

The typology of vocative formation

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Overview

Calls, (non-initial) addresses and how they are realised

Parameters of variation

- Optionality

- Degree of Autonomy

- Position

- Definiteness

- Non-at-issue content

- Physical distance

- Specification of the addressee

- Syntactic host

- Orientation

Forms of marking

- Particles

- Concatenative vocative forms

- Non-concatenative vocative forms

 - Vowel lengthening

 - Ablaut

 - Tonal inflection and Grammatical tone

Stress-shift
Truncation
Vocative chants
Reduplication
Suppletion



<https://dkaramasov.github.io/mache/presentations/25-tendencies-in-the-morphological-realisations-of-calls-and-addresses.pdf>

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<https://revistes.uab.cat/catjl/issue/view/v24-n1>

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- ▶ Range of realisation: (Almost) the whole spectrum of concatenative and non-concatenative morphological processes described in Haspelmath and Sims (2010, pp. 34–39).
- ▶ which may convey the following aspects:
 - ▶ Mark nouns as 2nd PERSON
 - ▶ Description of the relationship between SPKR and ADDR
 - ▶ Message is addressed at referent not ratified as speech participant overhearer
 - ▶ Other not-at-issue meaning regarding shared expectations
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- ▶ Corpus study for European Portuguese (João Azevedo)

Basic terminology: Calls and Addresses I*

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1. **Calls:**

- ▶ Only utterance initial
- ▶ Designed to catch attention
- ▶ Often/(?)always independent intonation phrase ι
- ▶ Conative interjection *hey* has a similar function Zwicky (1974, p. 787), Portner (2007, p. 411)
- ▶ May involve optional lengthening of short vowels in English (Ladd 1978, p. 518 and Hayes and Lahiri 1992, pp. 78, 81–83 for English, Sóskuthy and Roettger 2020, pp. 141–143)
- ▶ Also observed in animal communication

(1) Hey lady, you dropped your piano.

Basic terminology: Calls and Addresses II*

2. Addresses:

- ▶ Also utterance medial (parenthetical) and utterance final
- ▶ Designed to maintain attention, reinforcing social relationship (cf. Droste and Günthner 2021, Leech 1999, pp. 116–117, Stavrou 2013, pp. 328–329)
- ▶ Conative interjection *hey* less felicitous
- ▶ Vowel lengthening appears to be less felicitous
- ▶ Often unstressed, prosodic clitics (cf. Beckman and Pierrehumbert 1986, pp. 293–298 and Gussenhoven 2004, pp. 291–294)

(2) I'm afraid, sir, that my coyote is nibbling on your leg.

Roles in Utterance situations*

- ▶ Goffman (1976, p. 260), Goodwin (1982, pp. 3–6): Three types of listeners.
 1. Overhearer.
 2. Ratified listener.
 - 2.1 Directly addressed.
 - 2.2 Not specifically addressed, but part of a group of discussion participants.

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- ▶ In some languages **mandatory in specific contexts**: vocative particle *o* as a marker of politeness in Attic Greek, particle *á* García-Fernández (2023, p. 226) with H+L*L% vocative chants in Asturian

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- ▶ Other vocative markers cannot occur independent of a host: Old Bulgarian suffix *-le*, the Modern Bulgarian suffix *-be*, the Umbundu prefix *a* (cf. Hill 2007, pp. 2087–2090, 2022, pp. 2–3, 9)

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- ▶ **Utterance medial:** Often a separate prosodic unit, type of parantheticals, constraint to particular positions – much rarer (cf. Dehé 2009, pp. 570–571, 575, 610, Espinal 2013, pp. 310, 315–316, Stavrou 2013, pp. 325–326, Slocum 2016, pp. 159–196 and D'Alessandro and Oostendorp 2016, p. 69)

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- ▶ **Utterance final:** most often as a prosodic clitic, integrated into boundarytone of preceeding intonation phrase (cf. Beckman and Pierrehumbert 1986, pp. 293–298 and Gussenhoven 2004, pp. 291–294)

- (3) [voc Ty n'ivɣ-a] t'a ykyn-dox
this man-VOC NEG elder.brother-DAT/ADD
t'axta-ja.¹
be.angry-IMP
'This man, don't be angry at [your] elder brother.' NIVKH
- (4) [voc Nya jìdó!] Ge mi-ya:m-ay-ng-yó?²
my mother.VOC.DIST how 2-go-FUT-2-Q.VOC.DIST
'My mother! (I can't see you, but I know you are somewhere
out there) Where are you going?' HUALAPAI

¹As cited in Gruzdeva (1998, p. 20)= ex. (19).

²As quoted in Watahomigie, Bender, and Yamamoto (1982, pp. 74–75) = ex. (63).

- (5) ħKo ħaro'a 'ana e koe, e Hana ē?³
PRF perceive CONT AG 2S.S VOCPRT Hana VOCPRT
'Did you hear that, Hana?' [R485.016] RAPA NUI
- (6) Ciamar a tha thu, [VOC a Mhórag]⁴.
how PRT be.2S 2S.S VOCPRT VOC.Morag
'How are you, Morag?' MacKinnon (1971, pp. 171–174) SC.
GAELIC

³As quoted in Kieviet (2017, pp. 440–441) = ex. (225).

⁴As quoted in MacKinnon (1971, p. 171).

- (7) a. Thelo na se do, [voc Maria],
want.PRS.1S SBJV 2S.ACC see.1S Maria.VOC
avrio.⁵
tomorrow
'Mary, I want to see you tomorrow'
- b. * Thelo na, [voc Maria], se do
want.PRS.1S SBJV Maria.VOC 2S.ACC see.1S
avrio.⁶
tomorrow
- c. * Thelo na se, [voc Maria], do
want.PRS.1S SBJV 2S.ACC Maria.VOC see.1S
avrio.⁷
tomorrow

⁵As quoted in Stavrou (2013, p. 325) = ex. (45b).

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Medial vocatives and parantheticals

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- ▶ Stavrou (2013, p. 325) medial vocatives in Greek
 - ▶ Possible
 - ▶ After preverbal TOP
 - ▶ After preverbal SUBJ
 - ▶ After V before OBJ
 - ▶ Impossible
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 - ▶ After object clitics e.g. *se* ‘ACC.3s’
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- ▶ ??Vocatives cannot serve as host for prosodic clitics that occur in the clause

Two main functions of vocative nouns (cf. Schegloff 1968, pp. 1080–1081, Zwicky 1974, pp. 787–788, Levinson 1983, pp. 70–73, Leech 1999, pp. 108–109, 116–117, Sonnenhauser and Noel Aziz Hanna 2013, pp. 14–15, d’Avis and Meibauer 2013, pp. 191–197, Stavrou 2013, pp. 305–306, 327–329 and Slocum 2016, pp. 3–5, 10–12):

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 - ▶ Levinson (1983, pp. 70–73): No term of address is neutral with respect to social hierarchies.

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- ▶ Strong preference for final position in Tzotzil (Mayan, cf. Cowan 1969, p. 22) and Wandala (Afroasiatic, Chadic cf. Frajzyngier 2012, pp. 538–540)

No determiners* I

Vocative nouns are not compatible with determiners, noun-class affixes and related markers required in argument position. In many spoken varieties of Hungarian, proper names are preceded by the definite determiner *a*:

- (8) a. Jön a Péter.⁸
comes DET Péter
'(The) Péter comes' HUNGARIAN
- b. * A Péter, gyere.⁹
DET Péter come-IMP.2S
Intended meaning '(The) Peter come!' HUNGARIAN
- c. Péter, gyere.¹⁰
Péter.VOC come-IMP.2S
'Péter come!' HUNGARIAN

⁸As quoted in Szabolcsi (1994, p. 215) = ex. (84)

⁹As quoted in Szabolcsi (1994, p. 215) = ex. (86)

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No determiners I

Similar incompatibilities attested with many unrelated languages:

- ▶ Italian (cf. Longobardi 1994, 626–627 Fn.20)
- ▶ Hungarian (Szabolcsi 1994, pp. 215–216)
- ▶ German (cf. Schaden 2010, p. 179, Göksel and Pöchtrager 2013, p. 89, Stavrou 2013, p. 329)
- ▶ Catalan (cf. Espinal 2013, pp. 110, 112, 117, 123, Borràs-Comes, Sichel-Bazin, and Prieto 2015, p. 70),
- ▶ English (cf. Leech 1999, p. 107)
- ▶ Modern Greek (cf. Stavrou 2013, pp. 304, 319, 329–337)
- ▶ East Bantu (cf. Ndayiragije, Nikiema, and Bhatt 2012, pp. 116–117, Hill 2014, pp. 126–128)
- ▶ Mossi (Gur, Atlantic-Congo) (cf. Rennison 2013, p. 80)

- ▶ Ngandi (cf. Heath 1978, pp. 35–37, 48, 52) and Wubuy (cf. Heath 1984, p. 217) (both Gunwinyguan)
- ▶ Tzotzil (Mayan, cf. Cowan 1969, pp. 70–71)
- ▶ Chuckchi (cf. Dunn 1999, p. 318).
- ▶ Kilivali (Austronesian, Oceanic, cf. Senft 1986, pp. 43–44)

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- ▶ Bobaljik (2008, pp. 206–207):
 - ▶ 2nd PERSON as [–SPKR,+ADDR]
 - ▶ 3rd PERSON as [–SPKR,–ADDR].

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- ▶ Reference to shared expectations
 - ▶ European (L+)H*!H-% vocative chant: routine/shared expectations fulfilled, no new commitment, beneficial outcome (cf. Ladd 1978, pp. 520–524, Jeong and Condoravdi 2017)
 - ▶ Asturian H+L*L% vocative chant: speaker expectations violated (cf. García-Fernández 2023, p. 219)

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- ▶ Many languages have other types of calls and addresses with more specific nai meaning

Physical distance

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 - ▶ Gwa (Atlantic-Congo, Kwa, Nyo) particle *xùúúù* (cf. Painter 1975, pp. 19–20)

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- ▶ Proximal vocatives:
 - ▶ European Portuguese *ó* (underspecifeid)
 - ▶ Central Alaskan Yupik: truncation (cf. Miyaoka 2012, pp. 859–863)
 - ▶ Gua (Atlantic-Congo, Kwa, Nyo) particle *yèééè* (cf. Painter 1975, pp. 19–20)

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- ▶ NUMBER-marking: post-nominal vocative particles *-ee* ‘-VOC.S’ and *-ke* ‘-VOC.P’ in Dinka (Nilotic), (cf. Nebel (1948, p. 102)) and Hualapai (cf. Watahomigie, Bender, and Yamamoto 1982, pp. 71–75)

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- ▶ GENDER-marking: e.g. M *bǎ(i)* and F *fǎ(i)* (cf. Hill 2007, p. 2080, 2022, p. 8).
- ▶ Relationship:
 - ▶ Honorific/formal Attic Greek *ō* (cf. Schwyzer 1950, pp. 60–61)
 - ▶ Familiarity/informal Portuguese, *ó*, and in Modern Greek, *vre* (cf. Schwyzer 1950, pp. 60–61)
 - ▶ Children, the Korean particle *(y)a* (cf. Sohn (1999, pp. 341–343))
 - ▶ Gods deceased lovers, the Korean particle *i(si)e* (cf. Sohn 1999, pp. 341–343)

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- ▶ Some language allow application of identical markers to more complex utterances: Vocative chants in many Indo-European languages.
- ▶ Allocutive markers in Basque, only to verbs (cf. Antonov 2015)

Vocative chants with complex utterances*

In many languages, calling contours are compatible with different speech acts/sentence types, such as German (cf. Gibbon 1976, pp. 274–287), English (cf. Ladd 1978, pp. 520–525; Jeong and Condoravdi 2017, 2018) and Hungarian (cf. Varga 2008, pp. 480–481, 492–494):

speech act	default	calling contour	
GREETINGS	<i>Hallo</i> ^{H*L-L%}	<i>Hallo</i> ^{L+H*!H-%}	'hello'
ADDRESS	<i>Susi</i> ^{H*L-L%}	<i>Susi</i> ^{L+H*!H-%}	
wh-Q	<i>Wo bist Du?</i> ^{H*L-L%}	<i>Wo bist Du?</i> ^{L+H*!H-%}	'Where are you?'
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ASSERTION	<i>Das Essen ist fertig</i> ^{H*L-L%}	<i>Das Essen ist fertig</i> ^{L+H*!H-%}	'The food is ready'.
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Vocative chants with complex utterances*

In many languages, calling contours are compatible with different speech acts/sentence types, such as German (cf. Gibbon 1976, pp. 274–287), English (cf. Ladd 1978, pp. 520–525; Jeong and Condoravdi 2017, 2018) and Hungarian (cf. Varga 2008, pp. 480–481, 492–494):

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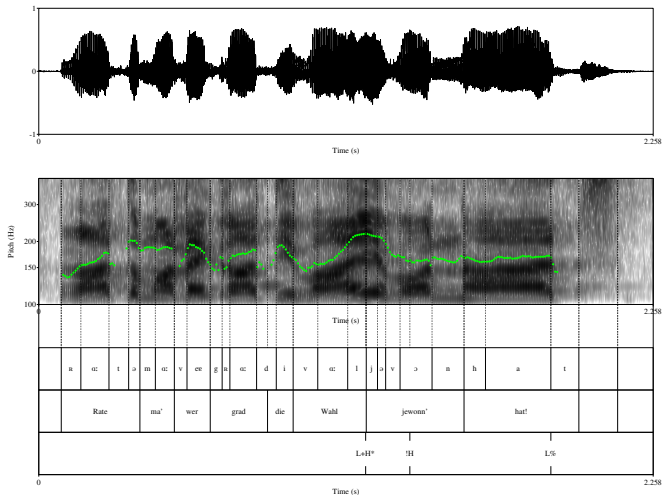
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- ▶ Puzzle: how to build same utterance with diverging intonations? Is the default intonation overridden? constituent with underspecified intonation??

Vocative chants with clauses



Sentential calls – across languages I*

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- ▶ Yorùbá (Western-Benue): ocative chant which manifests as a register raise, also with IMP *^wá* ‘come.DIST’ (cf. Oláwalé 2022, pp. 4–5, Manfredi 2003)

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- ▶ Wubuy (Gunwinyguan): vocative chant lengthening of final syllable + high pitch + marker *u*, found with VOC, EXCL, IMP (cf. Heath 1984, p. 86)
- ▶ Morphologically marked alarm calls in Ancient Greek *Io Bacchus!* ‘PRT Bacchus.NOM’, Middle High German *fiur=â* ‘fire=PRT’ and Early New High German *Feind=io* ‘enemy=PRT’ (cf. J. L. C. Grimm 1850, p. 112)

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- ▶ Gyele (Bantu): suffix o with VOC, IMP (cf. N. Grimm 2021, p. 249)

Sentential calls – across languages V*

- (9) Nya jìdó! Ge mi-ya:m-ay-ng-yó?¹¹
my mother.VOC.DIST how 2-go-FUT-2-Q.VOC.DIST
'My mother! (I can't see you, but I know you are somewhere
out there) Where are you going?' HUALAPAI
- (10) mùdì kí tàtò wúó¹²
CL1-person NEG scream there-VOC-DIST
'Nobody scream over there!' GYELE

¹¹As quoted in Watahomigie, Bender, and Yamamoto (1982, pp. 74–75) = ex. (63).

¹²As quoted in N. Grimm 2021, p. 249 = ex. (13).

Sentential calls – across languages VI*

- (11) riga::u!¹³
mother.VOCPRT
'(my) mother!' WUBUY
- (12) n⁹ura::u!¹⁴
fire.VOCPRT
'Fire!' WUBUY
- (13) wuɿ=ri-n^y jiɿ-na::u!¹⁵
???.VOCPRT
'They are fighting' WUBUY

Sentential calls – across languages VII*

- (14) a. A: Ban a g-an o. Ban a
who QUOT do-PST.2S VOC-DIST who QUOT
g-an o. Ban a g-an
do-PST.2S VOC-DIST who QUOT do-PST.2S
o.¹⁶
VOC-DIST
- b. B: Augi o. Augi o. Augi o.¹⁷
Augi VOC-DIST Augi VOC-DIST Augi VOC-DIST
A: 'Who did you say [has died]?'
B: Augi. KOBON

¹⁷As quoted in Davies 1981, p. 6 = ex. (11c).

The parallel behaviour of vocatives and imperatives:

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- ▶ Both have a close connection to the 2nd PERSON, (cf. Stavrou 2013, p. 323)

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- **intradeictic**: VOC corresponds argument:

(15) Petro_i, _____i ela [na
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- **extradeictic**: VOC not co-referrent with any arg

(16) Petro_i, I Maria_j prepei [na
 Petros.VOC DET.F Maria.NOM must SBJV
 fiji].
 leave.SBJV.AOR.3S
 ‘Petros, Maria must leave!’

M. GREEK

Plan

Overview

Calls, (non-initial) addresses and how they are realised

Parameters of variation

Optionality

Degree of Autonomy

Position

Definiteness

Non-at-issue content

Physical distance

Specification of the addressee

Syntactic host

Orientation

Forms of marking

Particles

Concatenative vocative forms

Non-concatenative vocative forms

Vowel lengthening

Ablaut

Tonal inflection and Grammatical tone

Evident, for most languages: nouns phrases, for some also more complex utterances

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 - 3.1 base modification: vowel lengthening
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 - 3.3 base modification: stress shift
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 - 3.5 reduplication

Interplay of phonology and morphology

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- ▶ Areal preferences for order
 - ▶ Preference for prenominal particles in European languages
 - ▶ preference for postnominal particles in African languages

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- ▶ Pro argument: VOC comes as a suffix in many (ancient) Indo-European languages that attaches on noun stems like case suffixes

Case-like suffix or derivational suffix?

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2. Languages with case paradigm can have VOC-marker that are not part of the case paradigm (cf. Nikolaeva and Tolskaya 2001, pp. 106, 340–341, 470, Gruzdeva 1998, pp. 18–22, Nedjalkov and Otaina 2013, p. 55, Fortescue 1984, pp. 205–209, 225, Dench 1994, pp. 59–60, 63–94, 100–103, 107–112, Merlan 1989, pp. 56–57, Crazzolara 1960, pp. 20–24, 140)

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6. VOC affixes often additionally involve non-concatenative processess

Vowel lengthening

- ▶ Most frequent type non-concatenative process in the formation of vocatives

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- ▶ Often result of grammaticalisation through assimilation of a post nominal VOC-particle

Rare but found in Wakashan branch (cf. Jacobsen 1994) with ablaut from *a* > *e* and *u* > *o* among others:

- (17) $\text{ʔuʃax} \cdot \text{uda} \rightarrow \text{ʔuʃax} \cdot \text{ude}^{18}$
 child.NOM child.VOC
 ‘Child.’

MAKAH

- (18) $\text{ʔa} \cdot \text{si} \cdot \text{qsu} \rightarrow \text{ʔa} \cdot \text{si} \cdot \text{qso}^{19}$
 niece.NOM niece.VOC
 ‘Niece.’

NUU-CHAH-NULTH

¹⁸As quoted in Jacobsen (1994, p. 27) =ex. (28).

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Grammatical tone and tonal inflection

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- ▶ Also with case marking in Ripuarian (cf. Gussenhoven and Peters 2004, pp. 255–256) and Limburgian Dutch attributive adjectives (cf. Van Oostendorp 2005, p. 108).

Definition grammatical tone by Rolle (2018, p. 19):

Grammatical tone (GT): a tonological operation which is not general across the phonological grammar, and is restricted to the context of a specific morpheme or construction, or a natural class of morphemes or constructions (i.e. grammatically conditioned tone addition, deletion, replacement, shifting, assimilation, dissimilation, etc.)

Replacive-dominant grammatical tone Rolle (2018, pp. 4–6, 53–57):

Replacive-dominant: the automatic replacement of the underlying tone of the target, revalued with a grammatical tune

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- ▶ Some Australian languages

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- ▶ Central Alaskan Yupik
- ▶ Övdelian
- ▶ Yapese (Austronesian, Oceanic), Indonesian (Austronesian, Malayo-Chamic)

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- ▶ Vowel lengthening
- ▶ Grammatical Tone
- ▶ Suffixation (e.g Australian languages)

- ▶ Yorùbá, with downstepp, endearment, playful admonishment: Bọ̀sẹ̀, [!]Bọ̀sẹ̀

- ▶ Kulina (Arawakan): *bedi* ‘daughter’ → *asi* ‘daughter.VOC’
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- ▶ English: *sir ma’am*

Vocative particles in (Indo-)European languages

language	item	optionality	autonomy	position	address	call	distance	social relation	host
Portuguese	<i>ó</i>	✓	—	pre-N	(✓)	✓		intimate	n
Asturian	<i>á</i>	✓/—	—	pre-N	—	✓	?	?	?
Catalan	<i>eh</i>	✓	✓	pre-N	?	✓	?	?	?
	<i>ey</i>	✓	✓	pre-N	?	✓	?	?	?
Sardinian	<i>ɔ</i>	✓	—	pre-N	—	✓		?intimate	?
Scots Gaelic	<i>a</i>	?	?	pre-N	✓	✓	?	? formal	?
Irish	<i>a</i>	?	?	pre-N	✓	✓	?	?	?
English	<i>hey</i>	✓	✓	pre-N	—	✓		informal	?
Viennese German	<i>heast</i>	✓	✓	pre-N	—	✓		intimate	n+cl
	<i>heans</i>	✓	✓	pre-N	—	✓		informal	n+cl
	<i>ge</i>	✓	✓	pre-N	—	✓		informal	n+cl
Albanian	<i>o</i>	?	?	flexible	?	?	?	?	?
Old Bulgarian	<i>-le/le</i>	✓	—	post-N	?	✓	?	?	?
Bulgarian	<i>be</i>	✓	—	post-N	?	✓	?	?	?
Romanian	<i>bre</i>	✓	✓	pre-N	?	✓	?	informal	?
	<i>măi</i>	✓	✓	pre-N	✓	✓	?	informal	?
	<i>bă(i)</i>	✓	✓	pre-N	?	✓	?	inf. M.	?
	<i>fă(i)</i>	✓	✓	pre-N	?	✓	?	inf. F.	?
Greek, Attic	<i>ō</i>	—	?	pre-N	✓	✓	?	formal	?
Modern Greek	<i>vre</i>	✓	✓	pre-N	✓	✓	?	informal	?
	<i>o</i>	✓	✓	pre-N	✓	✓	?	?	?
	<i>e</i>	✓	—	pre-N	—	✓	?	?	?
Persian	<i>ey</i>	✓	?	pre-N	✓	—	?	archaic	?

Table: Vocative particles in (Indo-)European languages

Vocative particles in Asian and Oceanic languages

language	item	optionality	autonomy	position	address	call	distance	social relation	host
Mari	-j	✓	—	post-N	?	✓	?	intimate	?
Lezgian	ja	✓	?	pre-N	✓	✓	?	?	?
Arabic	ya:	✓	✓	flexible	✓	✓	?	?	n+imp
Nivkh AD/ESD	-a/-aj	?	?	post-N	?	✓	?	?	?
Nivkh AD	-o/-ǵo	?	?	post-N	?	✓	?	?	?
Mandarin	a	✓	?	post-N	?	✓	?	formal	?
Korean	(y)a	?	?	flexible	?	✓	?	children	?
	i/∅	?	?	flexible	?	✓	?	adolescent	?
Karbi	ó	?	?	pre-N	?	✓	?	?	?
Dumi	e:	?	?	pre-N	?	✓	?	?	?
Lao	ʔe:j	?	?	post-N	?	✓	?	?	?
Indonesian	nah	✓	?	pre-N	?	✓	?	?	?
	hai	✓	?	pre-N	?	✓	?	?	?
Maori	e	—	?	pre-N	?	✓	?	?	?
	wa:	✓		flexible	✓	✓	?	?	?
Rapa Nui	e	?	?	pre-N	?	✓	?	?	?
	e...ē	?	?	post-N	✓	(✓)	?	?	?
Amele	o	✓	?	flexible	?	✓	?	?	n+cl
Kobon	o	✓	?	post-N	?	✓	distal	?	n+cl
	e/melrō	✓	?	post-N	✓	✓	?	?	?
Coastal Marind	ay	?	✓	post-N	?	✓	?	?	
	aw	?	✓	pre-N	?	✓	?	?	?

Table: Vocative particles in Asian and Oceanic languages

Vocative particles in Native American languages

language	item	optionality	autonomy	position	address	call	distance	social relation	host
Hualapalai	é	?	?	post-N		✓	prox	?	?
	(y)é	?	?	post-N	?	✓	prox	?	?
	(w)ó	?	?	post-N	—	✓	dist	?	n+cl
Tzotzil	e	✓	?	post-N	✓	(✓)	dist	?	n+cl
Cl. Nahuatl	-é	?	?	post-N	?	✓	?	M. SPKR	?
Aymara	-ya	✓	?	post-N	?	✓	?	(intimate)	?

Table: Vocative particles in Native American languages

Vocative particles in Atlantic-Congo languages

language	item	optionality	autonomy	position	address	call	distance	social relation	host
Kissi	wéi	✓	?	post-N	?	✓	?	children	?
	é	✓		pre-N	?	✓	?	?	?
Mani	-yò, -yè	✓	?	post-N	?	✓	?	?	?
Koromfe	é	✓		pre-N	?	✓	?	?	?
Baoulé	-à	—	?	post-N	?	✓	?	?	?
Ewe	ée	✓	?	post-N	?	✓	dist	?	?
Gwa	yèé	?	?	?	?	?	prox	?	?
	yèééè	?	?	?	?	?	dist	?	?
	xùúúù	?	?	?	?	?	dist	?	?
Yorùbá	ò	✓	✓	post-N		✓	?	?	n+imp
Ijò	-àa	✓	?	post-N	?	✓	?	?	?
Eton	á	✓	?	pre-N	?	✓	?	?	?
Gyele	-ò	✓	?	post-N	?	✓	prox	?	?
	-ó	✓	?	post-N	?	✓	dist	?	n+cl
ɓaka	-ó	?	?	post-N	?	✓	?	?	?
Umbundu	á-í	—	—	pre-N	✓	✓	?	?	?
Rufumbira	yee (we)	?	?	pre-N	✓	✓	?	?	?
Tswana	-a	?	?	post-N	✓	✓	?	intimate	?
Zulu	e	✓	?	pre-N		✓	prox	intimate	?
	we	✓	?	pre-N	?	✓	dist	?	?
	au	✓	?	pre-N	?	✓	?	solemn	?

Table: Vocative particles in Atlantic-Congo languages

Vocative particles in North and East African languages

language	item	optionality	autonomy	position	address	call	distance	social relation	host
Naro	-è	?	?	post-N	?	✓	?	?	?
Lugbara	<i>la/là</i>	✓	?	post-N	?	✓	?	?	?
Dinka	-ee	✓	—	post-N	?	✓	dist	singular	?
	-ke	✓	—	post-N	?	✓	dist	plural	?
Tarifiyt Berber	<i>a-</i>	?	?	pre-N	?	✓	?	?	?
Tashlhiyt Berber	<i>wa-</i>	?	?	pre-N	?	✓	?	?	?
	<i>taba</i>	✓	?	pre-N	?	✓	?	senior.F	?
	<i>(da)dda</i>	?	?	pre-N	?	✓	?	senior.M	?
Somali	-èey/-àay/-òoy	✓	—	post-N	?	✓	dist	hon. F.	?
	-òw	✓	—	post-N	?	✓	?	hon. M.	?
	-yahay	✓	—	post-N	?	✓	?	inf. F.	?
	-yohow	✓	—	post-N	?	✓	?	inf. M.	?

Table: Vocative particles in North and East African languages

Vocative suffixes

language	item	optionality	position	address	call	distance	social relation	host
Czech		—	stemfinal	✓	✓			n
Polish		✓	stemfinal	✓	✓	?	formal	n
Croatian		✓	stemfinal	✓	✓	?	?	n
Romanian	-e	✓	stemfinal	✓	✓	?	informal	n
Bulgarian	-o	✓	stemfinal	✓	✓	?	intimate	n
	-e	✓	stemfinal	✓	✓	?	intimate	
Modern Greek		—	stemfinal	✓	✓	?	?	n
Lithuanian		?	stemfinal	✓	✓	?	?	
Urdu		?/✓	stemfinal	✓	✓	?	?	n
Hindi		?	stemfinal	✓	✓	?	?	
Georgian	-o	✓—	stemfinal	✓	✓			n
Limbu	-e	?/✓	stemfinal	✓	✓	?	?	n
Ket	-á/-ó	✓	stemfinal	?	✓	prox	?	n
	-ó/-ó	✓	stemfinal	?	✓	distal	?	n
Udihe	-i	✓	stemfinal	✓	✓	?	intimate	
	-e	✓	stemfinal	✓	✓	distal	?	
Itelmen	-e/-a	✓	stemfinal	✓	✓		?	n
Martuthunira	-yi	?	stemfinal	?	✓	?	?	
Mangarrayi	-y	✓	stemfinal	?	✓	?distal	?	n
Nez Perce	-e	?	stemfinal	?	✓	?	intimate-jun	n
	-e?	?	stemfinal	?	✓	?	intimate-sen	n
Central Alaskan Yupik	-mi	?	stemfinal	?	✓	?	formal	n
Basque	-n	✓	post-v	✓	—	?	ADDR.F	decl
	-k	✓	post-v	✓	—	ADDR.M	archaic	decl
	-sy	✓	post-v	✓	—	formal	archaic	decl

Table: Vocative suffixes

Non-concatenative vocative realisations I

language	type	optionality	address	call	distance	social relation	host
Karo Batak	vowel length.	?	?	✓	?	?	?
Chuchki	vowel length.	?	?	✓	?	?	n+imp+excl
Central Alaskan Yupik	vowel length.		?	✓	dist	intimate	?
Chipewyan	vowel length.	?	?	✓	?	?	?
Sierra Miwok	vowel length.	?	?	✓	?	?	?
Mohawk	vowel length.	?	?	✓	?	?	?
Hidatsa	vowel length.	?	?	✓	?	?	?
Wakashan	ablaut u>o, i>e	?	?	✓	?	?	n+imp
Turkana	tonal infl.	?	?	✓	?	?	?
Shilluk	tonal infl. H	?	?	✓	?	?	?
Ngiti	tonal infl. H	?	?	✓	?	?	?
Somali	tonal infl.	?	?	✓	?	?	?
Karbi	tonal infl. M	?	✓	✓	?	?	?

Table: Non-concatenative vocative forms I

Non-concatenative vocative realisations II

language	type	optionality	address	call	distance	social relation	host
Indo-European, Hungarian, Turkish	L+H*!H%	✓	—	✓	dist	intimate	n+cl
German	L*+H L-H%	✓	—	✓		intimate	n
Yorùbá	register rise	✓	—	✓	dist		n+cl
Thai	leveling of H,M,L	✓	—	✓	?	?	?
Mandarin	final L%	✓	—	✓	?	?	?
Wolof	final sustained H%	?	?	✓	?	?	?
Mani	final sustained H%	?	?	✓	?	?	?
Daakaka	vocative chant	?	?	✓	?	intimate	?
Wubuy	vocative chant + =u	?	?	✓	?		cli
Ngardi	vocative chant + =wu	?	?	✓	?		(n+)cl

Table: Non-concatenative vocative forms II

Non-concatenative vocative realisations II

language	type	optionality	address	call	distance	social relation	host
Elfdalian	stress-shift	✓	✓	✓	?	?	n
Persian	stress-shift	?	?	✓	?	?	?
Turkish	stress-shift	?	?	✓	?	?	?
Uzbek	stress-shift	?	?	✓	?	?	?
Nivkh	stress-shift	?	?	✓	?	?	?
Nahuatl	stress-shift	?	?	✓	?	?	?
Sardinian	truncation	?	✓	✓	?	?	n+imp
Elfdalian	truncation	✓	✓	✓	?	?	n
Faroese	truncation	?	?	✓	?	?	n
Central Alaskan Yupik	truncation		?	✓	?prox	intimate	?
Seediq	truncation	?	?	✓	?	intimate	?
Kilivila	truncation	✓	✓	✓	?	?	?
Yapese	truncation	?	?	✓	?	?	?
Indonesian	truncation	?	?	✓	?	?	?

Table: Non-concatenative vocative forms II

*Exclamatives and vocatives

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- ▶ Identical marking in many languages: Svennung (1958) and Hill (2007, pp. 2078, 2080–2082, 2086–2090, 2092–2098) for Romanian, Abreu de Carvalho (2013, p. 53) for European Portuguese, Stavrou (2013, pp. 311–315) for Modern Greek, Akinlabí and Liberman (2000, pp. 43–44) and Ọláwalé (2022, p. 2) for Yorùbá, Dunn (1999, pp. 87, 90) for Chukchi and Miyaoka (2012, pp. 794–798)

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- ▶ Reference a salient expectation within the shared belief space of the speaker and the addressee.
 - ▶ EXCL: Violation of speaker expectation.
 - ▶ L+H*!H% Vocative chant: confirmation of speaker expectation.
 - ▶ Asturian H+L*L% Vocative chant: violation of speaker expectation.

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*Five key findings I

1. The marking of calls and addressess is particularly prone to atypical morphological strategies (cf. Spencer 2009, p. 186 and Floricic and Molinu 2018, pp. 273–278)
2. Systematic parallels exist between vocatives and exclamatives
3. Calls (?and addressess) can function as independent speech acts or sentence types (cf. Paul, 1880, pp. 192–193, 1920, p. 130, Delbrück 1901, pp. 143–145, Wundt 1901, pp. 74–75, Levinson 1983, pp. 71, 281, 308–312, following Schegloff 1972, pp. 357–359; Asher and Kumari 2013, p. 186 and Borràs-Comes, Sichel-Bazin, and Prieto 2015, p. 70)

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4. In many languages vocative markers can apply to more complex syntactic hosts and utterances
5. Vocative nouns are systematically incompatible with determiners holds in most language (but see Svennung 1958, Schaden 2010, p. 180, Eckardt 2014, 226–227, Fn. 2, Ritter and Wiltschko 2020, pp. 8–9)

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9. Non-initial addresses are often realised as prosodic clitics.