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10. A questionnaire on
Motion Lexicalisation and Motion Description
(for Australian languages)

David Wilkins
(in consultation with David Nash and Jane Simpson)

NOTE TO NON-AUSTRALIANISTS:

The following questionnaire was designed in preparation for the Third International Workshop on Australian Aboriginal Languages held at Max Planck Institute for Psycholinguistics, Nijmegen, April 28-29, 1998. We received extremely useful comparative data for more than a dozen Australian languages. Moreover, several non-Australianists felt that the same questionnaire could also be used very fruitfully in their field situation. As such we decided to include it in this field kit. We have not changed the questionnaire at all, so it retains its Australianist-bias, but we hope it will help guide your elicitation in this domain of research. Some minor problems have been noted for the various modules of the questionnaire. For instance, some people felt that the initial list of motion verbs below should have included 'arrive' and 'approach'. Still, such minor faults do not appear to have impeded the identification of important cross-linguistic patterns within Australia, so we are now curious to discover what patterns emerge when we move beyond this area to the rest of the world. Enjoy!

An example of a fully filled in questionnaire is provided at the end of the questionnaire.

Introduction

The purpose of this questionnaire is to gain a first comparative picture of the lexical resources Australian languages draw on for the expression of motion, and the manner in which motion descriptions are "packaged". In the nature of our design, and our discussion, we rely heavily on Talmy's (1985) notion of lexicalization patterns, in particular his cross-linguistic discussion of systems of motion description. We are interested, for instance, in patterns of semantic conflation (that is, what other semantic information besides 'motion' may be encoded in a verb root) and patterns of semantic distribution (that is, what types of information are encoded in the different morphemes that come together to build a description of a motion event).

We will assume a "pretheoretical" understanding of what constitutes a motion event and a motion description. In this questionnaire, the primary focus is on "translocational motion" (i.e.change of location of an entity along a path from one place to another). We further restrict our focus to motion descriptions in which the Subject argument of a verb (in an active clause) is the entity ('figure') in motion (an accompanying entity may also be in motion, but that is not our focus of interest). In narrowing our focus in this way, we depart from Talmy's own manner of investigation, since he was also interested in patterns of location, causative location and causative motion.

The questionnaire

This questionnaire is designed in a "modular fashion". There are four independent modules, and we would be glad to receive answers to any of the "modules". A researcher should not feel that they need to answer the whole questionnaire if that seems too daunting. Where you do not know the answer to a question, please say so (rather than leaving a part of a module blank). The ordering of modules reflects our own sense of which types of information are more important to enable us to do some cross-language comparison.

Name of Researcher:

Name of Language:

Primary Place of Research:

Primary Data Resources:

May we distribute your filled in questionnaire?:　　____ YES　　____ NO

How many inflecting, unanalysable, mono-morphemic verb roots does the language possess: (tick one of the following)

___ LESS THAN 50　　　　___ 50 to 200　　　　___ MORE THAN 200

Can you give us a more precise figure? (If so, what source[s] is the figure based on?):

MODULE I : Motion Verbs and Patterns of Motion Expression

Below we present 26 English motion verbs or descriptions. We would like you to provide any (and all) expressional equivalents for the language under discussion. We are not only interested in mono-morphemic verb roots, we are also interested in more complex expressions. For instance, in Arremte, there is no monomorphemic root for 'to fly'. However, Arremte speakers do commonly talk about the motion of birds, airplanes and insects by combining a general motion verb and the locative phrase *alkere-le* (sky-LOC) 'in the sky' in the same clause — e.g. *alkere-le alhe-me* ('in sky going') = 'flying'; *alkere-le unthe-me* ('in sky wandering') = 'flying around'; *alkere-le apetye-me* ('in sky coming') = 'flying this way', and so on. [N.B. While it would be nice to know translation equivalents, it is more important for us to know what expressions people actually use, no matter how infrequently.]

We do not assume that the following will provide a one-to-one list of equivalents. In some cases the same verb or expression may cover several notions we have distinguished on the list, and in other cases the distinctions won't be fine-grained enough and you'll need to provide several equivalents, detailing the distinctions. We simply ask you to give us as much detail as is feasible.

Please include the following information in any response:
(i) the transitivity of the verb in the expression (in relation to the meaning expressed)
(ii) a morphemic break down and gloss of each morpheme in all complex expressions
(iii) where relevant, an indication of any animacy or category constraints which apply to the moving entity in the expression (e.g. does the moving entity have to be a liquid?)

The List
a. "to go"

b. "to come"

c. "to return" ("to go back")

d. "to take to" ("take along"; "carry")

e. "to bring"

f. "to move" (from one place to another e.g. they shifted into the shade; they moved camp)

g. "to leave behind" ("to abandon"; "to leave something somewhere and go off")

h. "to move" (with no overall change of location; move on the spot or about a fixed point e.g the bush is moving, his eyes/hair moved)

i. "to move quickly" ("hurry away"; "hurry off")

j. "to walk"

k. "to run"

l. "to crawl (of baby)"

m. "to fly (of bird)"

n. "to hover" ("to flutter" - e.g of hawk; butterfly)

o. "to swim" (of fish? of person?)

p. "to roll" (e.g. of ball or boulder or tumbleweed)

q. "to creep up on" ("to sneak along"; "sneak up on")

r. "to follow someone/something"

s. "to track someone/something"

t. "ascend" ("get up on to"; "to climb up")

u. "to descend" ("get down off/out of")

v. "to fall" (down from a height) [does this contrast with "to fall over"?; "collapse"?]

w. "emerge" ("exit"; "appear"; "come out"; "rise [of sun]")

x. "to enter " ("to go into" [e.g. a house, a camp])

y. "to cross over" ("go across")

z. "to pass by"

MODULE II : Motion-Rich 'Textlet' or Text Fragment

So that one can get a feel about how motion description really works in the language, could you please provide a piece of natural continuous text which is rich in motion expression, and which you feel is representative. All that is needed is a small text or text fragment of between 5 and 20 clauses in length, in which the focus is the motion of one or more of the "protagonists". Of course, we need you to provide morphemic breaks, interlinear glosses, and a free translation. It would also be useful if you could provide notes, as you go along, to any specific motion related features that the 'outsider' should attend to. [An example will be provided. - Note that, we'd prefer it if you did not rely on a translation from English, but instead used a small text that was generated directly from the mind and mouth (or pen) of a native speaker.]

MODULE III: Grammatical Marking of Ground and Path

In Talmy's (1985:61) terms the basic components of a motion event are:
    Figure = the entity that is in motion
    Ground = the entity or entities that the Figure is moving in relation to
    Path = the course followed (and trajectory) of the Figure (often deduced from the
        Ground which is specified)
    Motion = the actual predication of a motion act.

So, in the sentence 'the baby crawled up the hill', the Figure is 'the baby', the Ground is 'the hill', the Path is specified with 'up', and the assertion of Motion is encoded in the verb 'crawl' .

This module of the questionnaire is particularly concerned with the way in which Grounds and Paths (including direction) may be grammatically coded. We would appreciate it if you used some of the expressions from the list in Module I of this questionnaire in glossed example sentences to illustrate the types of marking asked about below.

A. Marking of grounds

a) How are "goals" of motion marked? (i.e. what cases, adpositions, or other means are
        used to mark ground NPs functioning as "goals of motion?)
        [e.g. The child crawled to(wards) the tree.; They returned to camp; The lizard got
        up onto the rock.;]

b) Can one make a distinction between 'to X' and 'towards X'?
        For all motion verbs? How?
        [e.g. The leaf fell towards the ground. vs. The leaf fell to the ground.]

c) How are "sources" of motion marked?
        [e.g. The woman moved away from the fire.; They travelled from Sydney.;

The baby bird fell <u>out of the tree</u>.; The dog fell <u>off of the truck</u>.]

d) How are ground NPs which refer to the route or path along/on which motion takes place marked? [e.g. He's walking <u>along the track</u>.; The horse wandered <u>along the sides of the fence</u>.]

e) How are ground NPs which refer to the medium in which motion takes place marked? [e.g. The bird is flying <u>through the air</u>.; The children are running <u>through the sand</u>?]

f) How does one mark a ground NP which refers to a place through (or via) which the figure travels in order to get to another place?
[e.g. They travelled from Alice Springs to Elliott <u>via Tennant Creek</u>; She came <u>through here</u> on her way to church.]

g) With expressions like "enter" (or "go into") and "exit" (or "come out of"), how are the ground NPs which refer to the space "entered" and "exited" marked?
[e.g. The snake entered <u>its burrow</u>.; The owl came out <u>from the hollow of the tree</u>.]

h) With expressions of "crossing" and "passing" how are grounds indicating the entity 'crossed' and 'passed" marked?
[e.g. Those people ran <u>past our house</u>; A dingo crossed <u>the road</u>.]

i) Languages like English can string several Grounds together with one motion verb (e.g. The dog carried the meat from the creek along the path to the tree.). Other languages have strong restrictions, preferring one Ground per motion verb. Do you have a sense of how many grounds can occur naturally with a motion verb?

Is it possible (natural) to say things like:

- He went from the tree to the rock.

- He went into the house through the rear door.

- He came along the road towards our car.

-The dog carried the meat from the creek along the path to the tree.

j) If you use adpositions or case endings to express these ideas, can they occur independently as the main predicate in a sentence as in? (If they are possible, what do they mean? Can they have motion readings or only static spatial readings?)

- The dog (is) from the tree

- The dog (is) to the tree

- The dog (is) along the road

- The dog (is) into the house

- The rabbit (is) out of its burrow

B. Path Direction

a) Are there any form of directionals (i.e. grammaticised directional elements like Warlpiri -*rni* 'hither, to here', -*rra* 'thither, to there', -*mpa* 'past, by, across')? If so, what part of speech class do they attach to, or co-occur with? If they combine with verbs,

are they restricted to motion verbs or can they, for instance, occur with perception verbs or speech act verbs (or all verbs)?

b) Does the language have anything akin to the 'associated motion' category discussed by Koch (1984); Tunbridge (1988); and Wilkins (1989, 1991)? If a language has anything like this, it is usually some form of verb affix, verb compounding or fixed construction, and the most commonly coded notions tend to be 'do verb action while going along' ('she cried all along the way') or 'go/come and do verb action' ('she came and told me'; 'she went and hit him'). Please describe any phenomena that seem to be relevant.

[In a language like Adnyamathanha (Tunbridge 1988), where this category is very elaborate, you find the following verb affixes: -mana- 'come and V', -namana- 'quickly come and V', -vara- 'go and V', -navara- 'quickly go and V', -ndhena- 'V once while coming'; -nali- 'V continuously while coming'; -ndheli- 'V once while going', -nangga- 'V all the way along', -enhi- 'V while keeping moving'; and -wandha- 'V and leave'.

In origin such suffixes (or compounding elements) are very often general motion verbs]

MODULE IV: What Element of the Clause Encodes Path? : The verb-framed vs. satellite-framed typology

Talmy (1985) observed that, in motion descriptions, a language like English differs typologically from a language like Spanish, by virtue of the fact that Spanish tends to conflate 'motion' and 'path' together in the verb root, while English tends to code path in a separate (adverbial/prepositional) element which functions as a satellite to the verb. He judges patterns of expression to be characteristic for a language if they are (i) colloquial in style (rather than formal or stilted), (ii) frequent; and (iii) pervasive (rather than limited) in application. Thus, in English, the characteristic mode of expression is to say "go up", "go down", "go in", "go out" and so on, while it is less characteristic to to say "ascend", "descend", "enter", "exit", and so on. The former pattern exemplifies "satellite-framing" (i.e. 'go' provides the motion concept, while 'up', 'down', 'in', 'out' realizes the path). For languages like Spanish, verbs like "enter" and "ascend" are the characteristic mode of expression, and the verb roots can been seen to simultaneously code "motion" and "path" (i.e. "verb-framing").

[Note: Satellites to the verb-root may be affixes on the motion verb root; or clitics; or path adverbs; or particles; or preverbs]

Please try to assess whether the language you are working on is verb-framed or satellite framed (or somewhere in between or something else), by answering the following 'diagnostic' questions:

a) Are verb roots meaning 'enter', 'exit', 'descend', 'climb up' a more characteristic form of expression, in Talmy's terms, than more analytic counterparts such as "go into", "go out of", "go down", "go up"?

b) How common is it for verbs in the language to conflate both 'motion' and 'manner' [that is, are there a rich class of verb roots like 'run', 'swim', 'slither', 'hop', 'limp', 'crawl', 'stroll', etc.]? According to Talmy, if a language characteristically conflates 'motion' with 'manner' in verb roots, it is NOT common for the same language to also characteristically conflate 'motion' with 'path'.

c) When both manner and path notions appear in a motion description, how does information get distributed among elements? To answer this question we list sentences below which try to elicit some of the relevant distinctions. Again, don't go for word-for-word translations. Give us what you think would be the normal ("characteristic)

way of expressing the idea (or something close to it). And, please include the following information:

— the transitivity of the verb in question in relation to the meaning expressed (including the expected case on the subject of the sentence)
— an interlinear morpheme-by-morpheme gloss

i) The child ran to the other side of the street/path/creek.

ii) The child ran across the street.

iii) The baby crawled into the house/shed/camp. [Where the "into" path is to be stressed, is the form of expression done more like: "crawlingly enter" or "crawl into" or "crawl to the inside of"?]

iv) The baby crawled up the rock [Can one distinguish "crawl to the top of the rock" and "ascend the rock by crawling"?].

v) The snake slithered into the string bag.

vi) The boy fell to the ground. [while standing on the ground? vs from out of a tree?]

vii) The rock/boy fell down into the water. (where entry into the water is stressed)

viii) The girl climbed up onto the branch of the tree.

d) Can one "accumulate" path notions with just one verb? In English, one is not only able to string a number of different Grounds together, one can also accumulate a string of simple Path-satellites. As an example, Slobin (1996:83) notes that it is quite normal for English speakers to say things like "The bird flew down from out of the hole in the tree" (where down-from-out-of specifies the trajectory). In this English sentence, there is only one specified ground ('the hole in the tree'), but a complex of three units of Path information ('down', 'from', and 'out of'). The closest Spanish approximation would be "El pájaro salió del aguejaro del árbol volando hacia abajo" which translates literally as 'The bird exited of the hole of the tree flying towards below'. Thus, in contrast to English, Spanish, like other verb-framed languages, tends to render complex Path information through multiple clauses, since they do not allow for the accumulation of path expressions. So, what about the language under investigation?

OTHER INFORMATION
Please provide any other information on the language that you feel is relevant to this research endeavour. In particular, if there are publications or sections of publications concerning the language which deal directly with motion description, we would be grateful if you brought this to our attention (and we will collate and share all such references).

THANKS FOR ALL YOUR HELP

References cited in questionnaire:
Koch, Harold. 1984. 'The Category of "Associated Motion" in Kaytej', Language in Central Australia, 1 23-34
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Talmy, Leonard. 1985. 'Lexicalization patterns: semantic structure in lexical forms'. in Shopen ed. Language Typology and Syntactic Description III: Grammatical categories and the lexicon. CUP. 57-149

Tunbridge, Dorothy. 1988. 'Affixes of Motion and Direction in Adnyamathanha' in Austin ed. *Complex Sentence Constructions in Australian Languages*. John Benjamins. 267-283

Wilkins, David P. 1989. *Mpamtwe Arremte (Aranda): Studies in the structure and semantics of grammar*. Unpublished PhD dissertation. A.N.U.

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[AN EXAMPLE OF A FULLY FILLED IN QUESTIONNAIRE FOLLOWS]

<u>Name of Researcher</u>: David P. Wilkins

<u>Name of Language</u>:   Arrernte (Eastern and Central [Mparntwe])

<u>Primary Place of Research</u>:   Alice Springs, Northern Territory

<u>Primary Data Resources</u>: Field notes 1982-1988, 1992-1997; Wilkins (1989) Grammar, Texts and Lexicon; Henderson and Dobson (1994) *Eastern and Central Arrernte to   English Dictionary*; Arandic Languages Dictionary Project files

May we distribute your filled in questionnaire?:   __X_ YES ____ NO

How many inflecting, unanalysable, mono-morphemic verb roots does the language possess: (tick one of the following)

___ LESS THAN 50   ___ 50 to 200   _X_ MORE THAN 200

Can you give us a more precise figure? (If so, what source[s] is the figure based on?):

Based on a vocabulary of approx 3000 common (everyday
language) words, and quite strict criteria for counting
something as unanalysable, the number of monomorphemic,
inflecting, verb roots is in the range of 250-300 (with
slight relaxation of criteria this number would shoot up).

MODULE I : Motion Verbs and Patterns of Motion Expression

Below we present 26 English motion verbs or descriptions. We would like you to provide any (and all) expressional equivalents for the language under discussion. We are not only interested in mono-morphemic verb roots, but are also interested in more complex expressions. For instance, in Arrernte, there is no monomorphemic root for 'to fly'. However, Arrernte speakers do commonly talk about the motion of birds, airplanes and insects by combining a general motion verb and the locative phrase *alkere-le* (sky-LOC) 'in the sky' in the same clause — e.g. *alkere-le alhe-me* ('in sky going') = 'flying'; *alkere-le unthe-me* ('in sky wandering') = 'flying around'; *alkere-le apetye-me* ('in sky coming') = 'flying this way', and so on. [N.B. While it would be nice to know translation equivalents, it is more important for us to know what expressions people actually use, no matter how infrequently.]

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Please include the following information in any response:
(i) the transitivity of the verb in the expression (in relation to the meaning expressed)
(ii) a morphemic break down and gloss of each morpheme in all complex expressions
(iii) where relevant, an indication of any animacy or category constraints which apply to the
    moving entity in the expression (e.g. does the moving entity have to be a liquid?)

<u>The List</u>
a. "to go"

 alhe- (i.v) 'to go; move along a path; move along in the
  manner typical for the subject; travel'

 arnpe- (i.v.) 'to put one's foot down somewhere; to step
  on; to take a step; to start off to somewhere, go
  off somewhere' [note that in texts it is very
  common to encounter the form *arnpe-nhe-* (step-
  DO.GOING.PAST-) indicating that a protagonist is
  setting out from camp or starting to go off
  somewhere.]

 [N.B. There are also four complex associated motion
 inflections which attach to verb stems and contain the
 verb root *alhe-* 'go': *-ty.alhe* 'go and then do verb
 action'; *-rl.alhe* 'do verb action and then go';
 -artn.alhe 'quickly do verb action and then go';
 -inty.alhe 'do verb action while coming through a place
 (i.e. while coming and then going off)']

b. "to come"

 apetye- (i.v.) 'to come; move in the direction of
 deictic center' [historically derived from proto-
 Arandic 'go' verb **ape-* with a hither suffix *-tye*]

 [N.B. There is also an associated motion suffix *-intye*
 which attaches to verb stems to indicated that the verb
 action happened while coming towards deictic center.
 This same form combines with *alhe-* 'go' to create a
 complex inflection *-inty.alhe* 'do verb action while
 coming through a place (i.e. while coming and then going
 off)'. A further complex inflection is *-inty.alpe* 'do
 verb action while coming back'. Henderson and Dobson
 1994 also give another complex associated motion form
 for the S.E.dialect: *-inty.akerle* 'do verb action while
 coming downwards towards the person speaking'.]

c. "to return" ("to go back")

 alpe- (i.v.) 'to go back; return to'

apetye-alpe- (i.v.) 'to come back' (form from *apetye-*
'come' and *alpe-* 'go back')

[N.B. There are several associated motion suffixes which
attach to verbs to give return paths -*irtne* 'do verb
action while on the way going back'; -*inty.alpe* 'do verb
action while coming back'; -*rl.alpe* 'do verb action and
then return (either going or coming back)'; -*ty.alpe*
'return (either going or coming back) and then do verb
action'; and -*artn.alpe* 'Quickly do verb action and
return (either going or coming back)'

d. "to take to" ("take along"; "carry")

aknge- (tr.v.) 'to take someone/something along to
somewhere (e.g. take someone to visit another
person); to carry something'
akngerne- (tr.v.) 'to carry something' (the -*rne* on this
form is not synchronically analyseable, it occurs
on a number of transitive verbs and appears to be a
remnant of an old tense form in a distinct
conjugation class [c.f. Walrpiri -*rni*])

e. "to bring"

aknge-tye- (tr.v.) 'to bring something' [*aknge-* 'to
take; carry' -*tye* 'hither']
aknge-tye-alpe- (tr.v) 'to bring something back' [*alpe-*
'to go back']

f. "to move" (from one place to another e.g. they shifted into the shade; they moved camp)

aname-irre- (i.v) 'to move out of the way; to move camp;
shift from one place to another (e.g. the clouds
are moving this way from the south)' [This form
involves the inchoative verb formative -*irre*; the
same root, *aname*, also occurs with the causative
attached - *aname-lhile-* 'to move something from one
place to another']

[N.B. Many general uses of 'to move', in the sense of
travel and translocation, are also rendered by *alhe-*
'go', c.f. (a) above.]

akngerne-lhe- (i.v.) 'move off from one place to
another; shift from one place to another' (e.g. get
up and move from the sun into the shade).
[*akngerne-* (tr.v.) 'to carry something (see (d)); -*lhe*
'REFLEXIVE' (lit. 'to carry oneself somewhere')]

g. "to leave behind" ("to abandon"; "to leave something somewhere and go off")

impe- (tr.v.) 'to leave something (including a place)
behind and go off; to abandon something; to let go
of something/leave it alone'
ipmentye-irre- (i.v.) 'to be abandoned; to be left alone
for a long time (esp. of a camp; site or person -
e.g. that camp has been abandoned for a long time
now) [*ipmentye* (nom/adv) 'abandoned; alone'; -*irre*
'inchoative (intransitive verb formative)']
ipmentye-iwe- (tr.v.) 'to abandon someone or something
(for good)' [*ipmentye* (nom/adv) 'abandoned; alone';
iwe- 'to throw away; chuck out']
iwe- (tr.v) 'to throw something; to throw away, toss
out; drop someone off somewhere; leave
something/someone with someone else; abandon
something'
iwe-rl.alhe- (tr.v) 'leave something/someone behind at a
place; depart from; pass by/overtake someone' [*iwe-*
'throw (away)'; -*rl.alhe* 'do verb action and then
go off']

h. "to move" (with no overall change of location; move on the spot or about a fixed point
e.g the bush is moving; his eyes/hair moved)

aknge-lhe- (i.v.) 'for something to move about a fixed
point; sway; swing; shake; move a body part' [e.g.
'The bush moved'; 'I moved my arm'; 'The spinning
top is moving/rotating] [*aknge-* 'to take
someone/something along to somewhere; to carry
something' (see (d)); -*lhe* 'REFLEXIVE' (lit. to

take/carry oneself) - compare *akngerne-lhe-* under
(f))

i. "to move quickly" ("hurry away"; "hurry off")

unte- (i.v.) 'hurry off; move quickly along/away (e.g.
of car; snake; person; leaf that is blown along
etc.); run; flow, come pouring out (of liquids)'

unte-tye- (i.v.) 'hurry this way; move quickly towards
deictic center' [*unte-* 'hurry off', *-tye* 'hither']

arrtyane- (i.v.) 'animate being go hurrying off; run
.away, escape' [compare the form *arrtye* (adv.)
'skippingly; hoppingly; shufflingly; jigglingly']

ahere-irre- (i.v) 'to move quickly' [*ahere* (adv.) 'move
quickly; fast'; ; *-irre* 'inchoative (intransitive
verb formative)']

j. "to walk"

In most cases the general motion verbs given previously,
especially in (a)-(c), would be used, with no manner
specified. When one wants to be explicit, the nominal
ingke 'foot, feet; leg' occurs before one of those
general motion verbs:

ingke alhe- 'walk (along; off; away)'

ingke apetye- 'come walking (towards deictic centre)'

ingke alpe- 'return on foot'

k. "to run"

There is no verb which specifically refers to (or even
prototypically conjures up) the motor pattern associated
with moving the legs quickly to locomote. The two most
common ways to refer to an action with this manner are
to use the verb *unte-* 'hurry off; move quickly (in the
manner characteristic of the subject moving faster than
its norm)' or the verb *arrtyane-* 'animate being go
hurrying off; run away, escape' [compare the form *arrtye*
(adv.) 'skippingly; hoppingly; shufflingly;
jigglingly']. See (i) above.

Some speakers accept *ingke unte-* (foot hurry.off-) 'run'
In the case of *arrtyane-* there seems to be a strong
association with movement (including skipping, jumping,
bounding, shuffling) that makes the body 'jitter' or
'jiggle'.

l. "to crawl (of baby)"

artnerre- (i.v.) 'to crawl of humans (typically babies);
or of higher animates who are dragging their back
legs along (usually due to paralysis)'

artnerre-ake- (i.v.) 'to crawl' [same as above, unclear
what the *ake-* element is]

[N.B. the nominalised form of this verb *artnerre-ntye*
refers to the 'crawling stage of babies' or to anyone
who is only able to crawl.]

m. "to fly (of bird)"

General motion verbs are often used, but it is also
common to make it explicit that one is talking about
"flying" (of birds, airplanes, insects). In this case,
the motion clause contains both a general motion verb
and the locative phrase *alkere-le* (sky- LOC) 'in the
sky; through the sky'. For example:

alkere-le alhe- (in the sky go) 'fly along; fly away'

alkere-le apetye- (in the sky come) 'fly this way'

alkere-le unthe- (in the sky wander) 'fly around'

[N.B. The form *alkere-ke-irre-* (sky-DAT-INCH) is used
for a winged entity "taking off; taking flight" (lit.
become into the sky)]

n. "to hover" ("to flutter" - e.g of hawk; butterfly)

alharrke- (i.v.) 'for lightning to flash; to twinkle,
flicker; flutter, tremble; hover in place (of a
hawk)'

[Compare, *lyarrkwe-lyarrkwe-irre-*, which Henderson
and Dobson record for S.E. variety of Eastern
Arrernte, in the meaning of "flap (e.g. butterfly
wings)" and "talk really loudly".

Also compare Alyawarr *arrke-* 'make a shaking
vibrating movement; flash, twinkle; flutter (as in

the hawk is fluttering in the sky)' with Arrernte
arrke- 'lightning flashing; go away; go back
somewhere']

o. "to swim" (of fish? of person?)

kwatye-ke irrpe- (i.v.) 'have a bath, go for a swim'
(*kwatye* 'water'; *-ke* DATive; *irrpe-* 'to enter', so
this is literally 'enter water')

apmapele (adv) 'swim along using the limbs to propel
oneself', this adverb commonly modifies a basic
motion verb, e.g. *apmapele alhe-* (swimmingly
go) 'to go swimming along'.

For fish or tadpoles or watersnakes or certain water
larvae, the general motion verbs can be used, but, as
with 'fly' (in m. above), one often finds the medium
expressed in the motion clause. That is, *kwatye-le*
(water-LOC) 'in water' often appears with a motion verb
to realise 'swim'. For example:

kwatye-le alhe- ('in water go') 'to swim along (fish)'
kwatye-le unthe- ('in water wander') 'to swim around'

p. "to roll" (e.g. of ball or boulder or tumbleweed)

Again, typically just described by basic motion verbs
(which don't encode manner). When wanting to specify
some kind of manner, then in the case of "rolling", the
following adverb is used:

ahertatye (adv.) 'rollingly; tumblingly' [Note, the
object doesn't have to be 'round', this can even
refer to a person staggering and stumbling along.]

ahertatye alhe- 'to roll along; to tumble along'
ahertatye apetye- 'to come tumbling; to roll this way'

q. "to creep up on" ("to sneak along"; "sneak up on")

aperte- (i.v.) 'creep up on; stalk; approach stealthily;
move without making a sound'

anyelknge-anyelknge (adv) 'to move in secret; to move
sneakily' (c.f. anyelknge 'sneakily; secretly')

anyelknge-anyelknge alhe- 'to sneak off; to take off

without permission; to move along suspiciously as
if intending to do something bad'

r. "to follow someone/something"

apente- (tr.v.) 'to follow someone; to follow a path'
interte (adv.) 'following someone; going on behind'
interte-ke-irre- (i.v) 'to go along following someone;
to start out after someone intending to catch up
with them eventually' [*interte* 'following'; *-ke*
'DATive'; *-irre* 'INCHoative']

interte-ake-me (tr.v) 'to follow someone; to catch up
with someone by following after them'

s. "to track someone/something"

ingkente- (tr.v.) 'follow the tracks of something'
[Almost certainly originally based on *ingke* 'foot;
leg; footprint, track'.]
[Note that Henderson and Dobson (1994:374) also
give the meaning 'go along putting your feet in
someone else's footprints' and observe "This is an
oldfashioned way for an older boy or younger man to
try and woo a girl; putting his foot into a
footprint of hers (without her necessarily seeing)"

ingke apente- (tr.v) 'follow a person's tracks' [*ingke*
'footprint; track' *apente-* 'to follow'

impatye apente- (tr.v) 'follow the tracks of an animal
or person' [*impatye* 'the tracks or imprints made by
an animal or person]

t. "ascend" ("get up on to"; "to climb up")

antye- (i.v.) 'go up, ascend; climb up; get up
onto/into; mount a horse; ride horse/bike'. [The
Dative case (*-ke*) goes onto the thing that is
climbed on, mounted]

akertne-irre- [up/top/above/high-INCH-] (i.v.) 'become
upwards; rise (e.g. sun; flag; bread; water level);
move up'

[N.B. There are is one complex associated motion inflection which attaches to verb stems and contains the verb root *antye-*, namely *-ty.antye* 'do verb action while moving upwards'.]

u. "to descend" ("get down off/out of")

atnarnpe- (i.v.) 'to descend; get down off of; climb down; get out of (e.g. car); dismount; jump off of'. [The ablative case, *-nge* goes on the thing that is 'dismounted' and the place one climbs down to (jumps off onto) takes the Dative case *-ke* (if the goal is achieved) or the allative case *-werne* (if motion is merely towards that place)]

akerle- (i.v.) Henderson and Dobson 1994 give this as a verb meaning 'move down, come down, go down', it may also mean 'to move downstream'.

kwene-irre- [in/inside/down/under/below-INCH-] (i.v.) 'become downwards/become inside; move down/move inside; descend (e.g. sun); to sink in water; to become deflated or pressed in; retract'

[N.B. There are two complex associated motion inflections which attach to verb stems and contain the form *akerle-*, namely *-ty.akerle* 'do verb action while moving downwards' and *-artn.akerle* 'quickly do verb action while moving downwards'. Henderson and Dobson 1994 note a further associated motion form for the S.E.dialect: *-inty.akerle* 'do verb action while coming downwards towards the person speaking'.].

v. . "to fall" (down from a height) [does this contrast with "to fall over"?; "collapse"?]

atnye- (i.v) 'to fall, fall down from a height, fall over, topple over, drop from above (like fruit from a tree)'

arrurelhe- (i.v.) Henderson and Dobson 1994 record this verb as meaning 'a number of things fall to the ground one by one, stuff falls off bit by bit; fall out (e.g of hair)'

atake-lhe- (i.v.) [destroy-REFLEXIVE-] 'to cave in; collapse (e.g. of a building); fall in on itself'

w. "emerge" ("exit"; "appear"; "come out"; "rise [of sun]")

arrate- (i.v) 'to appear; emerge; come out of; arrive on the scene; rise (e.g. of sun or of smoke from a fire) [The ablative case, *-nge* goes on the thing that something emerges or comes out from, while the place one emerges to (appears at) takes the Dative case *-ke*]

akethe-werne alhe- (i.v.) [outside-ALLATIVE go-] 'to go outside; to move into a clearing or an opening'

arrate-lhile-lhe- (i.v.) [emerge-CAUS-REFLEXIVE-] 'to cause self to appear/emerge/come out' (e.g. a baby bird pecking out of an egg)'

tyerre-lhe- (i.v.) [extract/pull.out-REFLEXIVE] 'to get out of (a tight) enclosure; emerge from a cocoon; become dislocated (of joints and bones); to pull something out of oneself'

x. "to enter " ("to go into" [e.g. a house, a camp])

irrpe- (i.v.) 'go into; enter into; set (of sun)'; put on clothing' [The thing entered takes the Dative case *-ke* ; Note that this can be used even when just part of the body crosses into something. That is, if someone stuck their hand through a house window (to grab something) then they still 'entered/went into' the house. This contrasts with *irrpe-nhe-* below]

irrp-intye- (i.v.) [enter-DO.WHILE.COMING-] 'come into; enter towards the place where speaker is'

irrpe-nhe- (i.v) [enter-DO.MOVING.PAST-] 'for the whole of something to move into something else; for a person to fully enter a space'

irrpe-lhile-lhe- (i.v.) [enter-CAUSATIVE-REFLEXIVE-] 'to cause oneself to be inside; take oneself inside; retract (e.g. a desert mouse struggling into a narrow crack, dragging its body into a tight area).

akwerne-lhe- (i.v.) [insert-REFLEXIVE-] 'animate being get into something; hide; animate being go inside a space'

y. "to cross over" ("go across")

    tyane- (v.i) 'to cross over something; to cross through

        something; go across' [The thing that is crossed

        typically takes the Ablative case *-nge*; but where

        it's also some medium crossed through it can take

        the Locative case *-le*]

    rtalkwe alhe- (v.i.) [across/over go-] 'go across;

        cross in front of someone' [Note *rtalkwe* is a

        spatial adverbial form meaning 'do acrossways;

        crossing; be sideways to; over'

    rtalkwe-irre- (v.i) [across/over-INCHOATIVE-] 'move

        across something; cross over; pass overhead; cross

        someone's path' [lit. 'become across']

z. "to pass by"

    anpere alhe- (v.i.) [past go-] 'go past

        something/someone; go through a place or area'

        [Note, the thing that is passed typically takes the

        Ablative case *-nge*.]

        Note, *anpere* is a spatial adverbial form meaning

        'be or move past; be or move through; past;

        through; extended along; by']

    anpere-irre- (v.i.) [past-INCHOATIVE-] 'to pass by; to

        pass through'

    iwe-rl.alhe- (tr.v) 'leave something/someone behind at a

        place; depart from; pass by/overtake someone' [*iwe-*

        'throw (away)'; *-rl.alhe* 'do verb action and then

        go off']

MODULE II : Motion-Rich 'Textlet' or Text Fragment

So that one can get a feel about how motion description really works in the language, could you please provide a piece of natural continuous text which is rich in motion expression, and which you feel is representative. All that is needed is a small text or text fragment of between 5 and 20 clauses in length, in which the focus is the motion of one or more of the "protagonists". Of course, we need you to provide morphemic breaks, interlinear glosses, and a free translation. It would also be useful if you could provide notes, as you go along, to any specific motion related features that the 'outsider' should attend to. [An example will be provided. - Note that, we'd prefer it if you did not rely on a translation from English, but instead used a small text that was generated directly from the mind and mouth (or pen) of a native speaker.]

Arrernte Motion-Rich Textlet
• The following textlet and free translation are taken from Henderson and Dobson's (1994: 405-406) dictionary entry for *irretye* 'wedge-tailed eagle, eaglehawk'.
• I chose this textlet, rather than one I have collected myself, because the contrast between the English free translation that Henderson and Dobson provide and the Arrernte description is particularly good at illustrating the difference in 'motion packaging' between the two languages. [It is advantageous that they presumably weren't preoccupied with 'motion' issues when providing an idiomatic English translation for the examples.]
• The dictionary does not provide a morphological breakdown for illustrative sentences. Thus, the morphological analyis, gloss of morphemes and annotations are mine alone (D.P.W.).
• The free translation in italics is Henderson and Dobson's [In annotations I make comments to flesh out the translation further.]
• Of special interest are (i) the prevalence of manner of motion verbs in the English rendition, while there are no manner of motion verbs in the Arrernte (although there are adjuncts to general motion verbs on the basis of which manner can be deduced), and (ii) the use of 'associated motion' inflections in the text.

a) Thipe irretye-∅ alkere akertne-le   unthe-le.ane-me
      bird   eagle-S   sky   up/high-LOC wander-CONT-npp
    The wedge-tailed eagle flies around in the sky

    [N.B. The English translation 'fly around' corresponds to a
    phrasing in Arrernte that is more literally rendered as
    'wandering continuously in the high sky'. The motion verb
    unthe- 'to wander; to go around in search of' provides the
    path notion 'around' but no sense of manner. 'Fly' is
    deduced from the occurrence of the adjunct (locative) noun
    phrase 'sky high-LOC'.]

b) kwene-akerle   are-me-le   kere-ke
   down/inside-downwards look/see-npp-SS game-DAT
   looking down for its prey

c) Kere-Ø   are-me-le
   game-O   see-npp-SS
   When it sees its prey

d) imernte   kwene-akerle   aywerre
   and.then down/inside-downwards   whirring .noise

   angke-ty.akerle-me-le.
   speak/make.sound-DO.MOVING.DOWN-npp-SS
   the eagle comes swooping down making a whirring noise

   [N.B. There is no single word equivalent of 'swooping', this
       clause uses a category of associated motion inflection on
       the verb *angke-* 'speak; make a sound', and a more literal
       translation is 'make a whirring noise while descending
       downwards'.
   Note also the two different occurrences of *-akerle*; this form
       has its origins in a verb *akerle-* 'move down; go
       downwards; move downstream' but has grammaticised in two
       different (but related directions). In one instance it is
       a nominal suffix meaning 'downwards' (no sense of motion
       entailed), in the second instance it has grammaticised
       as part of a complex associated motion verb inflection
       -ty.akerle 'do verb action while moving downwards'.]

e) Kere iwenhe apeke re-nhe   iltye-le   ware-arteke-le
   game what   maybe 3sg-ACC   claw-INSTR   just-SEMBL-ADV

   athankwe-nhe-me-le
   scoop-DO.MOVING.PAST-npp-SS
   *Whatever the prey is, it just scoops it up in its claws just
   like that.*

   [N.B. There is an associated motion inflection meaning 'do
       while moving past' on the verb root meaning 'to scoop up;
       to scoop out', and so the complete verb would be more
       literally rendered as 'scooping on the way past (the
       prey)']

d) akertne-ulkere-irre-nhe-me-le
   up/top/high-MORE-INCH-DO.MOVING.PAST-npp-SS
   and then goes high into the sky

   [N.B. Here we have an example of a common form of
       intransitive motion verb derivation using the inchoative
       form *-irre*. This verb formative can be added to cardinal
       point terms, spatial adverbials, and certain other spatial
       terms to create motion verbs meaning to move in the
       direction or relative orientation specified in the
       root. See also (g)]

e) imernte   itnye-lhe.ile-me-le.
   and.then fall-CAUS-npp-SS
   and drops it
   [N.B. This is the common form for 'dropping something, it is
       formed by adding causative morphology to the verb root
       meaning 'to fall']

f) Itnye-lhe-arle-ile-ke iperre
   fall-CAU-foc-SE-pc   AFTER
   After dropping it

   [N.B. The (emphatic) focusing suffix *-arle*, appears between
       the elements of the causative formation (lhe.ile). This
       functions to indicate that the thing dropped has fully
       completed its descent.]

g) imernte   kwene-akerle   kwutye-tyeke anteme
   and.then   down/inside-downwards gather-PURP   now

   utepe-irre-me-le
   back.towards-INCH-npp-SS
   the eagle returns to pick it up

   [N.B. Here we have another derived intransitive motion verb
       using the inchoative-*irre*. In this case, the root form,
       while entering into several derivations, does not appear
       to occur as an adverb or spatial term on its own. A more
       accurate translation of *utepe-irre-* might be 'turn and go
       back'.
   Note also, Henderson and Dobson have not rendered the notion
       'downwards' in their English translation, although this is
       made explicit in the Arrernte version. Thus, an
       alternative close translation might be 'and then (it) turns
       and goes back downwards in order to gather up (its prey)']

h) alkere-le   akwete   apetye-mele   ware-arteke-le
   sky-LOC   still/keep.on   come-npp-SS   just-SEMBL-ADV
   [no translation corresponding to this given]

   [N.B. I would translate this as 'The eagle keeps on flying
       this way just like that.' Once again 'fly' is not coded in
       the verb, but deduced from the locative adjunct, (see (a)
       above), and in this case the complex phrasing literally
       means 'come this way in the sky'.
   Note also, that the *apetye-*, at least historically, involves
       the 'hither' suffix *-tye*, added to the proto-Arandic 'go'
       verb *ape-*.]

i) imernte   kere re-nhe   ahelhe-ke   kwutye-tyeke
   and.then game 3sg-ACC   ground-DAT gather-PURP
   [no translation corresponding to this given]

   [N.B. I would translate this line as 'to regather its prey
       that's (landed) on the ground']

j) arlkwe-rl.ane-tyeke imernte   apwerte   akertne-werne
   eat-CONT-PURP   and.then   hill/rock up/high/top-ALL

   aknge-tye-me-le   antywe ikwerenhe-werne apeke
   carry/take-HITHER-npp-SS   nest   3sgGEN-ALL   maybe
   and then takes it into the hills or to its nest to eat.

   [N.B. This is the first time in which we have a goal phrase

added, in fact we have two alternative goals: literally
'bring it towards the hill top, or towards its nest'.
The allative -werne does not entail achievement of goal.
Note also, that although 'take' is given in the original
free translation, the verb is actually used means 'bring'
and is derived by adding the 'hither' suffix -tye to the
verb aknge- 'to take; to carry'.]

The following abbreviations occur in the glosses in this textlet:
3 '3rd person'; sg. 'singular';
S 'subject of intranstive'; O 'object of transitive';
ACC 'accusative'; DAT 'dative'; INSTR 'instrumental';
LOC 'locative'; ALL 'allative'; GEN 'genitive';
SEMBL 'semblative'; ADV 'adverbial'; foc 'focal element';
pc 'past completive'; npp 'non-past progressive';
CONT 'continuous aspect'; INCH 'inchoative'; CAUS 'causative';
PURP 'purposive'; SS 'same subject'

MODULE III: Grammatical Marking of Ground and Path

In Talmy's (1985:61) terms the basic components of a motion event are:
Figure = the entity that is in motion
Ground = the entity or entities that the Figure is moving in relation to
Path = the course followed (and trajectory) of the Figure (often deduced from the
    Ground which is specified)
Motion = the actual predication of a motion act.

So, in the sentence 'the baby crawled up the hill', the Figure is 'the baby', the Ground is
'the hill', the Path is specified with 'up', and the assertion of Motion is encoded in the verb
'crawl'.

This module of the questionnaire is particularly concerned with the way in which Grounds
and Paths (including direction) may be grammatically coded. We would appreciate it if you
used some of the expressions from the list in Module I of this questionnaire in glossed
example sentences to illustrate the types of marking asked about below.

A. Marking of grounds

a) How are "goals" of motion marked? (i.e. what cases, adpositions, or other means are
    used to mark ground NPs functioning as "goals" of motion?)
    [e.g. The child crawled to(wards) the tree.; They returned to camp; The lizard got up
    onto the rock.;]

• There is an ALLative case -werne which roughly translates
'towards', to'.
Ampe artnerre-ke arne-werne (child crawl-p.c. tree-ALL)
'The child crawled towards the tree'

Itne apmere-werne alpe-rltiw-ke (3plS camp-ALL return-
plS-pc) 'They returned to camp'

• With some motion verbs, the endpoint (achieved) goal is
marked with the DATive case -ke.

Ankerte apwerte akertne-ke antye-ke. (bearded dragon
rock top-DAT climb/ascend-pc) 'The bearded dragon got up onto
the rock'.

• NOTE: Arrernte possesses a system of four "-wards" suffixes
which are used to indicate that some entity or event (static
or dynamic) is aligned with respect to a given point of
orientation. This system has two major oppositions. The
first oppostions is between   -theke 'towards G[round]' and
-ntyele 'from G onwards; away from G', while the second
opposition is between -ntape 'upwards' and -akerle
'downwards'. The suffixes -theke 'towards' and -ntyele 'from
onwards' have a special association with the case suffixes -
werne 'ALLative' and -nge 'ABLative', respectively, and they
are commonly (but not necessarily) found attached after
these cases. The morphemes -ntape 'upwards' and -akerle,
almost always occur attached to the 'spatial-part-cum-
positional' terms akertne 'up, top, above' and kwene 'in;
inside; into; down; under; below', respectively.

b) Can one make a distinction between 'to X' and 'towards X'? For all motion verbs?
How?
    [e.g. The leaf fell towards the ground. vs. The leaf fell to the ground.]

• No, one cannot make a distinction between 'to X' and
'towards X' for all verbs.
- The verbs from the "deictic" motion set (e.g. alhe- 'go';
alpe- 'go back'; apetye- 'come', etc.) only mark goals with
the ALLative case -werne, and this is vague between
'towards' and 'to'.
- By contrast, the verbs from the 'oriented motion subclass'
(e.g. atnye- 'fall'; irrpe- 'enter'; arrate- 'appear;
exit') can mark goal NPs with either the ALLative case, -
werne, or the DATive case, -ke, providing a 'towards' versus
'to' reading, respectively.

Arlpelhe ahelhe-werne atnye-ke. (Leaf ground-ALL fall-pc)
'A leaf fell towards the ground'.

Arlpelhe ahelhe-ke atnye-ke. (Leaf ground-DAT fall-pc) 'A
leaf fell to the ground'

c) How are "sources" of motion marked?
    [e.g. The woman moved away from the fire.; They travelled from Sydney.;
    The baby bird fell out of the tree.; The dog fell off of the truck.]

• Sources of motion are marked using the ABLative case -nge,
often with the further suffix -ntyele 'from G onwards; away
from G' attached (giving -nge-ntyele).

Arelhe ure-nge aname-irre-ke. (woman fire-ABL shift-pc)
'The woman moved away from the fire'

Re apetye-ke Sydney-nge-ntyele. (3sgS come-pc Sydney-ABL-
onwards) 'He came from Sydney (i.e. travelled from Sydney
onwards towards here)'

d) How are ground NPs which refer to the route or path along/on which motion takes place marked? [e.g. He's walking along the track.; The horse wandered along the sides of the fence.]
• One of the uses of the LOCative case -le is to indicate the 'path along which someone travels'.

Re iwerre-le alhe-me (3sgS path-LOC go-npp)
'He's walking along the path'

• When one is travelling along beside something, one tends to use the phrasing X itere-le (X side-LOC) 'along the side of X' [e.g. alhere itere-le 'along beside of the creek'; parrike itere-le 'along the side of the fence']

e) How are ground NPs which refer to the medium in which motion takes place marked? [e.g. The bird is flying through the air.; The children are running through the sand?]
• The LOCative case, -le, is also used to mark the medium in which motion takes place.

Thipe alkere-le alhe-me. (bird sky-LOC go-npp) 'The bird is flying' [literally, the bird is going through the air.]

f) How does one mark a ground NP which refers to a place through (or via) which the figure travels in order to get to another place? [e.g. They travelled from Alice Springs to Elliott via Tennant Creek; She came through here on her way to church.]
• The ending -mpele is attached to either the LOCative case, -le, or the ABLative case, -nge, to render the sense of 'through' or 'via'.

Darwin-werne Adelaide-ntyele apetye-me itne apmere Mparntwele-mpele alhe-me-le. (Darwin-ALL Adelaide-onwards come-npp 3plS place Alice Springs-LOC-through go-npp-SS) 'Coming from Adeliade to Darwin they go through Alice Springs.' [E&CA to E Dictionary: page 478]

• Similarly, the ending -angkwerre attaches to the LOCative case to render the sense of 'through, via, by, along'

g) With expressions like "enter" (or "go into") and "exit" (or "come out of"), how are the ground NPs which refer to the space "entered" and "exited" marked? [e.g. The snake entered its burrow.; The owl came out from the hollow of the tree.]

• With the verb irrpe- 'enter; go into' the DATive case -ke marks the space entered.
• With the verb arrate- 'appear; come out; emerge' the ABLative case -nge marks the space exited (often you get -nge-ntyele 'from X onwards marking the source NP)

h) With expressions of "crossing" and "passing" how are grounds indicating the entity 'crossed' and 'passed' marked? [e.g. Those people ran past our house; A dingo crossed the road.]

• The ABLative case -nge tends to mark the grounds referring to entities which are 'crossed' or 'passed'. [In some instances -le LOCATIVE also marks such grounds, but I am not sure about the distinction between the two forms of marking.]

Eastside Shops-nge anpere-irre-me. (Eastside Shops-ABL) 'passing by East Side Shops'

Kngwelye iwerre-nge tyane-ke. (dog road-ABL cross-pc) 'The dog crossed the road'

i) Languages like English can string several Grounds together with one motion verb (e.g. The dog carried the meat from the creek along the path to the tree.). Other languages have strong restrictions, preferring one Ground per motion verb. Do you have a sense of how many grounds can occur naturally with a motion verb?

• A search of the text corpus suggests that by far the most common situation is for there to be one ground per motion verb (This is NOT an artefact of some more general rule limiting the typical number of adjuncts in a clause to one, in fact Grounds of motion clauses commonly co-occur with other adjuncts specifying other information than Ground information).

re-therre arrate-me-le inteye-nge alpe-rre-ke apmere-werne anteme. (3dlS emerge/exit-npp-SS cave ABL, return-dlS-p.c. camp-ALL) 'They (dl) exited from the cave and then returned home.' [emerged from the cave ... returned towards home]

• In a number of cases, two grounds do occur. There are multiple instances where both an ABLative-marked ground and an ALLative-marked ground co-occur. I also have some instances where an ALLative marked ground cooccurs with a Locative-marked ground specifying the medium in which or the path along which motion takes place.

Kele akngwelye window ikwere-nge-ntyele itny-eke akethe-werne-theke. (O.K. dog window 3sgDAT-ABL-onwards fall-p.c. out.side-ALL-wards) 'Then the dog fell from the window to outside'

Itne Yipirinya-werne alhe-ke iwerre-le, ... (3plS Yipirinya-ALL go-pc road-LOC) 'They went to Yipirinya along the road, ...'

• I have found only one non-elicited instance where 3 Grounds cooccur. [Speakers do not reject constructed utterances with 3 grounds, but they often preferentially break them into two or three clauses.] The one natural example I have comes from a route description:

Apmere ikwere-nge unte apeke alhe-rle averrere-werne-theke alhere itere-le. (Place 3sgDAT-ABL 2sgS might go-

gen.evt north-ALL-wards creek.bed side-LOC) *'From that place
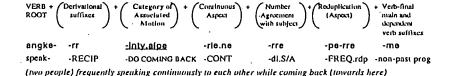you could go northwards along beside the creekbed.'*

j) If you use adpositions or case endings to express these ideas, can they occur
   independently as the main predicate in a sentence as in? (If they are possible, what do
they mean? Can they have motion readings or only static spatial readings?)

I need to check. As far as I'm aware, in Arrernte, verbless
clauses in which 'case-endings' could be interepreted as the
main 'predicate' are always stative (non-dynamic). There
does not appear to be anything like Kayardild in which
verbless clauses with NPs marked for certain ALLative and
ABLative cases are interpreted as motion clauses.

B. Path Direction

a) Are there any form of directionals (i.e. grammaticised directional elements like Warlpiri
   -rni 'hither, to here', *-rra* 'thither, to there', *-mpa* 'past, by, across')? If so, what part
of speech class do they attach to, or co-occur with? If they combine with verbs, are they
restricted to motion verbs or can they, for instance, occur with perception verbs or speech
act verbs (or all verbs)?

• There is 'hither' directional -tye of limited use: unte-
'to hurry off' vs. unte-tye- 'to hurry hither'; aknge- 'take,
carry' vs. aknge-tye- 'to bring; carry hither' [and
suppletively alhe- 'go' and ape-tye- 'come']

• As (f) in part A above showed, there are a couple of
endings, which attach after cases on a ground noun phrase,
which indicate 'through, via, past'. For instance, the ending
-mpele 'via, by way of, through', which is probably cognate
with the Warlpiri directional -mpa 'past, by, across'. [In
this regard also note the various 'X-wards' endings noted in
(a) in part A.]

• See, part (b), as many of the associated motion forms are
used like (quasi-)directionals.

b) Does the language have anything akin to the 'associated motion' category discussed by
   Koch (1984); Tunbridge (1988); and Wilkins (1989, 1991)? If a language has anything
like this, it is usually some form of verb affix, verb compounding or fixed construction,
and the most commonly coded notions tend to be 'do verb action while going along'
('she cried all along the way') or 'go/come and do verb action' ('she came and told me';
'she went and hit him'). Please describe any phenomena that seem to be relevant.

There are 15 (quasi-)inflectional forms which constitute the
'category of associated motion' in Arrernte. Some of these
have already been mentioned in Module I under a., b., c., t.,
and u. This category is used to foreground the action (or
state of affairs) encoded in the verb stem against the
background of a motion event with which it is associated.
This category has its own position in the verb:

VERB + ROOT	(Derivational suffixes)	+	(Category of Associated Motion)	+	(Continuous Aspect)	+	(Number ·Agreement with subject)	+	(Reduplication (Aspect))	+	Verb-final main and dependent verb suffixes
angke-	-rr		-inty.alpe		-rle.ne		-rre		-pe-rre		-me
speak-	-RECIP		-DO COMING BACK		-CONT		-dl.S/A		-FREQ.rdp		-non-past prog

(two people) frequently speaking continuously to each other while coming back (towards here)

The distinctions made are presented in the following table:

CATEGORY OF ASSOCIATED MOTION				
Action and Motion Concurrent		**Action and Motion Non-Concurrent**		
(Performer of Action is also moving entity)				
Directed: Deictic	Oriented		GO (-lhe)	GO BACK (-alpe)
-intye = "DO COMING"	-nhe = "DO PAST"	Prior Motion (-tye)	-ty.alhe = "GO & DO"	-ty.alpe = "GO BACK & DO"
-inty.alpe = "DO COMING BACK"	-ty.antye = "DO UPWARDS"			
	-ty.akerle = "DO DOWNWARDS"	Subsequent Motion (-rle)	-rl.alhe = "DO & GO"	-rl.alpe = "DO & GO BACK"
-inty.alhe = "DO COMING THRU"				
-irtne = "REVER-SIVE": (a) Do going back; (b) Do back to	-artn.akerl = "Quickly DO DOWNWARDS"	Subsequent Motion Hurried (-artne)	-artn.alhe = "Quickly: DO & GO"	-artn.alpe = "Quickly: DO & GO BACK"
(Performer of Action is NOT moving entity)				

Directed Non-Concurrent
(prior) -ty.intye = "DO ON Z's ARRIVAL"

Examples of the use of some of these forms appear in the
textlet in Module II, and in Part IV d.

Sometimes, where the verb stem already encodes that the
subject or object is a moving entity (the figure), the
'associated motion' inflection can have a more purely
directional interpretation. Thus, while nth-intye- 'give-
DO.COMING' can mean that the subject did the giving while
on the way moving towards deictic center, it can also mean
'give it here', where it is the 'object' (the standard

'moving theme') whose direction of motion is specified (and the subject doesn't have to be in motion at all).

MODULE IV: What Element of the Clause Encodes Path? :
The verb-framed vs. satellite-framed typology

Talmy (1985) observed that, in motion descriptions, a language like English differs typologically from a language like Spanish, by virtue of the fact that Spanish tends to conflate 'motion' and 'path' together in the verb root, while English tends to code path in a separate (adverbial/prepositional) element which functions as a satellite to the verb. He judges patterns of expression to be characteristic for a language if they are (i) colloquial in style (rather than formal or stilted), (ii) frequent; and (iii) pervasive (rather than limited) in application. Thus, in English, the characteristic mode of expression is to say "go up", "go down", "go in", "go out" and so on, while it is less characteristic to to say "ascend", "descend", "enter", "exit", and so on. The former pattern exemplifies "satellite-framing" (i.e. 'go' provides the motion concept, while 'up', 'down', 'in', 'out' realizes the path). For languages like Spanish, verbs like "enter" and "ascend" are the characteristic mode of expression, and the verb roots can been seen to simultaneously code "motion" and "path" (i.e. "verb-framing").
[Note: Satellites to the verb-root may be affixes on the motion verb root; or clitics; or path adverbs; or particles; or preverbs]

Please try to assess whether the language you are working on is verb-framed or satellite framed (or somewhere in between or something else), by answering the following 'diagnostic' questions:

a) Are verb roots meaning 'enter', 'exit', 'descend', 'climb up' a more characteristic form of expression, in Talmy's terms, than more analytic counterparts such as "go into", "go out of", "go down", "go up"?

• Although both forms of expression are possible, use of the verb roots irrpe- 'enter', arrate- 'appear, exit', atnarnpe- 'descend; get down off of', and antye- 'climb; ascend; go up; rise' are far more frequent in texts and more colloquial in style than their analytic counterparts.

•One can, and sometimes does, say kwene-werne-theke alhe- (inside-ALL-ward) 'go towards the inside', kwene-nge-ntyele alhe- (inside-ABL-onwards go) 'go from the inside onwards', akethe-werne-theke alhe- (outside/clearing-ALL-wards go) 'go towards the outside', akertne-ntape alhe- (up/top-upwards go) 'go upwards', and kwene-akerle alhe- (down-downwards go) 'go downwards'. As you would imagine, the meanings of the verb roots and their more analytic associates are not synonymous even though, in certain cases, they can be used to describe the 'same' scene. For instance, irrpe- 'enter; go into' strongly suggests that the figure crosses a boundary into a containing area, whereas kwene-werne-theke alhe- 'go towards the inside' does not, and can be used when something is already in a containing region and is moving towards its centre. Further, in texts, akethe-werne-theke alhe- 'go towards the outside' tends to be used to refer to something moving into a clearing or moving towards a wide open space, and arrate- 'to emerge; appear; come

out; exit' typically cannot substitute it in the same context.

b) How common is it for verbs in the language to conflate both 'motion' and 'manner' (that is, are there a rich class of verb roots like 'run', 'swim', 'slither', 'hop', 'limp', 'crawl', 'stroll', etc.]? According to Talmy, if a language characteristically conflates 'motion' with 'manner' in verb roots, it is NOT common for the same language to also characteristically conflate 'motion' with 'path'.

• It is very uncommon for verb roots in the language to conflate 'motion' and 'manner'. For instance, to express the manner equivalents of 'walk', 'swim', 'limp', 'roll', and 'fly' one would have to resort to complex expressions (typically in the form of an adjunct or an adverb modifying a basic motion verb like alhe- 'go', apetye- 'come', unte- 'hurry', etc.). Among the handful of manner of motion roots are verbs like artnerre- 'to crawl (of a baby)'and urnte- 'do the men's dance'. Such roots are very low frequency in text counts (especially in comparison to 'deictic' motion roots like alpe- 'return; go back' and 'oriented motion roots'like irrpe- 'enter; go into').

c) When both manner and path notions appear in a motion description, how does information get distributed among elements? To answer this question we list sentences below which try to elicit some of the relevant distinctions. Again, don't go for word-for-word translations. Give us what you think would be the normal ("characteristic") way of expressing the idea (or something close to it). And, please include the following information:
— the transitivity of the verb in question in relation to the meaning expressed (including the expected case on the subject of the sentence)
— an interlinear morpheme-by-morpheme gloss

i) The child ran to the other side of the street/path/creek.

Ampe   unte-me   iwerre-nge   intwarre-thayte-werne.
child   hurry-npp   path-ABL   other.side-side-ALL
The child hurried towards the other side of the path.
[Here 'crawl' could substitute 'hurry'.]

ii) The child ran across the street.

Ampe   unte-mele   iwerre-nge   tyane-ke.
child   hurry-npp-SS path-ABL   cross-pc
The child hurried across the street. [lit. a child hurryingly crossed the path.]

iii) The baby crawled into the house/shed/camp. [Where the "into" path is to be stressed, is the form of expression done more like: "crawlingly enter" or "crawl into" or "crawl to the inside of"?]

Ampe   akweke apmere-ke   artnerre-mele irrpe-ke
child   small   camp-DAT   crawl-npp-SS enter-pc
A baby crawled into the house. (Lit. a baby crawlingly entered the house.)

iv) The baby crawled up the rock [Can one distinguish "crawl to the top of the rock" and "ascend the rock by crawling"?].

Ampe akweke apwerte   akertne-werne   artnerre-me.
baby small   rock   top-ALL   crawl-npp
A baby crawled towards the top of the rock.

Ampe akweke apwerte-ke artnerre-mele   antye-ke.
child small   rock-DAT   crawl-npp   ascend-pc
A baby crawled up the rock. [Lit. A small child crawlingly ascended the rock]

    v) The snake slithered into the string bag.
[most likely to be the snake 'entered' the bag - apmwe yakwethe-ke irrpe-ke 'snake bag-DAT enter-pc]

    vi) The boy fell to the ground. [while standing on the ground? vs from out of a tree?]
ampe   urreye ahelhe-ke   atnye-ke.
child   boy   ground-DAT   fall-pc
a boy fell to the ground [can be used for either falling over from a standing position or falling out of a tree]

    vii) The rock/boy fell down into the water. (where entry into the water is stressed)
ampe urreye atnye-me-le, kwatye-ke   irrpe-ke.
child boy   fall-npp-SS, water-DAT   enter-pc
a boy fell down into the water [lit. a boy having fallen, entered water]

d) Can one "accumulate" path notions with just one verb? In English, one is not only able to string a number of different Grounds together, one can also accumulate a string of simple Path-satellites. As an example, Slobin (1996:83) notes that it is quite normal for English speakers to say things like "The bird flew down from out of the hole in the tree" (where down-from-out-of specifies the trajectory). In this English sentence, there is only one specified ground ('the hole in the tree'), but a complex of three units of Path information ('down', 'from', and 'out of'). The closest Spanish approximation would be *"El pájaro salió del agujero del árbol volando hacia abajo"* which translates literally as 'The bird exited of the hole of the tree flying towards below'. Thus, in contrast to English, Spanish, like other verb-framed languages, tends to render complex Path information through multiple clauses, since they do not allow for the accumulation of path expressions. So, what about the language under investigation?

• Complex path information is very commonly expressed through multiple clauses or through chains of verbs.

Alhekulyele-le   petye-mele
Mt. Gillen-LOC   come-npp-SS
yanhe   arrat-intye.lhe-ke,
there(mid) appear-DO.COMING.THRU-pc,
pmere Mparntwe-ke   anteme   irrp-intye-ke re,   ...
place Alice Springs-DAT now   enter-DO.COMING-pc 3sgS
Coming along Mt.Gillen (he) emerged through there and he then came into Alice Springs. [He came along through into Alice Springs]

... antyetyerre   re   kenhe arrate-rle.lhe-me-le
...   frog   3sgS But   appear/exit-DO&GO-npp-SS
alwirre-me-le alhe-rlenge
run.way-npp-SS go-D.S.

'... *while the frog got out (of the jar) and started going off, fleeing away, leaving (the scene)'* [lit. 'go off having fled, having exited and started moving off]

•With one motion verb, one can really only accumulate path notions by distributing the information across a number of different morpheme and constituent types - e.g. one bit of path information in the verb root, one bit of path information in the associated motion inflection, one bit of path information that can be deduced from the ground, and/or one bit of path information encoded in an adverbial or other adjunct.

Apente-nhe-Ø   bridge kwene-le-mpele
follow-DO.MOVING.PAST-IMP bridge under/below-LOC-via
Follow (the path) past through under the bridge.

CONCLUSION TO MODULE IV:

On the balance of evidence, Arrernte shows many more of the properties of a verb-framed ("Spanish-like") language, than a satellite-framed ("English-like") language.

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