# How Languages Represent Motion Events: Typologies and Universals 

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## 1. Introduction

### 1.1 Methodology for Finding Meaning-Form Relations

("entities" = elements, relations, and structures: both particular cases and categories of these)
a. Determine various semantic entities in a language.
b. Determine various surface entities in the language.
c. Observe which (a) entities are expressed by which (b) entities -- in what combinations and with what interrelations -- noting any patterns.
d. Compare findings of this sort across languages, noting any patterns.

### 1.2 Semantic Structure of a Motion Event

[Figure Motion Path Ground $]_{\text {Motion event }} \leftarrow$ Relation [Event] $]_{\text {Co-event }}$
"motion" has two realizations: MOVE and $\mathrm{BE}_{\mathrm{LOC}}$
"Relation" can be: Precursion / Enablement / Manner / Cause /Concomitance / Subsequence
Note: "Motion" with a capital "M" covers both motion and location
and "Path" with a capital "P" covers both path and site
2. Semantic Components of a Motion Event Characteristically Appearing in a Language's Verb Root
2.1 Motion + Co-event

### 2.1.1 Diagram of the Co-event conflated in the Motion verb



### 2.1.2 Some Languages / Language Families with the Motion + Co-Event Conflation Pattern

Indo-European (except for post-Latin Romance languages), Finno-Ugric, Chinese, Ojibwa, Warlpiri. English is a perfect example of the type

### 2.1.3 English Motion expressions -- Conflated and Unconflated

(0)
$\mathbf{B E}_{\text {LOC }}+$ Manner
a. The lamp lay $($ stood $/$ leaned $)$ on the table $=$ [the lamp $\mathrm{WAS}_{\text {LOC }}$ on the table] WITH-THE-MANNER-OF [the lamp lay there]
b. The rope hung across the canyon from two hooks =
[the rope WAS $_{\text {LOC }}$ (EXTENDED) across the canyon] WITH-THE-MANNER-OF [the rope hung from two hooks]

## MOVE + Manner

non-agentive
c. The rock rolled (bounced / slid) down the hill $=$
[the rock MOVED down the hill] WITH-THE-MANNER-OF [the rock rolled]
d. The gate swung (creaked $)$ shut on its rusty hinges $=$
[the gate MOVED shut (= the gate shut)] WITH-THE-MANNER-OF [the gate swung on its rusty hinges]

## agentive

e. I bounced (rolled / slid) the keg into the storeroom =

I ${ }_{A}$ MOVED the keg into the storeroom] WITH-THE-MANNER-OF [I bounced the keg] Similarly: I twisted / popped the cork out of the bottle.

## self-agentive

f. I ran (limped / jumped / stumbled / rushed) down the stairs =
[I WENT down the stairs] WITH-THE-MANNER-OF [I ran]

## MOVE + Cause

non-agentive
g. $\quad$ The napkin blew off the table $=$
[the napkin MOVED off the table] WITH-THE-CAUSE-OF [(something) blew on the napkin]
h. The bone pulled loose from its socket $=$
[the bone MOVED loose from its socket] WITH-THE-CAUSE-OF [(something) pulled on the bone] Similarly: The water boiled down to the midline of the pot.

## agentive

i. I kicked (pushed $/$ threw) the keg into the storeroom $=$
[ $\mathrm{I}_{\mathrm{A}}$ MOVED the keg into the storeroom] WITH-THE-CAUSE-OF [I kicked the keg]
j. I chopped (sawed) the tree down to the ground at the base $=$
[I ${ }_{\mathrm{A}}$ MOVED the tree down to the ground] WITH-THE-CAUSE-OF [I chopped on the tree at the base] Similarly: I blew / flicked the ant off my plate.

I knocked / pounded / hammered the nail into the board with a mallet.

### 2.2 Motion + Path

### 2.2.1 Diagram of the Path conflated in the Motion verb



Figure 1.2. Path conflated in the Motion verb
2.2.2 Some Languages / Language Families with the Motion + Path Conflation Pattern Romance, Semitic, Japanese, Korean, Turkish, Tamil, Polynesian, Nez Perce, Caddo. Spanish is a perfect example of the type.

### 2.2.3 Spanish Expressions of Motion with Conflation of Path

- non-agentive --with Manner gerund
a. La botella entró a la cueva (flotando)
the bottle MOVED-in to the cave (floating)
'The bottle floated into the cave'
b. La botella salió de la cueva (flotando)
the bottle MOVED-out from the cave (floating)
'The bottle floated out of the cave'
c. La botella pasó por la piedra (flotando)
the bottle MOVED-by past the rock (floating)
'The bottle floated past the rock'
d. La botella pasó por el tubo (flotando)
the bottle MOVED-through through the pipe (floating)
'The bottle floated through the pipe'
e. El globo subio por la chimenea (flotando)
the balloon MOVED-up through the chimney (floating)
'The balloon floated up the chimney'
f. El globo bajó por la chimenea (flotando)
the balloon MOVED-down through the chimney (floating)
'The balloon floated down the chimney'
g. La botella se fué de la orilla (flotando)
the bottle MOVED-away from the bank (floating)
'The bottle floated away from the bank'
h. La botella volvió a la orilla (flotando)
the bottle MOVED-back to the bank (floating)
'The bottle floated back to the bank'
i. La botella le dio vuelta a la isla (flotando)
the bottle to-it gave turn to the island (floating)
(= 'MOVED around')
'The bottle floated around the island'
j. La botella cruzó el canal (flotando)
the bottle MOVED-across the canal (floating)
'The bottle floated across the canal'
k. La botella iba por el canal (flotando)
the bottle MOVED-along along the canal (floating)
'The bottle floated along the canal'

1. La botella andaba en el canal (flotando)
the bottle MOVED-about in the canal (floating)
'The bottle floated around the canal'
m. Las dos botellas se juntaron (flotando)
the two bottles MOVED-together (floating)
'The two bottles floated together'
n. Las dos botellas se separaron (flotando)
the two bottles MOVED-apart (floating)
'The two bottles floated apart'

Similarly:
avanzar 'MOVE ahead/forward',
regresar 'MOVE in the reverse direction',
acercarse 'MOVE closer to (approach)',
llegar 'MOVE to the point of (arrive at)',
seguir 'MOVE along after (follow)'.

- agentive
-- with Manner gerund
a. Metí el barril a la bodega rodándolo I- MOVED-in the keg to the storeroom rolling-it 'I rolled the keg into the storeroom'
b. Saque el corcho de la botella retorciéndolo I- ${ }_{\mathrm{A}}$ MOVED-out the cork from the bottle twisting-it (or:

Retorcí el corcho y lo saqué de la botella I-twisted the cork and it $\mathrm{I}_{\mathrm{A}}$ moved-out from the bottle 'I twisted the cork out of the bottle'
-- with Cause gerund
c. Tumbé el árbol serruchándolo // a hachazos / con una hacha

I-felled the tree sawing-it // by ax-chops / with an ax
'I sawed / / chopped the tree down'
d. Quité el papel del paquete cortándolo
f $\mathrm{I}_{\mathrm{A}}$ moved-off the paper from-the package cutting-it
'I cut the wrapper off the package'

- the "PUT" type of agentive verb

Table 1.1. Spanish 'putting' verbs, differing according to distinctions of Path ( $A=$ Agent, $F=$ Figure object, $G=$ Ground object)

| A poner $F$ en $G$ | A put $F$ onto $G$ |
| :--- | :--- |
| A meter $F$ a $G$ | A put $F$ into $G$ |
| A subir $F$ a $G$ | A put $F$ up (on)to $G$ |
| A juntar $F_{1} \& F_{2}$ | A put $F_{1} \& F_{2}$ together |
|  |  |
| A quitar $F$ de $G$ | A take $F$ off $G$ |
| A sacar $F$ de $G$ | A take $F$ out of $G$ |
| A bajar $F$ de $G$ | A take $F$ down from $G$ |
| A separar $F_{1} \& F_{2}$ | A take $F_{1} \& F_{2}$ apart |

### 2.2.4 English Path verbs like the Spanish ones

enter, exit, ascend, descend, cross, pass, circle, advance, proceed, approach, arrive, depart, return, join, separate, part,
-- but all these are borrowed from Romance languages, where they are the native type.
Few native English Path verbs: rise, leave, near, follow.

### 2.3 Motion + Figure

### 2.3.1 Diagram of the Figure conflated in the Motion verb



Figure 1.3. Figure conflated in the Motion verb

### 2.3.2 Some Languages / Language Families with the Motion + Figure Conflation Pattern

Navajo, Atsugewi (Hokan), Tzeltal (Mayan)

English has a few verbs of this type, e.g., rain / spit
a. It rained in through the bedroom window [non-agentive]
b. I spat into the cuspidor [agentive]

### 2.3.3 Atsugewi examples

## Atsugewi verb roots of motion with conflated Figure

-lup- 'for a small shiny spherical object (e.g. a round candy, an eyeball, a hailstone) to move/be-located'
-t- 'for a smallish planar object that can be functionally affixed (e.g. a stamp, a clothing patch, a button, a shingle, a cradle's sunshade) to move/be-located'
-caq- 'for a slimy lumpish object (e.g. a toad, a cow dropping) to move/belocated'
-swal- 'for a limp linear object suspended by one end (e.g. a shirt on a clothesline, a hanging dead rabbit, a flaccid penis) to move/be-located'
-qput- 'for loose dry dirt to move/be-located'
-staq- 'for runny icky material (e.g. mud, manure, rotten tomatoes, guts, chewed gum) to move/be-located'

Atsugewi expressions of motion with conflated Figure
a. locative suffix: -ik. 'on the ground'

Cause prefix: uh- 'from "gravity" (an object's own weight) acting on it'
inflectional affix-set: '- w- - ${ }^{\text {a }} \quad$ '3d person subject (factual mood)

$$
\text { /'w-uh-staq-ik•- }{ }^{\text {a }} \quad \Rightarrow \quad[\text { wostaqúrk•a }]
$$

Literal: 'Runny icky material is located on the ground from its own weight acting on it'
Instantiated: 'Guts are lying on the ground'
b. directional suffix: -ict 'into liquid'

Cause prefix: ca- 'from the wind blowing on the Figure'
inflectional affix-set: '- w- - ${ }^{\text {a }} \quad$ '3d person subject (factual mood)'

$$
I^{\prime} \text {-w-ca-staq-ict- }{ }^{\text {a/ } / ~} \Rightarrow \text { ['c wastaq, ǐc ta] }
$$

Literal: 'Runny icky material moved into liquid from the wind blowing on it' Instantiated: 'The guts blew into the creek'
c. directional suffix: -cis 'into fire’

Cause prefix: cu- 'from a linear object, moving axially, acting on the Figure'
inflectional affix-set: $\quad \mathrm{s}-{ }^{\prime}-\mathrm{w}-$ - $^{\mathrm{a}} \quad$ 'I-subject, 3d person object (factual mood)'

$$
/ \mathrm{s}^{-}-\text {-w-cu-staq-cis- }{ }^{\mathrm{a}} / \Rightarrow\left[\text { sccustáq }^{\prime}{ }^{\mathrm{h}} \mathrm{a}\right]
$$

Literal: 'I caused it that runny icky material move into fire by acting on it with a linear object moving axially’
Instantiated: 'I prodded the guts into the fire with a stick'

### 2.3.4 Same Pattern for Body Part / Garment Motion

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mainly in English: body part Figure treated as direct object within standard conflation pattern I held my hand over the fire / laid my head on the pillow
pulled my arm back out of the cage / put my ear against the wall / stuck my tongue out rarely in English: body part Figure expressed in the verb
I stepped onto the curb / leaned out the window / reached toward the ceiling all Atsugewi body part motion / location is of this latter type
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Similarly in English for a garment Figure:
I have a hat on / put my shirt on / took my shoes off / put a coat on her
vs. I booted up / I shod the horse
all Atsugewi garment motion / location is of this latter type

Atsugewi wholly lacks verbs of 'object maneuvering' like English
hold, put (in), take (out);
have, give (to), take (from);
carry, bring (to), take (to);
throw, kick, bat (away);
push, pull (along)

### 2.4 Other Conflation Patterns

### 2.4.1 Motion + Ground -- Unrealized

e.g., the English verb root -plane as in:
emplane, 'move onto a plane' / deplane, 'move off of a plane'
a full system, though, would further call for: circumplane / transplane
as well as, say: enhouse / dehouse / circumhouse / transhouse
but no language with a characteristic -- or even minor -- system of this sort is apparent

### 2.4.2 Motion + two semantic components -- Only as a Minor System

e.g., English MOVE + Path + Ground (agentive):
to shelve, 'MOVE [Figure] onto a shelf': I shelved the books.
to box, 'MOVE [Figure] into a box': I boxed the apples
or English Figure + MOVE + Path (agentive):
to powder, 'MOVE powder onto': She powdered her nose.
to scale, 'MOVE scale off of': I scaled the fish.
but this pattern does not occur as a language's most characteristic system
-- perhaps because it would require enormously many distinct lexical items

### 2.4.3 Motion + no further semantic component -- unrealized

this pattern would entail that the same single verb appear in all Motion sentences
-- or that one verb meaning 'MOVE' appear in all motion sentences
and one verb meaning 'BE-LOC' appear in all locative sentences
apparently no languages have this as a characteristic pattern, perhaps due to its inefficiency

But some languages do have a single recurrent verb 'BE-LOC' for all locative sentences, e.g., Spanish: estar

Note: other languages of the Spanish Path-conflating type, e.g., Halkomelem, do have a set of distinct locative site verbs: 'be in', 'be on', etc.
Note: English, beside its locative be, does have locative Coevent-conflating verbs, e.g., lie, sit, stand, lean, hang, surround, abut, flank

### 2.4.4 Motion + a minimally differentiated semantic component

Certain major systems do exist that approach the zero-conflation type.
Here, Motion does conflate with another component of the Motion event, but where only two or three distinctions pertaining to that component are represented

Southwest Pomo conflates MOVE with the Figure, but only for 3 distinctions of number -- not for numerous distinctions of type, as in Atsugewi
$-w /-? d a /-p^{h} i l$
mean, respectively, 'for one/two or three/several together...to move'
These three roots appear recurrently in verbs referring to Motion events.

### 2.4.5 Split system of conflation

e.g., Spanish: Motion + zero conflation for locative event

Motion + Path conflation for motion event with a boundary crossing
Motion + Co-event conflation for motion event without a boundary crossing
Note: the latter distinction, proposed by Aske and Slobin, seems a first approximation, not fully correct

### 2.4.6 Parallel system of conflation

Here, a language can use different, equally colloquial, conflation patterns for the same type of Motion event.
Modern Greek has this arrangement for non-/self-agentive motion events, shown here for 'entry':

| a. | etreksa | mesa | (s-to | spiti) |
| :---: | :---: | :---: | :---: | :---: |
|  | I-ran | in | (to-the | house [ACC]) |
|  | 'I ran in (-to the house).' |  |  |  |
|  | bika | (trekh | (s-to | spiti) |
|  | I-entered | (runn | (to-the | house [ACC]) |
|  | 'I entered (the house) (running).' |  |  |  |

## 3. Semantic Components of a Motion Event Characteristically Appearing in a Language's Satellite

a satellite (to the verb) $(\mathrm{Sat})=$ any constituent other than a
noun-phrase or prepositional-phrase complement that is in a sister relation to the verb root It relates to the verb root as a dependent to a head.
Either bound affix or free word, it encompasses:
English verb particles, German separable and inseparable verb prefixes,
Latin or Russian verb prefixes, Chinese verb complements,
Lahu non-head "versatile verbs" Caddo incorporated nouns,
Atsugewi polysynthetic affixes around the verb root
verb complex $=$ verb root + all occurring satellites
English verb complex can have up to 4 satellites:
Come <-right <-back <-down <-out from up in there!
(said, e.g., by parent to child in treehouse)
main typological category of a language determined by:
the components of a Motion event that appear in its verb root
subcategorization of this typology: of its remaining components, the ones appearing in its satellite

### 3.1 Path

characteristically in English, with the Co-event in the verb, Path appears in the satellite + preposition e.g., the concept of a path from the interior of some enclosure to its exterior is expressed by ( $\mathrm{F}=$ Figure; G - Ground; PP in parens is deletable if G is deictic/anaphor)
F... <-out (of> G)
e.g., [I stood inside the house and then] I ran out (of it).

### 3.1.1 Main English Path Satellites

-- here shown with associated preposition and Ground nominal deleted

| I ran in. | He ran across. | It flew $u p_{1}$. |
| :--- | :--- | :--- |
| I ran out. | He ran along. | It flew down. |
| I climbed on. | He ran through. | I went above. |
| I stepped off. | He ran past/by. | I went below. |
| He drove off $_{2}$. | She came over $_{1}$. | I ran up (to her). |
| I stepped aside. | It toppled over $_{2}$. | She followed along after (us). |
| She came forth. | She spun around $_{1}$. | They rolled apart. |
| She walked away. | She walked around ${ }_{2}$. | They slammed together. |
| He went ahead. | She walked (all) about. |  |
| He came back. |  |  |

### 3.1.2 Additional English Path Satellites

| F. . | <-loose | $($ from $>\mathrm{G}$ ) | The bone pulled loose (from its socket) |
| :---: | :---: | :---: | :---: |
| F. | <-free | (from>G) | The coin melted free (from the ice) |
| F | <-clear | (of $>\mathrm{G}$ ) | She swam clear (of the oncoming ship) |
| F | <-stuck | $(\mathrm{to}>\mathrm{G})$ | The twig froze stuck (to the window) |
| F | <-fast | (to>G) | The glaze baked fast (to the clay) |
| F | <-un- | (from>G) | The bolt must have unscrewed (from the plate) |
| F | <-over- | $\phi>\mathrm{G}$ | The eaves of the roof overhung the garden |
| F. | <-under- | $\phi>\mathrm{G}$ | Gold leaf underlay the enamel |
| G. . | <-full | (of $>\mathrm{F}$ ) | The tub quickly poured full (of hot water) |

### 3.2 Path + Ground

### 3.2.1 rare English examples

<-home 'to one's [the subject's/object's] home'; <-shut 'to across an aperture'
a. She drove him home (to her / his cottage in the suburbs)
b. The gate swung shut (across the entryway)

### 3.2.2 As One of the Main Satellite Types in Atsugewi

Path + Ground satellites in Atsugewi Subdividing English 'into'

```
-ict 'into a liquid'
-cis 'into a fire'
-isp -u• + 'into an aggregate' (e.g. bushes, a crowd, a rib-cage)
-wam 'down into a gravitic container' (e.g. a basket, a cupped hand, a pocket, a lake basin)
-wamm 'into an areal enclosure (e.g. a corral, a field, the area occupied by a pool of water)
-ipsn + ' '(horizontally) into a volume enclosure' (e.g. a house an oven, a crevice, a deer's stomach)
-tip -u + 'down into a (large) volume enclosure in the ground` (e.g. a cellar, a deer-trapping pit)
-ikn + 'over-the-rim into a volume enclosure' (e.g. a gopher hole, a mouth)
-ikc 'into a passageway so as to cause blockage' (e.g. in choking, shutting, walling off)
-ik\mp@subsup{s}{}{u}}+\quad\mathrm{ 'into a corner'(e.g. a room corner, the wall-floor edge)
-mik. 'into the face/eye (or onto the head) of someone'
-mic 'down into (or onto) the ground'
-cis }\mp@subsup{}{}{\textrm{u}}\mathrm{ ' 'down into (or onto) an object above the ground' (e.g. the top of a tree stump)
-iks 'horizontally into (or onto) an object above the ground' (e.g. the side of tree trunk)
```


### 3.3 Patient: (Figure/)Ground

"noun incorporation" = a satellite in the verb complex referring to the Figure/Ground of a Motion event or the Patient of a non-Motion event
a. yak-čah-yih nisah-ya-?ah $\Rightarrow$ [dahčahih tisáy?ah]
woods-edge-LOChouse-be-TNS
Literally: 'At woods edge it-house-is'
Loosely: 'The house is at the edge of the woods'
b. Wá•kas na-yawat-yá-ynik-ah $\Rightarrow$ [wá•kas táywacáynikah]
cattle PL-water-enter-PAST
Literally: 'Cattle water-entered'
Loosely: 'The cattle went into the water'
C. nisah-nt-káy-watak-ah $\Rightarrow$ [tisánčáywakkah]
house-penetrate/traverse-PAST
Literally: 'He-house-traversed'
Loosely: 'He went through the house'

### 3.4 Manner

examples in Nez Perce, whose verb root characteristically conflates Motion+Path
/hi- quqú-- láhsa -e/ $\Rightarrow$ [hiqqoláhsaya]
3d person galloping go up PAST
Literally: 'He/she ascended galloping'
Loosely: 'He galloped uphill'

```
partial list of Nez Perce Manner satellites (prefixal to the verb root)
\begin{tabular}{ll} 
?ipsqi- & 'walking' \\
wile'.- & 'running' \\
wat- & 'wading'
\end{tabular}
siwi- 'swimming-on-surface'
tuk'e- 'swimming-within-liquid'
we.- 'flying'
tu.k e- 'using a cane'
ceptukte- 'crawling'
tuk weme '(snake) slithering'
wu.l- '(animal) walking/(human) riding (on animal at a walk)'
ququu'.- '(animal) galloping/(human) galloping (on an animal)'
tiq e- '(heavier object) floating-by-updraft/wafting/gliding'
?iye'.- '(lighter object) floating-by-intrinsic-buoyancy'
wis- 'traveling with one's belongings'
kipi- 'tracking'
tiw ek- 'pursuing (someone: D.O.)'
cu'.- '(plurality) in single file'
til- 'on the warpath/to fight'
qisim- 'in anger'
```


### 3.5 Cause

the set of Cause satellites (prefixal to the verb root) in Atsugewi, whose verb root conflates Motion+Figure and satellite suffix conflates Path+Ground

Atsugewi Cause satellites ( $P=$ the Patient, $E=$ the Experiencer )
natural forces
<-ca- 'from the wind blowing on P '
<-cu- 'from flowing liquid acting on P' (e.g., a river on a bank)
$<-$ ka- 'from the rain acting on P'
<-ra- 'from a substance exerting steady pressure on P' (e.g. gas in the stomach)
<-uh- 'from the weight of a substance bearing down on P' (e.g. snow on a limb)
<-miw- 'from heat/fire acting on P '
objects in action
<-cu- 'from a linear object acting axially on P' (e.g. as in poking, prodding, pool-cueing, piercing, propping)
<-uh- 'from a linear object acting circumpivotally (swinging) on P' (as in pounding, chopping, batting)
<-ra- a. 'from a linear object acting obliquely on P' (as in digging, sewing, poling, leaning) b. 'from a linear/planar object acting laterally along the surface of P ' (as in raking, sweeping, scraping, plowing whittling, smoothing, vising)
<-ta- 'from a linear object acting within a liquid P' (as in stirring, paddling)
<-ka- 'from a linear object moving rotationally into P' (as in boring)
<-mi- 'from a knife cutting into P '
<-ru- 'from a (flexible) linear object pulling on or inward upon P' (as in dragging, suspending, girding, binding)
body parts in action
<-tu- 'from the hand(s)-moving centripetally-acting on P' (as in choking, pinching)
<-ci- 'from the hand(s)-moving manipulatively-acting on P '
<-ma- 'from the foot/feet acting on P'
$<$ ti- 'from the buttocks acting on P '
<-wi- 'from the teeth acting on P '
<-pri- 'from the mouth-working ingressively-acting on P' (as in sucking, swallowing)
<-phu- 'from the mouth-working egressively-acting on P' (as in spitting, blowing)
<-pu- 'from the lips acting on P'
<-hi- 'from any other body part (e.g. head, shoulder) or the whole body acting on P'
sensations
<-sa- 'from the visual aspect of an object acting on E'
<-ka- 'from the auditory aspect of an object acting on E'
<-tu- 'from the feel of an object acting on E'
<-pri- 'from the taste/smell of an object acting on E'

## 4. Chart of the Motion Event Typology

Table 1.12. Typology of Motion verbs and their satellites

| Language/language family | The particular components of a Motion event characteristically represented in the: |  |
| :---: | :---: | :---: |
|  | Verb root | Satellite |
| Romance <br> Semitic <br> Polynesian | Motion + Path | ф |
| Nez Perce |  | Manner |
| Caddo |  | (Figure/) ${ }^{\text {Ground }}$ [Patient] |
| Indo-European (not Romance) Chinese | Motion + Co-event | Path |
| Atsugewi (most northern Hokan) | Motion + Figure | a. Path + Ground <br> b. Cause |

## 5. Salience in the verb complex

apparent general principle: a concept is relatively foregrounded in attention in an NP and backgrounded in a V root or satellite

English, with its Coevent verb and Path satellite, can background Manner/Cause and Path A tsugewi, with its V root and satellites, can background Figure, Cause, Path, and Ground

$$
\begin{array}{lll}
I^{\prime} \text {-w-ca-staq-ict- }{ }^{\text {a } / ~} & \Rightarrow \quad \text { ['c wastaquícta] } & \\
- \text { from wind-blowing } & \text {-- icky matter-moved } & \text {-- into-liquid -- Factual } \\
\text { Cause ...........] } & \text { Figure ..........] } & \text { Path + Ground }
\end{array}
$$

English sentences equivalent in information but not in backgroundedness:
a. Some icky matter blew into some liquid
b. The guts blew into the creek

English sentence equivalent in backgroundedness but not in information: It blew in.

## 6. Extensions of the Co-event conflation pattern

### 6.1 Conflation onto mid-level verbs based on BE $_{\text {LOC }}$ or MOVE

a. GIVE: $\left[\mathrm{A}_{1}\right]_{\mathrm{A}} \mathrm{MOVE}[\mathrm{F}]$ into the GRASP of $\left[\mathrm{A}_{2}\right]$
[I GAVE him another beer] WITH-THE-MANNER-OF [I slid the beer]
$\Rightarrow$ I slid him another beer.
b. PUT: $[\mathrm{A}]$ controlledly ${ }_{\mathrm{A}}$ MOVE $[\mathrm{F}]$ by limb motion but without body translocation
[I PUT the hay up onto / down off of the truck] WITH-THE-CAUSE-OF [I forked the hay]
$\Rightarrow$ I forked the hay up onto / down off of the truck.
(*I forked the hay to my neighbor's house down the block shows that fork is based on PUT, not on ${ }_{\mathrm{A}}$ MOVE)

### 6.2 Conflation onto combinations of MOVE with matrix verbs

a. GO: [A] AGENT himself [i.e., his whole body, = F] to MOVE
[the child WENT down the hallway] WITH-THE-MANNER-OF [the child hopped]
$\Rightarrow$ The child hopped down the hallway.
Similarly: I ran into the house.
b. GET: $\left[\mathrm{A}_{1}\right]$ INDUCE $\left[\mathrm{A}_{2}\right]$ to GO
[I GOT him out of his hiding place] WITH-THE-CAUSE-OF [I lured / scared him]
$\Rightarrow$ I lured/scared him out of his hiding place.
Similarly: I talked him down off the ledge.
I prodded the cattle into the pen.
They smoked the bear out of its den.
c. URGE: $\left[\mathrm{A}_{1}\right]$ AIM to GET $\left[\mathrm{A}_{2}\right]=\left[\mathrm{A}_{1}\right]$ AIM to INDUCE $\left[\mathrm{A}_{2}\right]$ to GO
[I URGED her away from the building] WITH-THE-CAUSE-OF [I waved at her]
$\Rightarrow$ I waved her away from the building.
Similarly: I beckoned him toward me.
I called him over to us.

### 6.3 Conflation onto metaphorically extended MOVE

## Motion-like change of state constructions

non-agentive
a. "MOVE": [F] MOVE metaphorically (i.e., change state)
[he "MOVED" to death] WITH-THE-CAUSE-OF [he choked on a bone]
( $\Rightarrow$ He died from choking on a bone. - or:)
$\Rightarrow$ He choked to death on a bone.
b. BECOME: "MOVE" in the environment: __Adjective
[the shirt BECAME dry] WITH-THE-CAUSE-OF [the shirt flapped in the wind]
( $\Rightarrow$ The shirt dried from flapping in the wind. - or:)
$\Rightarrow \quad$ The shirt flapped dry in the wind.
Similarly: The tinman rusted stiff.
The coat has worn thin in spots.
The twig froze stuck to the window.
c. FORM: [F] "MOVE" into EXISTENCE (cf. the phrase come into existence)
[a hole FORMED in the table] WITH-THE-CAUSE-OF [a cigarette burned the table]
$\Rightarrow \quad$ A hole burned in the table from the cigarette.

## agentive

d. " ${ }_{\mathrm{A}}$ MOVE": [A] AGENT [F] to "MOVE"
[I " ${ }_{\mathrm{A}}$ MOVED" him to death] WITH-THE-CAUSE-OF [I choked him]
( $\Rightarrow$ I killed him by choking him. - or:)
$\Rightarrow$ I choked him to death.
Similarly: I rocked/sang the baby to sleep.
e. $\quad{ }_{\mathrm{A}} \mathrm{BECOME}=\mathrm{MAKE} \mathrm{I}_{1}:{ }_{\mathrm{A}} \mathrm{MOVE} "$ in the environment: $\qquad$ Adjective
[I MADE 1 the fence blue] WITH-THE-CAUSE-OF [I painted the fence]
$\Rightarrow \quad$ I painted the fence blue.
f. ${ }_{\mathrm{A}} \mathrm{FORM}=\mathrm{MAKE}_{2}$ : [A] AGENT [F] to "MOVE" into EXISTENCE (cf. the phrase bring into existence)
[I MADE 2 the cake out of fresh ingredients] WITH-THE-CAUSE-OF [I baked the ingredients]
$\Rightarrow \quad$ I baked a cake out of fresh ingredients.
Similarly: I knitted a sweater out of spun wool.
I hacked a path through the jungle.
The mouse chewed a hole through the wall.

### 6.4 Conflation across the various relations of the Co-event to the Motion event

## a. Precursion

[glass MOVED onto the rug] WITH-THE-PRECURSION-OF [the glass splintered] Glass splintered onto the rug.
[I ${ }_{\mathrm{A}}$ MOVED the seeds into the testube] WITH-THE-PRECURSION-OF [I ground the seeds] I ground the seeds into the testtube.

## b. Enablement

[could you ${ }_{\text {A }}$ MOVE that bottle down off the shelf] WITH-THE-ENABLEMENT-OF [you reach to / grab the bottle] Could you reach / grab that bottle down off the shelf?
[ $I_{A}$ MOVED jellybeans into her sack] WITH-THE-ENABLEMENT-OF [I scooped up the jellybeans] I scooped jellybeans up into her sack.

## c. Reverse Enablement

[ $\mathrm{I}_{\mathrm{A}}$ MOVED the sack to an open conformation] WITH-THE-REVERSE-ENABLEMENT-OF [(someone) had tied the sack]

Ich habe den Sack aufgebunden.
I have the sack open-tied
"I untied the sack and opened it."

## [ ${ }_{\mathrm{A}}$ MOVED the dog TO FREENESS] WITH-THE-REVERSE-ENABLEMENT-OF [(someone) had chained the dog]

Ich habe den Hund losgekettet.
I have the dog free-chained
"I set the dog free by unchaining it."

## d. Cause

onset:
[our tent MOVED down into the gully] WITH-THE-ONSET-CAUSE-OF [a gust of wind blew on the tent] Our tent blew down into the gully from a gust of wind.
[I ${ }_{\mathrm{A}}$ MOVED the puck across the ice] WITH-THE-ONSET-CAUSE-OF [I batted the puck]
I batted the puck across the ice.
extended:
[the water MOVED down to the midline of the pot] WITH-THE-EXTENDED-CAUSE-OF [the water boiled] The water boiled down to the midline of the pot.
[ $\mathrm{I}_{\mathrm{A}}$ MOVED the toothpaste out of the tube] WITH-THE-EXTENDED-CAUSE-OF [I squeezed on the toothpaste/tube] I squeezed the toothpaste out of the tube.
e. Manner
[the top MOVED past the lamp] WITH-THE-MANNER-OF [the top spun] The top spun past the lamp.
[the frond MOVED into its sheath] WITH-THE-MANNER-OF [the frond curled up] The frond curled up into its sheath.
[ $\mathrm{I}_{\mathrm{A}}$ MOVED the mug along the counter] WITH-THE-MANNER-OF [I slid the mug] I slid the mug along the counter.

## f. Concomitance

[she WENT to the party] WITH-THE-CONCOMITANCE-OF [she wore a green dress]
She wore a green dress to the party.
[I WENT past the graveyard] WITH-THE-CONCOMITANCE-OF [I whistled]
I whistled past the graveyard.
cf. I read comics all the way to New York.
g. Concurrent Result
[the door MOVED TO A-POSITION-ACROSS-AN-OPENING] WITH-THE-CONCURRENT-RESULT-OF [the door slammed]

The door slammed shut.
[the rocket MOVED into the water] WITH-THE-CONCURRENT-RESULT-OF [the water splashed]
The rocket splashed into the water.
h. Subsequence (including: Consequence / Purpose)
[I will GO down to your office] WITH-THE-SUBSEQUENCE-OF [I will stop at your office]

I'll stop down at your office (on my way out of the building).
[I will GO in [to the kitchen]] WITH-THE-SUBSEQUENCE-OF [I will look at the stew cooking on the stove] I'll look in at the stew cooking on the stove.
[they ${ }_{\mathrm{A}}$ MOVED the prisoner into his cell] WITH-THE-SUBSEQUENCE-OF [they locked the cell] They locked the prisoner into his cell.
(with PLACE: [A] PUT [F] TO [G])
[I PLACED the painting down on the table] WITH-THE-SUBSEQUENCE-OF [the painting lay (there)]

I laid the painting down on the table.
Similarly:
I stood/leaned/hung the painting on the chair/against the door/on the wall.

## Comparably:

I sat down on the chair.

### 6.5 Multiple conflation

a. [could you GIVE me the flour]

WITH-THE-ENABLEM ENT-OF [you ${ }_{\text {A }}$ MOVE the flour down off the shelf], WITH-THE-ENABLEMENT-OF [you reach ${ }_{1}$ to it with your free hand]?
$\Rightarrow$ [could you GIVE me the flour,]
WITH-THE-ENABLEMENT-OF [you reach ${ }_{2}$ the flour down off that shelf with your free hand?]
$\Rightarrow$ Could you reach 3 me the flour down off that shelf with your free hand?

Similarly: [ $\mathrm{I}_{\mathrm{A}}$ MOVED a path through the jungle]
WITH-THE-ENABLEMENT-OF [I FORMED a path (==> out)]
WITH-THE-CAUSE-OF [ $\mathrm{I}_{\mathrm{A}}$ MOVED STUFF away]
WITH-THE-CAUSE-OF [I hacked at the STUFF with my machete]
$\Rightarrow$ I hacked out a path through the jungle with my machete.
b. [the prisoner SENT a message to his confederate]

WITH-THE-MANNER-OF [the prisoner ${ }_{\text {A }}$ MOVED the message along the water pipes]
WITH-THE-ENABLEMENT-OF [the prisoner FORMED the message (==> out)] WITH-THE-CAUSE-OF [the prisoner tapped on the water pipes]
$\Rightarrow$ The prisoner tapped out a message along the water pipes to his confederate.

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