approach treats the formal markedness of the expressive items in a language on a par with the other idiosyncratic properties of that language's lexicon, and loses the crosslinguistic generalisation that the markedness of form and function is often correlated.

Expressives can be coined productively. This means that, despite the fact that it is often impossible to identify an expressive subgrammar that is categorically distinct from the rest of the lexicon, there must still be some kind of 'grammar' for expressive items. The nature of this grammar varies per language, but in this paper we have made a start with defining some of its outlines. Expressive items are structurally less constrained than core lexical items, and they violate constraints that are highly ranked both within and across languages, such as NoCoda, *Complex Onset on prosodic structure; Root = Foot on the alignment of prosodic and morphological structure, and Semantic Transparency on form-function mapping.

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Appendix

This Appendix contains the control and test sets discussed in section 2.3. The control set consists of 45 phonotactically unmarked CVCV roots, with unmarked root-initial and second consonants,¹⁵ and unmarked vowels. The translation of the items as given in Onvlee (1984) was used as a description of their semantics: items with a translation containing reference to sounds, motions, sights; names for plants, animals and humans; or a negative evaluation/connotation, were classified as semantically ‘expressive’. They are marked with ♥ in the tables. The remaining items are semantically ‘unclassified’.

Control set of CVCV roots (based on Onvlee 1984)

Kamera	Translation	Semantic type
1. <i>tutu</i>	touch (on), be on target, be true/correct	.
2. <i>tútu</i>	be near, guard	.
Y3. <i>títa</i>	race, gallop	sense (motion)
Y4. <i>tata</i>	k.o. wild chicken	name
Y5. <i>tetu</i>	k.o. sea fish	name
6. <i>tota</i>	be erect	.
7. <i>toti</i>	calm, quiet	.
8. <i>taka</i>	forbid, hold back	.
9. <i>taku</i>	spoon, spoon out	.
10. <i>teki</i>	take as wife	.
Y11. <i>tika</i>	1. kneel, crouch, 2. too much, in abundance, 3. almost (adv)	sense (motion)
12. <i>tiki</i>	1. utter 2. almost (variant of <i>tika</i>)	.
Y13. <i>tiku</i>	sound of knocking, creaking, cracking	sense (sound)
14. <i>tíku</i>	1. sheath (of sword or knife) 2. head	.
15. <i>toka</i>	drive up by hitting (esp. buffalo)	.
16. <i>toku</i>	1. ridge of roof 2. shop (loan from Indonesian)	.
17. <i>tuka</i>	pull tight, stretch, harness	.
18. <i>tuki</i>	1. spotted, black and white 2. require, demand	.
19. <i>túki</i>	round, spherical, whole	.
20. <i>tuku</i>	1. mortar (for pounding <i>pinang</i>) 2. to forge 3. throw at	.
21. <i>túku</i>	higher than surroundings, not even or flat	.
22. <i>tahi</i>	1. bright (of colour) 2. frying pan	.

¹⁵ Because liquids behave exceptionally elsewhere in Kamera phonology, I did not include roots with /r/ in the unmarked control set.

Y23. <i>tehu</i>	stunted, dwarf-like	bad
Y24. <i>tohu</i>	with disgusting odour	bad
Y25. <i>tuhu</i>	soft farting sound	sense (sound)
26. <i>pata</i>	break something	.
Y27. <i>Pati</i>	male name	name
28. <i>patu</i>	four	.
29. <i>piti</i>	pick up/take something	.
30. <i>puta</i>	hold tightly	.
31. <i>púti</i>	roll rope	.
32. <i>paki</i>	1. nice, attractive 2. clothes, wear clothes	.
33. <i>paku</i>	(hit a) bolt, pin, nail	.
34. <i>peka</i>	proclaim, announce	.
35. <i>peku</i>	good, well-arranged	.
36. <i>piku</i>	100.000	.
37. <i>poki</i>	blind	.
Y38. <i>poku</i>	1. sound of thudding, clapping 2. capital (to merchandise)	sense (sound)
Y39. <i>puki</i>	movement of racing feet; 'running for it'	sense (motion)
Y40. <i>puku</i>	1. sound of snapping rope or back bone 2. trot (horse)	sense (sound)

Test sets of CVCV roots with the marked consonants /nj/ and /ny/ (based on Onvlee 1984)

1. <i>njadi</i>	be able to, succeed (Ind.loan)	.
Y2. <i>njaka</i>	deficient, insufficient	bad
Y3. <i>njaki</i>	k.o. oyster	name
Y4. <i>njala</i>	wrong, bad	bad
Y5. <i>njanga</i>	1. branch of a tree 2. attend, look after (cf. <i>njangga</i>)	name
6. <i>njangga</i>	attend, look after (cf. <i>njanga</i>)	.
7. <i>njanji</i>	promise (Ind. loan)	.
Y8. <i>njara</i>	horse	name
9. <i>njata, YNjata</i>	very high number	.
Y10. <i>njati</i>	ancestral name	name
Y11. <i>Njawa</i>	k.o. tree (Ind.: <i>jati</i>)	name
12. <i>njepa</i>	Java	name
13. <i>njeri</i>	change, exchange, reimburse, compensate	.
Y14. <i>njibi</i>	beard, (hair, fringes) hanging down	.
Y15. <i>njidi</i>	smash to pieces, splinter	sense (motion)
Y16. <i>njika</i>	hobble, limp, walk with a limp	sense (motion)
Y17. <i>njiku</i>	(crop) consumed, devoured entirely by animals (pigs)	bad
Y18. <i>njili</i>	(walk with a) limp	sense (motion)
Y19. <i>njilu</i>	exhausted, tired	bad
Y20. <i>njima</i>	replacement, reimbursement	.
Y21. <i>njini</i>	large sea shell fish	name
Y22. <i>njingu</i>	1. motion of penetrating soil 2. level(ed)	sense (motion)
Y23. <i>njingu</i>	1. motion of looking sideways 2. look after someone	sense (motion)
Y24. <i>njinji</i>	1. back to front, inside out 2. crooked, false, fake (only in compound <i>njingu njànga</i>)	bad
25. <i>njipa</i>	deviating, diverging from the norm; be insecure	bad
Y26. <i>njipu</i>	crossed	.
Y27. <i>njiru</i>	1. pass, exceed, surpass 2. trespass, breach the law	sense (motion); bad
28. <i>njiwa</i>	thundering noise (only in compound <i>njiru njàra</i>)	sense (sound)
29. <i>njobu</i>	earring	.
Y30. <i>njodi</i>	bay, cove	.
31. <i>njonga</i>	motionless spinning (of e.g. a top)	sense (motion)
32. <i>njongu</i>	space in between houses, side of house	.
33. <i>njubu</i>	depth, cove, hollow	.
34. <i>njuda</i>	sharp, pointed	.
35. <i>njuka</i>	sleepy	.
36. <i>njulu</i>	support, prop	.
Y37. <i>njúlu</i>	1. change skin (snake, shrimp) 2. become young again	.
Y38. <i>njúnga</i>	wander, roam	sense (motion)
Y39. <i>njúngu</i>	sit motionless, aimless, workless	sense (motion)
Y40. <i>njunja</i>	swarm	sense (motion)
	movement of soft, tender material (breast, fat)	sense (motion)
	watery, wet (pap, pulp)	sense (touch)

Y41. <i>njunju</i>	prop, hold up (water, planned marriage)	bad
Y42. <i>njura</i>	1. expert (Ind. loan <i>juru</i>)	.
43. <i>njuru</i>	2. wet, damp (sand on beach, excrements)	sense (touch)
Y44. <i>njúru</i>		
Y1. <i>nyabu</i>	smacking sound of pig eating	sense (sound)
Y2. <i>nyaki</i>	sound of crunchy chewing	sense (sound)
3. <i>nyama</i>	to chew	.
4. <i>nyanga</i>	secure; ready	.
5. <i>nyanyi</i>	in a small amount, a little bit	.
Y6. <i>nyapa</i>	ripped, in shreds, tattered	bad
7. <i>nyara</i>	chase, chase away	.
8. <i>nyawa</i>	power, strength, energy	.
Y9. <i>nyeli</i>	worm	animal
Y10. <i>nyimba</i>	be blocking the way	bad
Y 11. <i>nyiwa</i>	1. flesh with seeds (in mellon, pumpkin etc.)	plant
	2. break open such fruit	
Y12. <i>nyobi</i>	bolt down food (dog)	sense (motion)
Y13. <i>nyola</i>	walk with large steps, stride	sense (motion)
Y14. <i>nyolu</i>	eat with smacking lips, to feast on	sense
Y15. <i>nyomba</i>	1. sturdy, robust 2. wallow in mud	sense
Y16. <i>nyonga</i>	1. stupid(ity), foolish(ness), fake	bad
	2. put/sit down alternating one after the other	sense
	1. worn out (e.g. baskets, clothes)	bad
Y17. <i>nyonya</i>	2. Madam (Ind. loan)	.
	1. hit, thrash, flog	sense
Y18. <i>nyonyi</i>	2. exhausted, worn out (people)	bad
	1. protrude 2. teacher's wife (Ind. loan)	.
19. <i>nyora</i>	support	.
20. <i>nyuka</i>	1. k.o. jellyfish	animal
Y21. <i>nyúlu</i>	2. tilt, slant, cant, distort	bad/sense
	go straight on, follow on	.
22. <i>nyunju</i>	1. utter, speak out 2. blemish, ailment	bad
Y23. <i>nyura</i>	upcoming motion of water at high tide	sense
Y24. <i>nyúru</i>		