Locating

Associated Motion: an underdescribed morphological category

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Encoding time on the verb...

• Tense encodes *when* an event takes place.
  – (Past, Present, Future...)

• Aspect encodes *how* that event takes place at that time:
  – Before: perfective; After: prospective
  – Continuous: progressive
  – Repeated: iterative

• Tense is central in syntactic theory for clauses.
What about space?

• In fact, similar systems exist for morphological encoding of spatial relationships on the verb.  
  – (Technically more like aspect than tense.)
• We’ll call these Associated Motion (AM).
• Most common is ‘going’ vs. ‘coming’ contrast:  
  Maasai (Nilotic, Kenya/Tanzania; Tucker & Mpaayei 1955: 127)
  asi  asieku  asioyo  
  ‘to be impatient’  ‘to come quickly’  ‘to go away quickly’
Itive and Ventive

Maasai (Tucker and Mpaayei 1955, 126; 123)

• A-rew-aa nkishu
  1SG-drive-ITV cattle
  ‘I shall drive the cattle away.’

• Te-re-u nkishu
  IMP-drive-VEN cattle
  ‘Drive the cattle this way!’
Associated Motion Morphology

- Quechua (Soto Ruiz 2010:353)
  
  Llamka-**mu**-saq   Filipi-wan
  Work-**AM**-1SG.FUT Felipe-WITH

  ‘I will (go) work (over there) with Felipe.’

In Quechua, just one general movement suffix.
Defining Associated Motion

- Wilkins (1991:251) describes associated motion as “a notional semantic category which can be found crosslinguistically in typologically and genetically unrelated languages ... [with] a unique morphosyntactic treatment that distinguishes it from other categories [as in Mparntwe Arrernte, which] is evidence for recognising a distinct grammatical category, to be added to the list of possible morpho-syntactic categories which a natural language may manifest.”

- Guillaumé (2013:131) defines associated motion as “referring to grammatical markers that attach to non-motion verbs and specify that the verb action occurs against the background of a motion event with a specific orientation in space.”
Associated Motion in Australia

The term *Associated Motion* originates in Australia (Koch 1984; Tunbridge 1988; Wilkins 1991, 1997; McGregor 2002).

“Grammatical category”?  
Mparntwe Arrernte  (Wilkins 1991: 225, 207)

(1) Re   ayenge tw-intye-ke
       3sgA 1sgS  hit-DO.COMING-past.completive
   ‘S/he hit me as s/he came (this way).’

(2) angke-tye.lhe-ke
       speak-GO&DO-pc
   ‘went and then spoke’
Associated Motion in Australia

- Wilkins (1991) described 14 categories in Mparntwe Arrernte.
- Go vs. come
- Temporal:
  - Previous
  - Concurrent
  - Subsequent
- (Also one for a new subject.)

### CATEGORY OF ASSOCIATED MOTION

<table>
<thead>
<tr>
<th>Action and Motion Concurrent</th>
<th>Action and Motion Non-Concurrent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Performer of Action is also moving entity)</td>
<td></td>
</tr>
<tr>
<td>Directed: Deictic</td>
<td>Oriented</td>
</tr>
<tr>
<td>- intye = &quot;DO COMING&quot;</td>
<td>- nhe = &quot;DO PAST&quot;</td>
</tr>
<tr>
<td>- inty.alpe = &quot;DO COMING BACK&quot;</td>
<td>- tye.kerle = &quot;DO DOWNWARDS&quot;</td>
</tr>
<tr>
<td>- inty.lhe = &quot;DO COMING THRU&quot;</td>
<td>- ty.antye = &quot;DO UPWARDS&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subsequent Motion Hurried (-artne)</th>
<th>Directed Non-Concurrent</th>
</tr>
</thead>
<tbody>
<tr>
<td>- intye = &quot;DO ON Z's ARRIVAL&quot;</td>
<td>(prior)</td>
</tr>
<tr>
<td>- ty.intve = &quot;DO ON Z's ARRIVAL&quot;</td>
<td></td>
</tr>
</tbody>
</table>
Derivation or Inflection?

- **Shasta, 13 affixes (Mithun 1999: 141)**
  
<table>
<thead>
<tr>
<th>Affix</th>
<th>Meaning</th>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ehé·haw-</td>
<td>‘across’</td>
<td>tiyu·ehé·ha·na</td>
<td>‘it’s frozen over’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>kwehehá·ha·ma</td>
<td>‘I covered it (with a lid)’</td>
</tr>
<tr>
<td>-ehé·wi-</td>
<td>‘downstream’</td>
<td>rúmpéhé·wa·ká</td>
<td>‘he’s swimming downstream’</td>
</tr>
<tr>
<td>-ehé·w-</td>
<td>‘out of container’</td>
<td>kwehe·nahá·wik·a</td>
<td>‘he jumped out of (a corral)’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>kúčahé·wik·a</td>
<td>‘he fell out of (a boat)’</td>
</tr>
<tr>
<td>-aha·b-</td>
<td>‘into circumscribed area’</td>
<td>kwá·ya·?·aha·pi·ka</td>
<td>‘he scraped in his winnings</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>from me’</td>
</tr>
<tr>
<td>-wa·k-</td>
<td>‘in liquid’</td>
<td>káč·ipá·k</td>
<td>‘he herded them together’</td>
</tr>
<tr>
<td>-ehé_-</td>
<td>‘downward’</td>
<td>kwehehémpik</td>
<td>‘put it in to soak’</td>
</tr>
<tr>
<td>-asw-</td>
<td>‘away, off’</td>
<td>kawá·s</td>
<td>‘she put her pack down’</td>
</tr>
<tr>
<td>-cw-</td>
<td>‘upward’</td>
<td>kat·iká·c</td>
<td>‘take it away!’</td>
</tr>
<tr>
<td>-ahá·w-</td>
<td>‘along, uphill’</td>
<td>rá·wahá·wa·ka</td>
<td>‘lift up your feet!’</td>
</tr>
<tr>
<td>-ehé·ha·w-</td>
<td>‘across’</td>
<td>kumpehé·ha·?</td>
<td>‘the path goes up the hill’</td>
</tr>
<tr>
<td>-wáha·w-</td>
<td>‘along the edge’</td>
<td>kwí·iwá·ha·ma</td>
<td>‘swim across!’</td>
</tr>
<tr>
<td>-ípiw-</td>
<td>‘through tube’</td>
<td>ké·yehé·pe·pú</td>
<td>‘he’s sighting along (a gun)’</td>
</tr>
<tr>
<td>-i·pisu-</td>
<td>‘down into’</td>
<td>kwí·m·apsiruk</td>
<td>‘crawl through a hollow log!’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘he went down into the hole</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>to hunt for it’</td>
</tr>
</tbody>
</table>

- **Some languages have many contrasts...**
More than 60 suffixes in Kwakwala (incomplete list!)
(Mithun 1999: 149-50)

-onsa  ‘under water’
-nces  ‘down to beach’
-nsx  ‘edge’
-alod  ‘on rock’
-awit  ‘across’
-abo  ‘underneath’
-amak  ‘on surface of water’
-amala  ‘along bank of river’
-atus  ‘downriver’
-aq̕s  ‘back and forth’
-axsa  ‘away without definite aim’
-axs  ‘down’
-en̕  ‘nearby’
-ilaxla  ‘here and there’
-is  ‘on the floor, in the house’
-open space, on the beach, in world, bottom of water
-s  ‘on ground outside house’
-ax  ‘on rock’
-ax  ‘in a canoe’
-yak  ‘back into woods’
-øyod  ‘middle’
-usla  ‘upriver’
-x̱msa  ‘snare under water’
-lánsa  ‘go down to beach’
-čom̓nsa  ‘melt at edge’
-axalod  ‘put down on rock’
-tawitl̕a  ‘wade across’
-sobad̕  ‘throw long thing under’
-yáx̱wámak  ‘rise out of sea dancing’
-ná-gamala  ‘go along bank of river’
-q̕atsosla  ‘start walking downriver’
-nápaq̕s  ‘throw ball back and forth’
-pd̕-sxwa  ‘float away’
-náxa  ‘aim down’
-wonér̕s  ‘hide outside, nearby’
-qa  ‘walk about’
-*q̕  ‘live together in house’
-qailel̕  ‘canoe is on beach’
-hax̱es  ‘go up from beach’
-lásdes  ‘sleep outside’
-mé̱sxas  ‘lie dead on rock’
-yág̕a  ‘sit in a canoe’
-č̱̕ax̱s  ‘go into woods’
-lay̕ak  ‘melt in middle’
-č̕óm̓y̕od̕  ‘wade upriver’
-tástala  ‘carry up from beach’
pdx̱la  ‘drift’
y̱xwa  ‘dance going out the door’
ẖ̱-q̕wénéka  ‘lie one on top of another’
q̕ótwa  ‘water wells up out of hole’
-dax̱-bot̕a  ‘jump into hole’
-yax̱-šéšitl̕a  ‘dance around’
ṉps̕é̱g̕it  ‘throw across in house’
las̕i  ‘go bathing’
hanx̱  ‘put kettle on’
gás̕a  ‘come in’
hánneq̕it  ‘(kettle) stands in corner’
-x̱xag̕a  ‘put into dish’
-tépóliša  ‘lift foot from floor’
-lep̕líš  ‘step on floor’
aš̕a  ‘get on a thing’
-xiša  ‘sit on roof’
ḵ̕-q̕ax̱  ‘sit still on bank’
-x̱a-x̱a-x̱a  ‘stand in bow’
x̱od̕-ša-x̱a  ‘sprinkle over’
x̱o-x̱i̱-ša-x̱a  ‘I put them together’
lég̕-ap̕x̱  ‘put stones on fire’
hé-d̕a-x̱a-x̱a  ‘step right in front of’
-wonäsqa  ‘hide inside’
da̱x̱yud  ‘take up to top’
soks̕a  ‘spear through’
híd̕x̱s̕a  ‘take kettle off fire’
gé́x̱x̱a  ‘swim ashore’
qáča  ‘walk into woods’
qátxa  ‘walk across a hill’
pá če  ‘fly about’
x̱am̕-x̱i̱-u̱d  ‘snare at mouth of river’
sáp̕x̱sta  ‘chop down to ground’
-nsám̕-x̱a-x̱a  ‘throw on the fire’
-nabot̕o  ‘throw on top’
láša  ‘go out to sea’
x̱ud̕x̱s̕-x̱a-x̱a  ‘beat boards outside house’
siḏ̕-sde  ‘be paddling behind’
səb̕p̕la  ‘canoe starts on water’
Terminology

• Associated Motion is convenient but not common outside of Australia.

• In North America, the terms translocative (‘away from speaker’) and cislocative (‘toward’), even dislocative (‘go away and…’).

• Ventive/venitive (‘come and...’) and itive/andative (‘go and...’) common in African descriptive tradition and elsewhere.

• Sometimes also centripetal and centrifugal.

• Otherwise just directional/spatial/locational.
Areal studies

• Several studies for Australian languages.
• Many studies of African languages, some comparison (Bourdin 2005), no overviews.
• The Tacanan family in South America (Guillaume 2013), and broader discussion in (Aikhenvald 2012).
• rGyalrong, in western China (Jacques 2013)
• Sparse descriptions elsewhere
Methodology

• First broad comparative study of AM.
• Based on the methodology of *WALS* (Haspelmath 2005), looking through descriptive grammars for 324 languages.
  – Data for 200 ready now.
• Can be challenging to compare different styles of writing grammars and not miss data.
• Data is likely *underestimated* rather than exaggerated due to underdescription.
Research Assistants

• Collaborative project with four undergraduate research assistants.
  – Ryan Grunow
  – Kelsey Lac
  – George Jabbour
  – Jack Dempsey
Feature 64A: Nominal and Verbal Conjunction

This feature is described in the text of chapter 64 by Martin Haspelmath.

Values

- **Identity**: 161
- **Differentiation**: 125
- **Both expressed by juxtaposition**: 15

You may combine this feature with another one. Start typing the feature name or number in the field below.
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<thead>
<tr>
<th>Language</th>
<th>Value</th>
<th>Source</th>
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<tbody>
<tr>
<td>Kalkatungu</td>
<td><img src="image" alt="Identity" /></td>
<td>Blake 1979b: 95, 110, 112</td>
</tr>
</tbody>
</table>

Showing 101 to 200 of 301 entries
<table>
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<tr>
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<tr>
<td>Kamaiurá</td>
<td>Differentiation</td>
<td>Seki 2000: 239, 245</td>
</tr>
<tr>
<td>Kambera</td>
<td>Identity</td>
<td>Klamer 1998: 296-7</td>
</tr>
<tr>
<td>Kana</td>
<td>Differentiation</td>
<td>Ikoro 1996: 120, 123, 260, 264</td>
</tr>
<tr>
<td>Kannada</td>
<td>Differentiation</td>
<td>Sridhar 1990: 103-4, 106-7</td>
</tr>
<tr>
<td>Karen (Pwo)</td>
<td>Identity</td>
<td>Kato 2003: 635, 637</td>
</tr>
<tr>
<td>Karok</td>
<td>Differentiation</td>
<td>Bright 1957: 136, 359</td>
</tr>
<tr>
<td>Kashmiri</td>
<td>Identity</td>
<td>Wali and Koul 1997: 104, 108</td>
</tr>
<tr>
<td>Kâte</td>
<td>Identity</td>
<td>Pilhofer 1933: 130-1, 181</td>
</tr>
<tr>
<td>Kera</td>
<td>Identity</td>
<td>Ebert 1979: 250, 274-6</td>
</tr>
<tr>
<td>Ket</td>
<td>Identity</td>
<td>Werner 1997a: 319, 321</td>
</tr>
</tbody>
</table>
325 Languages [200 presented now]

Abkhaz, Abun, Acehnese, Acoma, Agarabi, Ainu, Alamlak, Alyawarra, Ambae (Lololovi Northeast), Amele, Apurinâ, Arabic (Egyptian), Araona, Arawak, Arop-Lokep, Arrernte (Mparntwe), Babungo, Badimaya, Bagirmi, Baka (in Cameroon), Bali-Vitu, Banon, Basque, Batak (Karo), Bawm, Berber (Middle Atlas), Binjin Gun-Wok, Bozo (Tigemaxo), Brahui, Brokstak, Buduma, Buma, Burushaski, Busa, Cahuilla, Canela-Krahô, Cantonese, Cayuga, Chamorro, Chechen, Chemehuevi, Chichewa, Chocho, Chukchi, Coahuilteco, Coos (Nahuatl), Cornish, Corpus Christi, Cypriot, Czakó, Dan, Dari, Dargwa, Degema, Dhaasanac, Dhivehi, Djabugay, Doyayo, Drehu, Duffi (Gollano), English, Erromangan, Evenki, Ewondo, Fijian, Finnish, Fongbe, French, Gapapaiwa, Garo, Georgian, German, Gola, Goomiyandi, Greek (Modern), Greenlandic (West), Guarani, Gujarati, Gunbalang, Gurr-goni, Haida, Hamtai, Ham, Hausa, Hawaiian, Hebrew (Modern), Hindi, Hixkaryana, Hmong, Hoa, Hungarian, Hunzib, Ika (Arhuaco), Imonda, Indonesian, Iraqw, Italian, Itzaj, Jakeltek, Jaminyunjang, Japanese, Ju'hoan, Kairiru, Kalkatungu, Kamaiurâ, Kamba, Kana, Kannada, Kanuri, Karen (Pwo), Karok, Kashmiri, Kâte, Kera, Ket, Kham, Khanty, Khasi, Khmu', Khoekhoe, Kiribati, Koasati, Kobon, Komori, Kombai, Korean, Korku, Koromfe, Korowai, Koyraboro Senni, Krongo, Kugri Nganhcona, Kukû, Kwâ, Kutenai, Kwayo, Lai, Lak, Lakhet, Lamang, Lango, Latvian, Lavukaleve, Laz, Lele, Lepcha, Lezgian, Lîloueot, Longgu, Lu, Luvale, Maale, Ma'di, Madurese, Maithili, Malayalam, Mam, Mandarin, Mangarrayi, Mangghuer, Maori, Mapudungun, Marathi, Maricopa, Marquesan, Matsés, Maybrat, Mbay, Mbili, Meithei, Midob, Mixtec (Chalcato), Miya, Mocoví, Mohawk, Monumbo, Mosetén, Mundari, Muvan, Musgu, Mussau, Nagatman, Nahuatl (Mecayapan Isthmus), Nahuatl (Tetelcingo), Namboi, Navajo, Ndebele (in South Africa), Ndjebbana, Nelemwa, Nepali, Newar (Dolakha), Nez Perce, Ngalakgan, Nhandu, Nias, Nisga, Niuafo'ou, Niuean, Nivkh, Nkore-Kiga, Nsenga, Nkaul, Obol, Ojibwa (Eastern), O'dham, Oromo (Harar), Otomí (Mezquital), Paamese, Paez, Paiute (Northern), Palaian, Palaun, Passamaquoddy-Maliseet, Pech, Pero, Persian, Pirahã, Pitjantjatjara, Popoloca (Meczontla), Puluwat, Purépecha, Qafar, Qiang, Quechua (Huallaga), Quechua (Imbabura), Retuârâ, Rotuman, Russian, Saami (Kildin), Saami (Northern), Salt-Yui, Sango, Sangu, Sanuma, Selkup, Sentani, Shoshone, Siar, Sisuan, Slave, So, Somali, Southeast Ambram, Spanish, Squamish, Sudest, Suena, Sundanese, Supyire, Tabã, Tagalog, Taîo, Tamako, Tamil, Taroa, Tauya, Tepehuan (Southeastern), Teribe, Tetun, Thai, Thompson, Tibetan (Shigatse), Tidore, Tigrinya, Tikar, Tinrin, Tiwi, Tobolo, Tommo So, Totonac (Xicotepac de Juárez), Triimai, Tsat, Tunug, Tukang Besi, Turkish, Tuvaluan, Tzutujil, Udihe, Udmurt, Uliithian, Upper Kuskokwim, Urubú-Kaapor, Usan, Vâisi, Vietnamese, Walman, Warao, Wardaman, Wari', Wichi (Mataca), Wolof, Yagua, Yaqui, Yawelmani, Yawuru, Yidiny, Yimas, Yoruba, Yukaghir (Kolyma), Zapotec (Quiegolani), Zoque (Chimalapa), Zulu, Zuni, Arapesh (Mountain), Asmat, Barasano, Burmese, Cree (Plains), Daga, Dani (Lower Grand Valley), Grebo, Kayardild, Kewa, Khalkha (Mongolian), Kiowa, Makah, Malagasy, Martuthunira, Maung, Ngiyambaa, Oneida, Rama, Rapanui, Swahili, Wichita, Irish, Selknam
200 languages: 82 with AM; 118 without
200 languages: morphology (68); compounding (12); Particles (21); Serial Verb Constructions (34)
Languages with both Ventive and Itive

200 languages: 47 with AM; 153 without
Languages with Active Memory (AM)
Languages with Ventive

200 languages: 52 with AM; 148 without
Unspecified directional

200 languages: 7 with AM; 193 without
Any horizontal directional

200 languages: 67 with AM; 133 without
200 languages: 21 with AM; 179 without
200 languages: zero (133); one (14); two (26); three-five (17); six-fourteen (10)
Beyond morphology:

• “In many Australian languages, [in addition to] the verbal categories of tense, aspect and mood, ... verbs may ... be specified for notions having to do with the motion associated with the action denoted by the verb” (Koch 1984:23)

Why just morphology?

Consider tense:
  • He walked
  • He walks
  • He will walk.

• In WALS (Dahl & Velupillai 2005a,b), 24% of languages do not have past tense nor have a morphological future. And 13% have no Tense-Aspect inflectional at all (Dryer 2005).
Serial Verbs

• Serial verb constructions (SVCs) are:
  – two or more juxtaposed verbs
  – with no marker of dependency or linking element
  – expressing a single event in a single clause
  – with shared values for Tense-Aspect-Modality and negation
  – and shared arguments (subject and/or object)
  – encoding various semantic relationships.

• Examples from Sranan (Sebba, 1987: 43, 46):
  (1) A waka go na wowoyo.
  He walk go LOC market
  ‘He walks to the market.’
  (2) Mi fringi a batra broko.
  I throw the bottle break
  ‘I threw the bottle and broke it.’
Serial Verbs

• Most common type of SVCs is with motion verbs

• “Every serializing language I have encountered includes a category of motion serialization, where a verb of motion is combined with some other verb in such a way that the motion verb comes first and the moving argument is the Agent of the second verb.” (Durie 1997: 310)

• “Every serializing language has ... verbs of motion ... [and some languages only have] this type of serialization.” (Aikhenvald 2006: 48)
210 languages: 95 with SVCs (45%); 115 w/out
Complex predicates and AM:

- Particles (Hawaiian: Hawkins 1982:16)
  
  *mai* ‘toward speaker’; *aku* ‘away’; *ihō* ‘down’; *a’e* ‘upward’
  
  E hā‘awi mai ʻI ka waiū
  
  ‘Give me the milk.’
  
  – German *hin-* ‘thither’, *her-* ‘hither’? (Lehmann 1991:515-516)

- Pseudocoordination (English): We went and saw a movie.

- Converbs (Japanese: Shibatani 2003:271)
  
  Hi-ga sizun-de it-ta
  
  sun-NOM sink-CONJ go-PAST
  
  ‘The sun went down.’
But it is unclear how many of these are really grammaticalized as AM.
AM extended:

- Consider English ‘went and V’:
  
  “Look what he went and did this time!”
  
  Doctor: “The patient went and died on me.”

  – Grammaticalized from physical movement away from the deictic center to (metaphorical movement to) violation of expectations.


  \[ \text{À-\ bna d- nè- l- q’e- y’t’} \quad \text{‘He suddenly emerged the wood he ITV from.in emerge (fin.) from the wood.’} \]

- Pseudocoordination with ‘surprise’ in other languages (Weiss 2007; Wiklund 2009)

- Joseph (1990) describes a SVC-like construction in Modern Greek with ‘come’ with interlocutor-aligning properties.
Conclusions

• AM is not rare: 25% ~ 33% ~ 40% ~ 100%?
  • Should be a focus of descriptive work

• Should be given a similar status to tense in theory
  • More research is needed!
  • Especially for phrasal encoding of AM.

• For example, how productive are these affixes? Which verbs do they combine with?
References


References


Thank you!

• Questions?