

Verb Lexicalization Patterns in Korean and Some Issues of Language Acquisition

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1. Introduction

Talmy (1985) gives a typology of how different languages lexicalize motion events. Languages such as English and Chinese typically lexicalize in the verb the manner or cause rather than any other aspects of motion. Romance languages, on the other hand, typically lexicalize the path of motion in the verb, while leaving it to syntactic context to specify other aspects of motion events. In still other languages such as Atsugewi, the Figure (i.e., the moving object) of the motion is lexicalized in the verb. According to Talmy, any language of the world uses only one of these three basic patterns for lexicalizing motion events. Talmy's typological generalization is summarized below:

(I) Conflation of Motion with Manner or Cause: Indo-European
(except Romance), Chinese

e.g., *The rock slid/rolled/bounced down the hill*

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

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(II) Conflation of Motion with Path: Romance, Semitic, etc.

e.g., *La botella entró a la cueva*
 the bottle moved:in to the cave

(III) Conflation of Motion with Figure: Atsugewi, Navajo

e.g., *It rained in through the bedroom window*
I spat into the cuspidor

Wienold and Schwarze (1989) and Wienold (1990, 1992) have proposed, mainly observing the behavior of simple verbs, that Korean and Japanese belong to the second class of Talmy's types - that Korean and Japanese lexicalize the aspect of path of the motion in the verb. Choi and Bowerman (1991), in contrast, have proposed a different view, observing the behavior of serialized as well as simple verbs. According to them, Korean exhibits different verb lexicalization patterns for expressing spontaneous and caused motion: the motion expressed in the verb conflates with the path when expressing caused motion, but it conflates with the deictic element when expressing spontaneous motion - a pattern not described by Talmy. Choi and Bowerman also argue that such a split in the lexicalization patterns between spontaneous and caused motion events has a developmental consequence: since children learning Korean meet the semantic element of path mostly conflated with notions of spontaneous or caused motion, it takes them longer to realize that "Path can sometimes be extracted and receives its own marking" (Choi & Bowerman, 1991). According to them, English-speaking children begin to use some path particles for both spontaneous- and caused-motion very early - by as early as 14-16months, and they use almost all path particles for a wide variety of both spontaneous - and caused-motion events by 19-20months; in contrast, Korean children are slow to use path verbs for spontaneous motion such as *oll-a-ka-* 'go up' and *nayli-e-ka-* 'go down', as well as those for caused motion such as *ol-li-* 'cause to move up' and *nayli-* 'cause to move down'. Choi and Bowerman claim that such a developmental lag observed in Korean-speaking children is a consequence of the fact that Korean conflates motion with different semantic elements for spontaneous- and caused-motion events.

This paper examines Korean-speaking children's acquisition of motion verbs. I will present an analysis different from Choi and Bowerman's on Motion-conflation patterns in Korean and on the interpretation of acqui-

sition data. I will argue that Korean employs basically the same motion-conflation pattern for spontaneous and caused motion. In Section 2, I will briefly introduce Talmy's (1975, 1985) analysis of motion-conflation patterns and recapitulate Choi and Bowerman's findings. Section 3 will present data supporting my analysis that Korean employs basically the same motion-conflation pattern for spontaneous- and caused-motion verbs. It will show, on the basis of longitudinal spontaneous speech data collected from 5 children, the following facts: first, Korean-speaking children produce, from the earliest stage of acquisition, quite a number of verbs whose intransitive form for spontaneous motion and transitive form for caused motion share the identical root; second, verbs expressing spontaneous motion do not always contain a deictic element, and therefore cannot exhibit [Motion+Deixis] conflation pattern; third, some verbs expressing caused motion do contain a deictic element. In Section 4, I will propose a unified motion-conflation pattern for verbs of both spontaneous and caused motion in Korean. Section 5 will deal with what seems to be a counterexample to the proposed generalization - that is, the existence of certain caused-motion verbs that do not seem to have morphologically related counterpart expressions for spontaneous motion. I will suggest a pragmatic explanation to account for why intransitive counterparts of those caused-motion verbs resist a spontaneous-motion interpretation and usually imply an implicit agent. Section 6 will suggest an explanation for the observed acquisition order among different Path-conflating verbs. In Section 7, I will discuss the question why Korean children never overgeneralize certain Path verbs to posture changes or use them as requests to be picked up and carried, as English-speaking children often do. At least as a partial answer to the question, I will point out that certain Path-conflating verbs in Korean express UNDERSPECIFIED Path information. Section 8 summarizes proposals made in this paper.

2. Choi and Bowerman's (1991) Analysis in Talmy's (1975, 1985) Framework

Talmy (1985) identifies the basic components of a motion event as follows:

(1) *John walked/ran/crawled into the room*

[Figure] [Motion+Manner] [Path] [Ground]

A brief description of the major semantic categories in Talmy's frame of analysis is as follows: 1. "Motion" is the main action/state most identified with the verb root; 2. "Figure" is the salient moving or stationary object in a Motion event; 3. "Ground" is the reference-frame in a Motion event, with respect to which the Figure's path/site is reckoned; 4. "Path" is the course followed or site occupied by the Figure object; 5. "Manner" or "Cause" refers to a subsidiary action or state that the Figure manifests concurrently with its main action or state.

Talmy (1975, 1985) treats a situation containing movement or the maintenance of a stationary location alike as a "motion event". Choi and Bowerman (1991), on the other hand, restrict their analysis to the expressions of "directed" or "dynamic" motion events with a "bounded/telic" Path, i.e., events involving movement that results in a change of location. They also limit their analysis to "expressions that refer to concrete physical MOTION events", and "do not include events that are non-motion (e.g., abstract/conceptualized motion) or metaphorical extension of Motion events." Their rationale for limiting the domain of Motion as such is that "children who are at the stage that [Choi and Bowerman] are interested in mostly talk about concrete physical Motion events" (Choi, personal communication).

According to Choi and Bowerman (1991), children learning English are systematically shown in the input how to isolate a few recurring kinds of Path such as *up, down, in, out, on, off, back, and away*, and they therefore learn how to do this quickly. They then argue that "Korean, in contrast, uses different lexicalization patterns for spontaneous motion and caused motion, and most of its Path markers (verbs) in the two cases are distinct" (Choi & Bowerman, 1991, p. 93). According to them, "Korean children are not prompted to analyze out Path as an abstract component of motion events as strongly as are learners of English, and this may account for their delay in acquiring those Path verbs that do express Path in relatively pure form." The following examples show Choi and Bowerman's categorization of Korean motion verbs and their analysis:

Spontaneous motion

- (2) *Yumi-ka pang-ey itwi-e- tul- e- o- ass- ta*
 NOM room-LOC run- CONN enter-CONN-come-PAST-DECL
 [Figure] [Ground] [Manner] [Path] [Motion+Deixis]
 'Yumi came into the room, running.'

Caused motion

- (3) *Yumi-ka selap-ey yelsoy-lul neh- ess- ta*
 NOM drawer-LOC key- ACC put: in-PAST-DECL
 [Ground] [Figure] [Motion+Path]
 'Yumi put the key into the drawer.'

Path-conflating caused-motion verbs that Choi and Bowerman (1991, p. 91) list are: (i) "cause to ascend/descend verbs" such as *ol-li-* 'cause something to ascend' and *nayli-* 'cause something to descend'; (ii) "join/separate" verbs such as *neh-* 'put in', *puth-i-/ttey-* 'join/separate a flat surface to/from another flat surface', and *pus-* 'pour liquid into a container'; (iii) clothing verbs such as *ip-* 'put clothing item onto one's trunk of body' and *pes-* 'take off clothing'; and (iv) carrying verbs such as *an-* 'carry a person/an object in arms' and *ep-* 'carry a person on back'.

Choi and Bowerman's findings about acquisition are summarized as follows: (i) English-speaking children began to use some Path particles for both spontaneous and caused motion by as early as 14-16 months, and they used almost all Path particles for a wide variety of both spontaneous- and caused-motion events by 19-20 months. (ii) In Korean children's speech, intransitive motion verbs appeared much later than transitive motion verbs: *ka-* 'go' and *o-* 'come' became productive only at 19 months, whereas the children began to produce transitive Path verbs *kki-* 'fit' (1 out of 4 subjects) and *ppay-* 'unfit' (3 out of 4 subjects) between 14 and 16 months; They used more transitive Path verbs such as *puth-i-* 'stick onto', *neh-* 'put into a loose container', and *kkenay-* 'take out of a loose container', as well as some carrying and clothing verbs by 17-18 months. They used these transitive verbs only for caused motion and never overgeneralized them for spontaneous motion. (iii) Korean-speaking children were slow to use Path verbs for spontaneous motion such as *oll-a-ka-* 'go up' and *nayli-e-ka-* 'go down', and they were just as late on verbs for caused motion such

as *ol-li-* 'cause to move up' and *nayli-* 'cause to move down'. (iv) Once they do learn such Path verbs, they never overgeneralized them to posture changes or used them as requests to be picked up and carried, both favorite uses of *up* and *down* by English-speaking children.

3. Data

Since Choi and Bowerman provide pooled data from eight subjects, it may be helpful to take a closer look at the whole inventory of verbs produced by individual children at early stages. My database consists of spontaneous speech samples collected from 5 Korean-speaking children - 3 girls and 2 boys. The children were observed every 1-2 weeks in their interactions with their primary caregivers, and their spontaneous speech was recorded.¹ All the new verbs produced by two young children in my longitudinal data, W and P, up through 2 years of age are listed in Appendix A. W was already producing verbs in the first session of recording. For P, the onset of intelligible verb production took place during the recording period. Additional verbs produced by three other children of the same age range in my data are listed in Appendix B.

The following observations could be made from Appendices A and B taken together. First, Korean children produce, from the earliest stage of acquisition, quite a number of verbs whose intransitive form for spontaneous motion and transitive form for caused motion share the identical root. Second, some verbs expressing spontaneous motion in Korean DO NOT contain a deictic element, and therefore cannot exhibit the [Motion+Deixis] conflation pattern. Third, some verbs expressing caused motion DO contain a deictic element. If these observations reflect systematic patterns rather than minor exceptions in the Korean verb lexicalization system, it could be suggested that Korean exhibits basically the same motion-conflation pattern for spontaneous and caused motion. The following subsections discuss acquisition data and related language-specific facts more in detail.

3.1. Morphologically Related Expressions for Spontaneous and Caused Motion

English employs (i) the same Path marker for both spontaneous- and

¹ See Kim (in press) for a detailed description of these longitudinal data. I am very grateful to Pat Clancy for allowing me to use W's and H's data and to Seungbok Lee, for J's data.

caused-motion expressions (e.g., *go* IN(TO) vs. *put* IN(TO)); and (ii) the same motion-conflation pattern (i.e., [Motion+Manner] characteristically) to express both spontaneous and caused motion. In contrast, certain Korean verbs seem to employ morphologically unrelated roots for expressions of spontaneous and caused motion, an example often referred to being *tul-e-ka-* (move: in-CONN-go) 'go in' vs. *neh-* 'put in'. The question is whether the occurrence of morphologically unrelated verb pairs, across the causation boundary, expressing more or less the same motion event is pervasive enough to characterize the entire language.² The answer seems to be negative.

If we take a close look at Path-conflating expressions in Korean acquisition data, even very young children seem to produce a fair number of verbs that have a morphologically related counterpart on the other side of the causation boundary. Table 1 lists such verb pairs collected from Appendices A and B. The forms not attested in children's spontaneous utterances up through 24 months are marked with an exclamation mark (!) on the left. Most of the forms with !, however, are attested in one of the following three sources: (i) children's utterances before 24 months which are excluded from the list because they are preceded by the same form in immediately preceding adult utterances; (ii) children's utterances after 24 months; or (iii) input speech during the period under investigation. This warrants that both intransitive and transitive forms in these pairs are productive in Korean.

Table 1. Path-Conflating Expressions for Spontaneous and Caused Motion in Five Children's Utterances Up Through 24 Months

olu- 'move up'; *ol-li-* 'cause to move up'
 !*nayli-* 'move down'; *nayli-* 'cause to move down'
na- '(eruption, sweat, blood) move out/break out';

² One may, also ask a fundamental question about the assumption that *tul-e-ka-* 'go in' and *neh-* 'put in' are semantically equivalent plus or minus causation. Whereas *tul-e-ka-* can be predicated of either an animate or an inanimate Figure, it is odd to use *neh-* for an animate Figure with a high degree of self-control, e.g., a human being: ?/* *Yumi-ka Inho-lul pang-ey neh-ess-ta* 'Yumi put Inho into the room.' The right verb in this example would be *tul-i-e-ponay-* (move: in-CAUS-CONN-send) 'send in'.

- !nay- 'cause to move out'
 !tah- 'reach'; tay- 'hold something against a surface'
 puth- 'a surface sticks to another surface'; puth-i- 'join a surface to another surface'
 mut- 'liquid/soil sticks to a surface'; !mut-hi- 'put liquid substance onto a surface'
 mac- 'one two or three dimensional object fits another';
 mac-chwu- 'fit one two or three dimensional object to another'
 (building blocks, puzzle pieces)
 !phul-e-ci- '(button, knot) come undone'; phul- 'undo (button, knot)'
 !ttut-e-ci- 'fall off'; ttut- 'tear off' (chocolate pack, bandaid, seam)
 ppa-ci- (i) 'fall out'; ppay- 'unfit'
 (ii) 'fall into'; !ppa-ttuli- 'cause to fall into, drop'
 (water, swimming pool, container, gap)
 ttel-e-ci- (i) 'fall out'; ttey- 'take off, separate a flat surface from another flat surface' (bandaid, tape, poster)
 (ii) 'fall'; !ttel-e-ttuli- 'drop'
 ssot-a-ci-; ssot- 'pour out' (rain, liquid, a large quantity of objects)
 ephcill-e-ci-; ephcilu- 'spill'
 tha- 'get on' (car, airplane, horse, seesaw); !thay-wu- 'cause to get on'
 (!)pes-ki-e-ci- 'come off'; pes- 'take off (clothing)'
 !an-ki- '(voluntarily) get held in arms' (= 'move into a person's arms'); an
 - 'hold someone in arms'
 !ep-hi- '(voluntarily) get carried on one's back' (= 'ride pickaback on someone'); ep- 'carry someone on back'
 tal-li- 'attach (intransitive)'; !tal- 'attach (transitive)'
 pikhi- 'step aside'; !pikhi- 'move something aside'

(Note: ! indicates that children's production of the verb form before 24 months may have been an imitation of adults' preceding utterances or/and that the spontaneous production of the form has not been observed by 24 months.)

Note that all these verbs express motion conflated with Path, in expressions for spontaneous motion and caused motion alike, and none of the verbs for spontaneous motion in this table contain a deictic element.

These data suggest that the distribution of verbs that employ totally different lexical bases, though they exist in Korean, may not be pervasive. Korean adds the causative morpheme *-i-* (in 7 allomorphic variations *-i-/-hi-/-li-/-ki-/-wu-/-kwu-/-chwu-*) or *-ttuli-* to derive a causative expression if the verb root expresses spontaneous motion, and the inchoative/passive morpheme *-ci-* or *-i-* (in 4 allomorphic variations *i/hi/li/ki*) to derive an expression for spontaneous motion from an inherently causative root. All the “directed” motion verbs listed in Table 1 show this pattern. Children from the earliest stages of acquisition produce verbs that belong to this morphological category. Some children produce errors of using the base form in contexts requiring the derived causative form, for several months or longer after the second birthday: e.g., *pes-* ‘take off one’s clothing’ for *pes-ki-* ‘undress (others)’; *ip-* ‘put on one’s clothing’ for *ip-hi-* ‘dress (others)’; *nwup-* ‘lie down’ for *nwup-hi-* ‘lay down’; *anc-* ‘sit down’ for *anc-hi-* ‘make sit down’; *tol-* ‘turn around (intransitive)’ for *tol-li-* ‘make turn around’; *olu-* ‘move up’ for *ol-li-* ‘make move up’; *po-* ‘look’ for *po-i-* ‘show’, and so on (Park 1994, p. 54).

Acquisition data and adult Korean grammar concur to show that lexical independence between forms for spontaneous and caused motion (e.g., *tul-e-ka-* ‘go in’ and *neh-* ‘put in’) may not be a general phenomenon with movement verbs expressing “bounded/telic” Path. If we turn our attention to a wider range of motion verbs, including those that do not entail change of location, children produce even more verbs that belong to this morphological category. This morphological parallelism reaches far beyond motion verbs (Wienold 1990). Table 2 lists relevant verbs selected from Appendices A and B. Taken together with Table 1, it shows again that children from the earliest stages produce a good number of verbs that participate in this derivational process.

Table 2. More Examples of Morphologically Related Pairs of Spontaneous- and Caused-Motion Verbs and Spontaneous and Caused State-of-Change Verbs – from the Speech of Five Children Up Through 24 Months

nem-e-ci- ‘fall down’; !*nem-e-ttuli-* ‘cause to fall down’
 !*yel-li-* ‘open (intransitive)’; *yel-* ‘open (transitive)’
 !*tat-hi-* ‘close (intransitive)’; *tat-* ‘close (transitive)’

!*tol*- 'turn around (intransitive)'; *tol-li*- 'turn around (transitive)'
ttu- 'float, rise' (boat, airplane); !*ttuy-wu*- 'make float'
hulu- 'run out, flow'; !*hul-li*- 'let (liquid) flow"
mo-i- 'gather'; *mou*- 'collect'
!*camk-i*- 'get locked'; *camku*- 'lock'
!*ket-hi*- 'lift up (cloud, fog); *ket*- 'lift up, roll up (curtain, sleeve)'
!*cep-hi*- 'get folded'; *cep*- 'fold' (collar, umbrella, paper)
!*kke-ci*- '(light) go off'; *kku*- 'turn off'
!*khye-ci*- '(light) turn on'; *khye*- 'turn on'
nalu- 'fly'; !*nal-li*- 'make fly'
anc- 'sit down'; *anc-hi*- 'make sit down'
nwup- 'lie down'; !*nwup-hi*- 'make lie down'
!*huntul-li*- 'shake (intransitive)'; *huntul*- 'shake (transitive)'
kkay-ci-; *kkay*- 'break' (glass, mirror)
puswu-e-ci-; *puswu*- 'break' (furniture, wall)
pule-ci-; !*pule-ttuli*- 'break' (long and slim object)
!*call-a-ci*-; *calu*- 'break, cut'
!*kkunh-e-ci*-; *kkunh*- 'cut' (string, thread, telephone line)
ccic-e-ci- 'become torn apart'; *ccic*- 'tear apart' (blanket, toy pack, letter)
eps-e-ci- 'disappear'; !*eps-ay*- 'make disappear, get rid of'

(Note: ! indicates that children's production of the verb form before 24 months may have been an imitation of adults' preceding utterances or/and that the spontaneous production of the form has not been observed by 24 months.)

Some of the verbs in Table 2 are expressions of "contained" motion that results in no overall change of location, others are Manner-conflating motion verbs, and still others are verbs expressing a change of state. These verb pairs show that expressions of spontaneous and caused motion in Korean characteristically share the same verb root, and therefore the same motion-conflation pattern. Moreover, none of the expressions for spontaneous motion in these verb pairs contain a deictic element.

If we look outside morphologically related verb pairs, there are even more examples of spontaneous-motion verbs which do not contain a deictic element.

3.2. More Examples of Spontaneous-Motion Expression without a Deictic Verb

If we attend to general verb lexicalization patterns in Korean, there are a large number of verbs which express spontaneous motion but which do not contain a deictic element. The following examples are simple verbs that express directed motion.³

Table 3. Simple Directed Motion Verbs without a Deictic Element - Expressions for Spontaneous Motion

tatalu- 'arrive'
ilu- 'arrive'
ttena- 'depart'
nem- 'move: over (fence)'
kenne- 'move: across (river)'
cina- 'pass: by'

Such examples are also found in compound verbs, as Table 4 illustrates.

Table 4. Compound Directed Motion Verbs without a Deictic Element - Expressions for Spontaneous Motion

ttwi-e-olu- 'jump-CONN-move: up' (= 'jump up') (chair-LOC)
ttwi-e-nayli- 'jump-CONN-move: down' (= 'jump down') (ground-LOC)
ki-e-olu- 'crawl-CONN-move: up' (= 'crawl up')
tt-e-olu- 'float-CONN-move: up' (= 'rise onto a surface')
kala-anc- 'sink down'
sumi-e-tul- 'penetrate-CONN-move: in' (= 'penetrate into') (liquid into fabric)
tu-na-tul- 'move: in-move: out-move: in' (= 'move in and out')
nem-na-tul- 'move: over-move: out-move: in' (= 'move in and out over a boundary')
tul-lak-na-lak-ha- 'move in and out frequently'
tul-lang-keli- 'keep moving in and out'

³ I am limiting myself to native Korean verbs. If we include Sino-Korean verbs, the list would be longer.

- pikhi-e-na-* 'step: aside-CONN-move: out' (= 'step aside')
- pikhi-e-se-* 'step: aside-CONN-stand' (= 'stand aside')
- may-tal-li-* 'tie-hang-PASS' (= 'cling to, hang onto')
- oll-a-tha-* 'move: up-CONN-ride' (= 'get on (vehicle)')
- ttwi-e-nem-* 'jump-CONN-move: over' (= 'jump over')
- kenn-e-ttwi-* 'move: across-CONN-jump' (= 'jump across')
- tul-i-chi-* 'move: in-CAUS-hit' (= 'hit into' (e.g., "Rain hit into the window"))
- tul-i-tak-chi-* 'move: in-CAUS-approach-hit' (= 'hit into' (e.g., "Unexpected visitors hit into the house"))
- cina-chi-* 'pass: by-hit' (= 'go past')

These simple and compound verbs for directed spontaneous motion, in addition to those in Table 1, do not contain a deictic verb and therefore do not exhibit the [Motion+Deixis] conflation pattern.

The third piece of evidence against the claim that only spontaneous-motion verbs contain a deictic verb comes from the existence of caused-motion expressions containing a deictic verb.

3.3. Caused-Motion Expressions Containing a Deictic Verb

As Choi and Bowerman (1991) point out, it is true that some verbs expressing spontaneous motion show a [Motion+Deixis] conflation pattern. Such utterances produced by my 5 subjects are collected from Appendices A and B, and are reproduced in Table 5 below:

Table 5. Spontaneous-Motion Expressions Containing a Deictic Verb in Five Children's Utterances Up Through 24 Months

- o-* 'come'
- ka-* 'go'
- na-ka-* 'move: out-go' (= 'go out')
- na-o-* 'move: out-come' (= 'come out')
- oll-a-ka-* 'move: up-CONN-go' (= 'go up')
- nayli-e-ka-* 'move: down-CONN-go' (= 'go down')
- tul-e-o-* 'move: in-CONN-come' (= 'come in')
- nem-e-ka-* 'move: across-CONN-go' (= 'go across')

cina-ka- 'move: past-go' (= 'go past')

The occurrence of deitic verbs, however, is not restricted to expressions of spontaneous motion. That is, certain caused-motion verbs also contain a deictic element:

- (4) a. *I cim- ul i- chung-ey/ulo ol- li- e- ka-la*
 this package ACC second floor LOC/to move: up CAUS CONN go IMP
 'Move this package up to the second floor away from me.'
- b. *Yumi-ka papsang- ul pang-ey tul- i- e-*
 NOM dining : table ACC room LOC move : in CAUS CONN
o- ass-ta
 come PST DECL
 'Yumi moved the dining table into the room, toward me
 (=the speaker) (=where I was).'
- c. *Inho-ka Yumi-lul cip- ey teyli- e- o- ss- ta*
 Nom ACC house LOC accompany CONN come PST DECL
 'Inho brought Yumi home, toward me (=where I was).'⁴

Verbs that belong to this category appear in Table 6.

Table 6. Directed Caused-Motion Expressions Containing a Deictic Verb

- ol-li-e-ka-* (move: up-CAUS-CONN-go) 'move an object up away from the speaker';
- ol-li-e-o-* (move: up-CAUS-CONN-come) 'move an object up toward the speaker'
- nayli-e-ka-* (move: down: CAUS-CONN-go) 'move an object down away from speaker';
- nayli-e-o-* (move: down: CAUS-CONN-come) 'move an object down toward the speaker'
- tul-i-e-ka-* (move: in-CAUS-CONN-go) 'move an object into a place away from the speaker';

⁴ The deictic verb *o-* 'come' here indicates that the speaker was already inside the house.

- tul-i-e-o-* (move: in-CAUS-CONN-come) ‘move an object into a place toward the speaker’
- nay-ka-* (move: out: CAUS-go) ‘move an object out of a place away from the speaker’;
- nay-o-* (move: out: CAUS-CONN-come) ‘move an object out of a place toward the speaker’
- nall-a-ka-* (carry-CONN-go) ‘carry an object away from the speaker’;
- nall-a-o-* (carry-CONN-come) ‘carry an object toward the speaker’
- teyli-e-ka-* (accompany-CONN-go) ‘take a person away from the speaker’;
- teyli-e-o-* ‘bring a person toward the speaker’
- mosi-e-ka-* (accompany: NON.SUBJ.HON-CONN-go) ‘take a person who is higher in the social hierarchy than the speaker away from the speaker’;
- mosi-e-o-* ‘bring a person who is higher in the social hierarchy than the speaker toward the speaker’
- kaci-e-ka-* (have-CONN-go) ‘take an object away from the speaker’;
- kaci-e-o-* ‘bring an object toward the speaker’
- ppay-as-a-ka-* (take: out-snatch-CONN-go) ‘snatch an object away from the speaker’;
- ppay-as-a-o-* (take: out-snatch-CONN-come) ‘snatch an object toward the speaker’
- ppay-nay-ka-* (take: out-move: out-go) ‘draw out an object away from the speaker’;
- ppay-nay-o-* (take: out-move: out-come) ‘draw out an object toward the speaker’

These Path-conflating caused-motion verbs show that a deictic element may occur not only in compound verbs expressing spontaneous motion but also in those expressing caused motion. Therefore, they further support my proposal that Korean exhibits a unified motion-conflation pattern common to spontaneous- and caused-motion verbs.

Choi and Bowerman realize that the existence of verbs like *kaci-e-ka-* ‘take something away from the speaker’ and *kaci-e-o-* ‘bring something toward the speaker’ can be a problem for their claim that “Korean has no deictic transitive verbs for caused motion” (Choi & Bowerman 1991, p. 92). To deal with this problem, they argue that *kaci-e-ka-* ‘take something

away from the speaker' and *kaci-e-o-* 'bring something toward the speaker' express the spontaneous motion - coming or going - of the agent, who, while he comes or goes, is having something. They take *kaci-e-ka-/-o-* to constitute a biclausal construction : *kaci-* 'have' is the verb of the embedded clause and *ka-/o-* 'go/come', that of the main clause; and sentences like *Inho-ka chayk-ul (cip-ey) kaci-e-ka-ss-ta* 'Inho took the book (home) away (from me)' are "not transitive clauses but rather intransitive clauses denoting spontaneous motion" (Choi, personal communication).⁵

The monoclausal status of compound verbs like *kaci-e-ka-/o-* in Korean seems to have been well-established by a batch of linguistic tests. Just to give a simple example, the adverb-insertion test reveals the monoclausal status of these compound/serial verbs.⁶

- (5) *Inho-ka chayk-ul kaci-e *ecey ka-ass- ta*
 NOM book-ACC have-CONN yesterday go-PAST-DECL
 'Inho took the book away yesterday'

Moreover, for *teyli-e-ka-* 'take a person away from the speaker' and *teyli-e-o-* 'bring a person toward the speaker', for example, the bi-clausal analysis faces the additional problem that *teyli-* is a so-called "dependent verb," which never occurs by itself.

In order to understand the function of deictic verbs in Korean, we need to take a closer look at the behavior of deictic verbs expressing caused motion. Observe the following sentence:

- (6) *Inho-ka cim- ul i chung- ey*
 NOM package-ACC second floor- LOC
ol- li- e- o- ass- ta
 move: up-CAUS-CONN-come-PAST-DECL
 'Inho moved the package up to the second floor toward me'

⁵ Choi (personal communication) assumes the same biclausal structure analysis for verbs expressing spontaneous motion such as *nem-e-ka-* (move: over-go) 'go over' and *kenn-e-ka-* (move: across-go) 'go across', too. However, such a biclausal analysis might have the danger of undermining the Motion-conflation analysis of compound/serial verbs itself, because Talmy's analysis is intended for a single event rather than for multiple events of multiply embedded syntactic constructions.

⁶ Interested readers are referred to S. Lee (1992) and T. Chung (1993) for recent discussion of V-e/a-V compounds and more tests of clausal status.

There are two conceivable circumstances in which this sentence can be used appropriately: first, the agent Inho may actually go up to the second floor, where the speaker is, carrying the package with him; in the second situation, the agent may already be on the second floor, where the speaker is, and the agent uses some instrument (such as a pulley) to raise the package to the second floor. What is important is that the agent does not necessarily have to move in the direction indicated by the deictic verb. What moves in both situations is the object ('package') of the action – it moves toward the speaker, as indicated by the deictic verb. When the verb is *ol-li-e-ka-* 'cause to move up away from the speaker', the same logic applies: the agent may actually go upstairs away from the speaker carrying the package with him, or he may already be upstairs away from the speaker when he raises the package by using some remote control equipment. The important component of the meaning expressed by the deictic element *ka-* 'go' is that the moved object, and not the agent, moves away from the speaker.

What if the agent stays with the speaker while raising the package away from both of them by remote control? The expression for such an event is separately lexicalized as *ol-li-e-ponay-* (move: up-CAUS-CONN-send) 'send up'. On the other hand, if the agent is downstairs and raises the package by remote control to the second floor, where the speaker is, the appropriate verb would be either *ol-li-e-ponay-* 'send up' again, or more specifically *ol-li-e-ponay-o-* (move: up-CAUS-CONN-send-come) 'send up toward the speaker'.

Tul-i-e-ka- 'move an object into a place away from the speaker'; *tul-i-e-o-* 'move an object into a place toward the speaker' and *nay-ka-* 'move out an object away from the speaker'; *nay-o-* 'move out an object toward the speaker' show exactly the same behavior, with respect to the interpretation of deictic verbs, as *ol-li-e-ka-/o-* and *nayli-ea-ka-/o-*. These verbs for caused motion tell us that the deictic verbs they contain do not express physical motion of going or coming by the agent.

Now we may apply the test of remote control to *kaci-e-ka-/o-* 'take/bring'. Imagine a situation in which the agent who is already away from the speaker takes away an object from the speaker by using, say, a magnetic rod. To describe such an event we may use *ka-ci-e-ka-* 'take something away from the speaker' or *ppay-as-a-ka-* 'snatch something away

from the speaker'. Again, note that it is not the agent but the manipulated object of the motion that must move away from the speaker. The agent's moving away from the speaker is compatible with the meaning of the compound but not entailed by it. In sum, the verbs in Table 6 do not semantically entail spontaneous motion of the agent going or coming to a certain place physically, although that might be the typical reading. Since all the verbs in Table 6 are transitive verbs for caused motion, they go against the claim that the occurrence of deictic verbs is characteristically limited to spontaneous-motion expressions in Korean.

4. Motion-Conflation Patterns – A Unified Account

I propose in this paper that Korean characteristically employs the same verb roots for expressions of spontaneous and caused motion, and that the two types of expressions share the same motion-conflation pattern. Data in the preceding section indicate that even the earliest inventory of verbs used by children reflect this characteristic pattern of Korean Grammar. This generalization may be less straining from a typological perspective, too, since the mixed motion-conflation pattern across the causation boundary does not fit any of Talmy's typological generalizations.

What then would be the unified motion-conflation pattern in Korean? A full answer to this question should probably await future research. What I would like to suggest here is that there seems to be a unified internal structure of (compound) verb lexicalization in Korean. When simple verbs expressing different semantic categories are combined to form a compound, the most frequently obeyed ordering is Manner/Cause verbs preceding Path verbs, which in turn precede Deixis verbs, or any subpart of the sequence. Hence for expressions of spontaneous motion, *ttwi-e-tul-e-o-* (run-CONN-move: in-CONN-come) [Manner][Path][Deixis] 'run into toward the speaker' stands in contrast with the ungrammaticality of **ttwi-e-o-a-tul-* [Manner][Deixis][Path], **o-a-tul-e-ttwi-e* [Deixis][Path][Manner], **tul-e-ttwi-e-o-* [Path][Manner][Deixis] and all other combinations. The same principle applies to expressions of caused motion, as we see in *kwul-li-e-ᅇay-ka-* (roll-CAUS-CONN-move: out-go) [Manner][Path][Deixis] 'roll something out of a place away from the speaker' contrasted with the ungrammaticality of **kwul-li-e-ka-ᅇay-* [Manner][Deixis][Path], **ka-kwul*

-li-e-nay- [Deixis][Manner][Path], **nay-kwul-li-e-ka-* [Path][Manner] [Deixis] and all other combinations.⁷ There are, however, exceptions to this proposed generalization. First, the proposed ordering between [Manner/Cause] and [Path] is violated in certain cases: e.g., *kenn-e-ttwi-* (move: across-CONN-run) [Path][Manner] ‘run across’. The position of the deictic verb, however, if it occurs at all, is invariably final. Second, more than one Manner/Cause verbs or Path verbs occur in a row in certain compounds (e.g., *tul-i-pak-* (enter: CAUSE-drive: into) [Path][Path] ‘drive into’). The number of deictic verbs, however, is restricted to one. It has to be explored in future research whether such exceptional instances constitute a pervasive enough pattern to change what is proposed here to be the characteristic combination pattern, whether they result from idiosyncratic properties of individual verbs, what semantic constraints give rise to the characteristic pattern, and what systematic semantic differences exist between the characteristic pattern and exceptional cases.

Another substantial and more fundamental question to be considered in future research is whether the Motion should be thought to conflate always with the final semantic element in compound verbs. Consider *tul-e-ka-* (move: in-CONN-go) ‘go in(to)’, for example. Is the main motion conflated with Path or with Deixis? This is a question that could have been anticipated in the process of extending Talmy’s analytic framework of verb lexicalization patterns to compound/serial-verb constructions. As for the English expression *go in(to)*, it is apparent that motion is conflated with the verb, Path being independently expressed by the preposition. In Korean, in contrast, both components of the compound verb are verbs, each of which expresses motion to a certain degree. In some cases, native speakers’ intuition seems to be more confident as to which component of a compound verb expresses the “main motion”, but it is not always reliable, as we saw in the case of causative deictic verbs such as *ol-li-e-ka-* ‘cause to move: up away from the speaker’. Choi and Bowerman (1991) assume that the final component of a complex motion verb expresses the main motion – for example, that in *tul-e-ka-* ‘enter’ motion is expressed not in the Path verb but in the Deixis verb.

⁷ Slobin and Hoiting (1994) suggest, referring to Foley (personal communication), that the order of concepts encoded in serial verb constructions is [Manner] [Direction][Goal] universally.

In contrast, I argue in Kim (1995) that there is evidence which shows that in complex motion verbs along a Path, motion is conflated with Path rather than with Deixis, and that the deictic verb only provides an additional piece of information as to the direction relative to the speaker, of the main motion that occurred. The evidence comes from the *Se*-insertion test and the scope of negation interpretation. I will not go into the discussion here due to the limitation in space, but simply summarize below the findings in Kim (1995):

(7) Motion-Conflation Pattern for Morphologically Unrelated Verb Pairs for Spontaneous and Caused Motion:

a. spontaneous motion

<i>tul-</i>	<i>e- ka-</i>
[Motion+Path]	[Deixis]

b. caused motion

neh-
[Motion+Path]

The motion-conflation pattern suggested in (7) has a surprising implication for the status of Korean in the general typology: it shows that even when verbs for spontaneous and caused motion do not share the same morphological root, they share the same motion-conflation pattern; that is, directed motion is consistently conflated with Path regardless of whether the motion is spontaneous or caused. This saves linguists the trouble of modifying Talmy's allegedly exhaustive typological classification on the basis of Korean grammar. In contrast, it supports his generalization even more strongly, because the common pattern of motion-conflation emerges out of verbs that seem to have radically different internal structures.

5. Why Do Intransitive Counterparts of Certain Caused-Motion Verbs Resist Spontaneous-Motion Interpretation?

I proposed that Korean characteristically employs the same verb roots for expressions of spontaneous and caused motion, and that there is a unified motion-conflation pattern for both types of expressions. One of the factors that may lead one to conjecture, counter my proposal, that Korean uses dif-

ferent Path verbs for expressions of spontaneous and caused motion is the existence of a group of transitive verbs whose intransitive counterpart resists a spontaneous-motion reading. Such verbs listed in Choi and Bowerman (1991) are: join/separate verbs such as *kki-* 'fit', *neh-* 'put into', *kkoc-* 'stick into', *tam-* 'put liquid or multiple objects in a container', *sit-* 'load into/onto', *pwus-* 'pour into', *phu-* 'dip up', *kkenay-* 'take out', *noh-* 'put on', *kka-* 'peel off, unwrap', *kkakk-* 'peel off'; donning/doffing verbs; and some carrying verbs such as *an-* 'hold in arms' and *ep-* 'carry a person on one's back'. My subjects' production of such join/separate verbs, collected from Appendices A and B, is listed in Table 7:

Table 7. Caused-Motion Verbs without a Counterpart for Spontaneous Motion in Five Children's Utterances up Through 24 Months

<i>tha-</i>	'mix liquid or powder in a liquid base'
<i>kki-</i>	'fit one three-dimensional object into another'
<i>kkoc-</i>	'put a solid object elongated in one dimension into/onto a base'
<i>tam-</i>	'put liquid or multiple objects in a container'
<i>pus-</i>	'pour liquid into a container'
<i>sit-</i>	'load something into a vehicle'
<i>kka-</i>	'take off a covering layer or wrapper'
<i>palu-</i>	'apply a liquid substance onto a surface' (ointment, lotion)
<i>cip-</i>	'pick up with fingers or tongs'
<i>kkenay-</i>	'take something out of a container'
<i>neh-</i>	'put something into a container'
<i>noh-</i>	'put (something on a surface)'

The question to ask is why these verbs do not have a morphologically related counterpart that expresses spontaneous motion. The relevance of such a question shows up more clearly when we compare the situation with English. When one puts an object into a box, the event could be expressed as the agent's action on the object (*put into*), but it could also be expressed as a spontaneous motion of the moving object, if the agent is left out of perspective (*go into*). In English, the same Path marker *into* is used for both caused motion and spontaneous motion. In Korean, however, *neh-* 'put: in' and *tul-e-ka-* 'go in' do not share the same Path marker, being two

morphologically unrelated verbs.

We have seen, however, that children as well as Korean adults use the same verb root for certain expressions of caused and spontaneous motion, as listed in Table 1. All the verbs in Table 7 are inherently causative verbs just like certain verbs in Table 1. The latter, however, have passive/inchoative counterparts that express spontaneous motion (e.g., *ssot-* 'pour out (transitive)' vs. *ssot-a-ci-* 'pour out (intransitive)'). If such a morphological derivation of intransitive forms from inherently causative verb roots is available and is a productive process in Korean grammar, as has been noted, why don't the verbs in Table 7 have morphologically derived counterparts expressing spontaneous motion?

The fact of the matter is that the inherently causative verbs in Table 7 do have intransitive counterparts formed by adding the inchoative/passive suffix *-ci* or *-i/-hi/-li/-ki-* to the verb root. The problem is that these intransitive forms cannot receive a spontaneous-motion reading - that is, they all imply an implicit agent, and therefore should be categorized as referring to caused motion (Choi & Bowerman, personal communication). If the verbs in Table 7 and Table 1 are both inherently causative verbs that have intransitive counterparts formed by adding the same passive/inchoative suffix, why is only one group of verbs capable of getting a spontaneous-motion reading, while the other group of verbs are not? Observe the following sentences:

- (8) a. *Sathang kkepcil -i kka- ci- ess- ta*
 candy wrapper-NOM unwrap-INCH-PAST-DECL
 'The candy wrapper got unwrapped'
- b. *Sakwa kkepcil-i kkakk- i-/ a- ci- ess- ta*
 apple skin- NOM peel: off-PASS/CONN-INCH-PAST-DECL
 'The apple skin got peeled off'

These sentences imply that the candy wrapper/apple skin was taken off by an implicit agent. A question that immediately arises, then, would be: is it possible at all in Korean to express the event of the wrapper/fruit skin falling off spontaneously? The answer is affirmative, and the right verb for that purpose is *pes-ki-e-ci-*, as illustrated in the following example:

- (9) *Kkepcil-i cecello pes- ki- e- ci- ess- ta*
 skin- NOM spontaneously take: off-CAUS-CONN-INCH-PAST-DECL
 ‘The skin fell off spontaneously.’

Note also that the same verb *pes-ki-e-ci-* is used for different types of clothing items falling off spontaneously from different body parts, even though a variety of donning verbs must be used:

- (10) a. *I chima/kwutwu/moca-ka cal pes- ki-e-*
 this skirt/shoe/ hat- NOM easily come: off-CAUS-CONN-
ci- n- ta
 INCH-PRES-DECL
 ‘This skirt/shoe/hat falls off easily.’

I conjecture that such an asymmetric behavior of certain verbs with respect to the spontaneity interpretation is related to a pragmatic factor. What is going on seems to be that action verbs expressing highly specified manipulative activities on objects cannot help implying a hidden agent when they are passivized. In other words, to avoid getting an implicit agent interpretation, i.e., to receive a spontaneous-motion reading, a passivized verb should not encode too much information as to the Figure, Ground, or/and Manner of the motion referred to. Put differently, whereas many Path-expressing verbs for caused motion in Korean are “subordinate-level” predicates encoding detailed information about Figure, Ground or Manner, their counterparts for spontaneous motion are often “basic-level” predicates. This pragmatic factor seems to be responsible, at least in part, for the impossibility of the spontaneous-motion reading of the derived passive/inchoative counterpart of the verbs in Table 7. The following transitive joining verbs taken from Table 7 incorporate rich information about Ground, Figure or Manner as well as Path, but the intransitive counterpart expressing spontaneous motion for all of them is *tul-e-ka-* ‘go in’, perhaps another “basic-level” Path predicate:

- kki-* ‘fit one three-dimensional object to another’
kkoc- ‘put a solid object elongated in one dimension into/onto a base’
tam- ‘put liquid or multiple objects in a container’
pus- ‘pour liquid into a container’
sit- ‘load something into a vehicle’

The pragmatic factor at work must be related to the fact that the Figure of motion expressed by these verbs are typically inanimate objects that cannot perform highly specified actions for themselves. That hypothesis seems to be supported by the fact that when the lexical meaning of a verb implies that the Figure is a person, the passivized form of the verb invokes a spontaneous-motion interpretation:

- (11) *Emma- hanthey an- ki- ci com ma*
 mommy DAT hold: in: arm PASS CMPLR please NEG: IMP
 'Please do not come into Mommy's arms'
 (Lit. 'Please do not get held in arms by Mommy')

The sentence (documented in Park 1994) is frequently said by mothers to children who persistently cling to them. Although *an-* 'hold a person/a thing in arms' encodes information about Ground (i.e., to which part of the body goes the Figure), its morphological passive form may express spontaneous motion because a human Figure is thought to be capable of spontaneously carrying out such a specified type of action. A similar example shows the same point:

- (12) *Ppalli ephi- hi- e*
 quickly carry: person: on: back PASS IMP
 'Get on (my) back quickly'
 (Lit. 'Get carried on my back quickly')

In (12) not only Ground but also Figure information (e.g., that it must be a person) is encoded in the root of the verb, but the passivized form still receives spontaneous-motion interpretation, again because the human Figure is thought to be capable of carrying out such a highly specified action.⁸ In contrast, morphological passive forms of other carrying verbs and all donning verbs, whose Figure must be an inanimate object, do not prompt a spontaneous-motion interpretation, supporting the hypothesized pragmatic principle.

To summarize, it is true that passivized forms of certain inherently causative verbs cannot be interpreted as expressing spontaneous motion, but it

⁸ If the Figure is a nonhuman object, the appropriate verb would be *ci-* 'carry: object: on: one's: back', and the spontaneous motion reading of its passive form is impossible.

is also true that passivized forms of other inherently causative verbs can invoke a spontaneous-motion interpretation. It seems that a pragmatic factor determines, at least in part, the plausibility of a spontaneous-motion reading. It then would be reasonable to conclude that Path marking in Korean basically takes the same form in expressions for spontaneous and caused motion unless blocked by certain semantic properties of individual verbs.

6. Acquisition Order Among Path-Conflating Verbs

Choi & Bowerman (1991) report that Korean children produce Path-conflating verbs for caused motion – most typically *kki-* ‘fit’ and *ppay-* ‘unfit’ – much earlier than Path verbs for spontaneous motion such as *olu-* ‘move: up’, *nayli-* ‘move: down’, *tul-* ‘move: in’, and *na-* ‘move: out’; and also that children are late in production of *ol-li-* ‘cause to move up’ and *nayli-* ‘cause to move down’ as well. They propose that Korean children produce these “pure Path markers” (i) later than certain Korean verbs for caused motion; and (ii) also later than the English-speaking children’s acquisition of Path markers such as *up* and *down*, because Korean-speaking children meet Path mostly conflated with notions of spontaneous or caused motion. If Korean does not characteristically exhibit a mixed motion-conflation pattern across the causation boundary, why would there be such a time lag between the two classes of verbs? There might be multiple reasons for such a developmental lag, but I would first like to pursue a possibility that Choi & Bowerman (1991) also considered in a footnote. As they note, Korean “pure” Path verbs are usually pre-final, followed by deictic verbs, forming a compound. This may render these Path verbs less salient than *kki-* ‘fit’ and *ppay-* ‘unfit’, for example, and also less salient than English Path particles, which often occur sentence-finally and can receive heavy stress. Choi & Bowerman dismiss this hypothesis on the ground that *kki-* ‘fit’ and *ppay-* ‘unfit’ may also be followed by other verbal elements such as *cwu-* ‘give’ (= ‘do someone a favor’) or *po-* ‘try’ in caregivers’ speech. It seems, however, that the cohesion between Korean “pure” Path verbs and deictic verbs that follow them in a compound is much stronger than that found between a main verb and a “supporting” verb like *cwu-* and *po-*. So it may be useful to check input samples for the actual rate of compounding/serialization for each verb type of our concern. Table 8 presents the results.

Caregivers' speech samples were taken from P's and J's earliest data.⁹

Table 8. Frequency Distribution of Certain Simple and Compound Path-Conflating Verb Tokens in Two Caregivers' Speech

	P's input (19-21 months: 390 min. total)	J's input (22-23 months: 120 min. total)
<i>kki-</i> 'fit'	15	1
<i>ppay-</i> 'unfit'	19	2
<i>kki-e-cwu-/po-</i> 'fit for someone'/'try fitting'	3	2
<i>ppay-cwu-/po-</i> 'unfit for someone'/'try unfitting'	12	4
<i>na-</i> 'move: out'	3	7
<i>tul-</i> 'move: in'	8	1
<i>ol-li-</i> 'cause to move: up'	2	0
<i>nayli-</i> 'cause to move: down'	3	1
<i>na-ka-/o-</i> 'go/come out'	48	23
<i>tul-e-ka-/o-</i> 'go/come in'	12	6
<i>oll-a-ka-/o-</i> 'go/come up'	15	4
<i>nayli-e-ka-/o-</i> 'go/come down'	11	2
<i>nay-cwu-</i> 'cause to move: out for someone'	0	1
<i>ol-li-e-noh-</i> 'put up'	1	2
<i>nayli-e-noh-</i> 'put down'	0	1
<i>nayli-e-cwu-</i> 'cause to move: down for someone'	2	0

Pooled data from Table 8 yield the following overall rates: "pure" Path verbs in the input are followed by other verbs (mostly by deictic verbs) in a compound 90.1% of the time (128/142), whereas *kki-* 'fit' and *ppay-* 'unfit' are followed by other verbs (*cwu-* 'do someone a favor' and *po-* 'try') in a

⁹ W's input data are not included because they contain a fair amount of conversational interaction between the child and the investigator, and also between the mother and the investigator.

compound 36.2% of the time (21/58). Considering such a high proportion of occurrence in the pre-final position in the input, it is very likely that “pure” Path verbs are perceptually less salient to children than verbs such as *kki-* ‘fit’ and *ppay-* ‘unfit’ on the one hand, and also less than English Path particles on the other. Moreover, the absolute length of the verbs may also affect the onset of production: “pure” Path verbs typically occur in a V-CONN-V compound, whereas transitive verbs for caused motion often occur as a simple verb, and especially in monosyllabic CV forms for *kki-* ‘fit’, *ppay-* ‘unfit’, and *kka-* ‘peel off’ when followed by the most frequently used colloquial declarative/interrogative/imperative ending *-a/-e*. Thus, the inflected forms for these verbs in actual speech are very often *kkye* ‘fit’, *ppay* ‘unfit’, and *kka* ‘peel off’, in the input and children’s utterances alike. In addition to these factors, it may make sense to compare input frequencies of English particles *up* and *down*, and those of Korean motion verbs expressing upward and downward motions. As I am trying to show, linguistic complexity both on perceptual and production side coupled with input frequency factors may lie behind the relatively late emergence of “pure” Path verbs in Korean.

If we look at Choi and Bowerman’s (1991, p. 104) reports from subjects in the age range between 14 and 24 months, there seems to be time lag in the production of different Path-conflating verbs expressing caused motion. It is only *ppay-* ‘unfit’ and *kki-* ‘fit’ (and perhaps *kka-* ‘peel off’, too) that seem to be acquired considerably earlier than other Path-expressing verbs. The acquisition of both spontaneous- and caused-motion verbs expressing Path peaks between 21-22 months. Before 21 months, a number of Path-conflating verbs for caused motion are reported to be produced, but mostly by only one among the four subjects. If we take the case of a prototypical Path verb *neh-* ‘put in’, 3 out of 8 subjects produced it between 21-22 months, and as for *noh-* ‘put (on)’, it is between 23-24 months that 3 out of 8 subjects produced it. On the other hand, “pure” Path verbs such as *na-ka/-o-* ‘go/come out’ are produced by 4 out of 8, and *oll-a-ka/o-* ‘go/come out’, by 3 out of 8 subjects between 21-22 months. Therefore, it seems that the acquisition of transitive verbs expressing caused motion, which comprise a large, open class of diverse types, continues for a longer period of time than the acquisition of a fixed set of a few “pure” Path verbs, which occurs between 21 and 24 months. That is, the production of caused-motion verbs begins earlier than that of the “pure” Path verbs, and continues

through the third year and later.

The behavior of *noh-* ‘put on, leave’ deserves mentioning. In my data, W began to use *noh-* first as an auxiliary expressing duration of result of the action at 22 months in the form of *V+noh-* ‘have Ved’; only at 24 months was her first production of *noh-* as a main verb observed. It is not clear even at this point, however, whether the context required *noh-* ‘put on’ or *neh-* ‘put in’:¹⁰ P also began to use *noh-* in a compound, as a main verb, at 21 months, but not as a motion verb: she used it in a compound with another resultative auxiliary *twu-* ‘put, leave’, forming *noh-a-twu-* ‘leave-CONN-leave’ (=‘leave something in its present condition’, ‘do not touch something’); there was only one occurrence of *noh-* ‘put on, leave’ as a main verb without an auxiliary for P at 22 months, and the utterance was not relevant to the context. H also began to use *noh-* in a compound *noh-a-noh-* ‘put/leave-CONN-leave’ at 22 months, and as a main verb expressing motion at 23 months. C and J were not observed to produce *noh-* up through 24 months. The production of *noh-* ‘put, leave’ as a main verb across children, therefore, seems to be later than the emergence of other Path-conflating verbs including “pure” Path verbs. Moreover, it is not the case that children first use *noh-* to express physical motion, extending it to express non-motion event or aspect only later.

In fact, there is evidence suggesting that *noh-*, when it is used as a motion verb, may not be a Path-conflating motion verb in the first place. Rather, it may be like English *put* with respect to Motion-conflation patterns: it combines with a full range of “pure” Path verbs to form a compound, as the following examples illustrate:

- (13) a. *tul-i-e-noh-* ‘move: in-CONN-put’ (=‘put in’)
 b. *nay-noh-* ‘move: out-CONN-put’ (=‘put out’)
 c. *nayli-e-noh-* ‘move: down-CONN-put’ (=‘put down’)
 d. *ol-li-e-noh-* ‘move: up-CONN-put’ (=‘put up’)

¹⁰ The interaction went as follows:

C: *Kilum-cha yeki noh-a*
 oil truck here put DECL
 ‘Put the oil truck here’

A: *Ung, kekita neh- nun ke- ya, kulay*
 yes there: LOC put: in PRES CMPLR be: DECL right
 ‘Yes, (you) should put it in there right’

Note that *noh-* in the above compounds is not an auxiliary expressing duration of resultative states, but a motion verb expressing a concrete physical action. Note also that these compounds do not express two separate events but a single motion event. Therefore, Korean may not have a lexicalized simple verb equivalent in meaning to English 'put on', although it has a lexicalized simple verb expressing 'put in(to)' - i.e., *neh-*. Korean *noh-* may instead be equivalent in meaning to English *put*, a Cause-conflating verb.

If we look at Table 8, a striking feature is the high frequency of *na-ka/-o-* 'go/come out'. Separating the frequency count between the two compounds, however, reveals that *na-ka-* 'go out' constitutes only 4 out of 52 tokens produced by P's caregiver and 3 out of 23 tokens produced by J's caregiver - all the rest are *na-o-* 'come out'. The semantic distribution of *na-o-* 'come out' is also worthy of noting. It is more frequently used for predicating entities like sound, speech, tears, nose, and for denoting a figure appearing on a TV screen than for expressing physical motion events such as someone coming out of the bathroom. Indeed, children's use of the verb in its earliest production reflects the whole range of contexts in which the verb is used in adult speech. The acquisition of *na-o-* shows that children do not always begin to use Path verbs to talk about concrete physical motion events, but rather are willing to start from non-motion sense of the verb or its mental/metaphorical extension, if the input models such uses.

Such a semantic extension of motion verbs is found not only with *na-o-* 'come out', but also with *tul-* 'move: in' (cold, sleep), *tul-e-o-* 'move: in-CONN-come' (= 'come in') (light/electricity), and *na-* 'move: out': children talk about anger (*hwa/kol*-(NOM)) coming out/breaking out (*na-*) as well as about eruption (*ppotulak*(*ci*)), sweat (*ttam*), and blood (*phi*) coming out. They also produce the causative form *nay-* (move: out: CAUS) in idiomatic expressions when appropriate:

- (14) a. *Nay-ka kol- i na- ss- e*
 I- NOM anger-NOM come: out-PAST-DECL
 'Anger came out to me' (= 'I got angry')
- b. *Nay-ka kol- ul nay- ss- e*
 I- NOM anger-ACC come: out: CAUS PAST-DECL
 'I made anger come out' (= 'I showed signs of being angry')

Therefore, we should perhaps bear in mind that the range of evidence that Korean children may use to infer the morphological relatedness of Path verbs expressing spontaneous and caused motions need not be limited to physical motion events but extends to motion compounded with mental event notions, just as the motion-conflation pattern in languages that have it normally applies far beyond the expression of physical motion (Talmy 1985).

In this section, I suggested an explanation for why certain Path verbs are acquired later than others. I proposed that linguistic complexity both on the perception and production sides, coupled with input frequency factors may lie behind the relatively late acquisition of “pure” Path verbs such as *olu-* ‘move: up’. It seems that the acquisition of caused-motion verbs begins earlier (e.g., *kki-* ‘fit’ and *ppay-* ‘unfit’) than that of “pure” Path verbs, but continues for a longer period of time than the acquisition of a fixed set of a few “pure” Path verbs.

7. Underspecification of Path Information

Let us reconsider the initial question raised by Choi and Bowerman (1991): why do Korean children never overgeneralize verbs expressing upward motion (e.g., *oll-a-ka-* ‘go up’; *ol-li-* ‘cause to move: up’; *nayli-e-ka-* ‘go down’; *nayli-* ‘cause to move: down’) to posture changes (e.g., *il-e-na-* ‘stand up’; *anc-* ‘sit down’) or use them as requests to be picked up and carried (e.g., *an-* ‘hold: in: arms’), whereas English-speaking children extend Path particles such as *up* and *down* to a wide range of motion events that share abstract Paths very early on? For example, why do Korean children never select *an-* ‘hold: in: arms’ to mean ‘up’ in general, or *anc-* ‘sit’ to mean ‘down’ in general? According to Choi and Bowerman, this is because Korean children are not prompted to analyze out Path as an abstract component of motion events as strongly as are learners of English, which in turn can be accounted for by the following two reasons: (i) Korean uses Path verbs that differ for spontaneous and caused motion; and (ii) it combines information about Path with information about the shape or identity of the Figure and Ground objects.

I have suggested that the existence of morphologically unrelated expressions for spontaneous and caused motion in Korean (e.g., *tul-e-ka-/-o-* ‘go

/come: into' vs. *neh-* 'put: in') may not be pervasive enough to define the typological parameter of the entire language; that such exceptions can be explained away by a pragmatic principle; and that children seem to produce many Path verbs which use identical roots for spontaneous- and caused-motion expressions such as *oll-a-ka-* 'go up' vs. *ol-li-* 'cause to move: up', *naqli-e-ka-* 'go down' vs. *naqli-* 'cause to move: down', and *puh-* 'attach (intransitive)' vs. *puh-i-* 'attach (transitive)'. If my observations correctly capture the verb lexicalization patterns in Korean, there must be a different explanation for the lack of such an overextension on the part of Korean children.

It is true that many Korean verbs for caused motion express motion conflated with Path, Ground, and Figure as well. Expanding that insight, I would like to suggest that what is peculiar about these verbs is that whatever Path information they express seems to be UNDERSPECIFIED, and therefore children (and adults as well) cannot possibly overextend any specific Path notion to these verbs. For the same reason, children would not overextend any of these verbs to express a specific Path notion (such as 'up' and 'down') in general. Let us consider *an-* 'hold: in: arms' for example. The contexts in which *an-* can be used include the following: (i) mother and child both sitting on the floor at a certain distance from each other, mother opens her arms and says, "Come here, mommy will hold (*an-*) you"; (ii) both parents standing, father is holding the child, and the mother says, "Now mommy will hold (*an-*) you"; (iii) the child is up on a slide or a chair (or a tree), while the mother is standing at the foot of the slide or sitting on the floor, and she says, extending her arms, "You may come down now - mommy will hold (*an-*) you"; (iv) the child is on the ground and the mother is standing up, and she says, "Mommy will pick you up (*an-*)". Thus the real contexts in which the verb is used suggest that it is compatible with a variety of different Paths, and that seems to be because the Path information the verb carries is underspecified.

The same logic applies to *anc-* 'sit'. The verb can be used when the Figure changes its posture either from a standing position to a sitting position or from a lying position to a sitting position. The Paths taken in the two contexts differ, and the verb is compatible with either, since the Path component it contains is underspecified. Note that English uses different Path particles in the two contexts: (*sit*) *down* and (*sit*) *up*. Therefore, it seems

that certain verbs in Korean not only conflate Path information with other semantic information such as Figure and Ground, but perhaps more importantly, carries only UNDERSPECIFIED Path information.

This characteristic of the underspecified Path also applies to the prototypical caused-motion verb *kki-* 'fit'. As Choi and Bowerman point out, *kki-* 'fit' "is indifferent to whether the Figure goes into, onto, over, or together with the Ground, as long as it leads to a tight fit/three-dimensional meshing", although it is incompatible with Paths of separation such as "out" and "off". Then, it would be reasonable to say that *kki-* carries certain Path information, because it is not totally indifferent to the dynamic spatial relationship between the Figure and the Ground, but also that it expresses only UNDERSPECIFIED Path information. The implication, on the issue of acquisition, of the language-specific fact that certain caused-motion verbs in Korean carry underspecified Path information, is this: even if we assume, for the sake of argument, that children already have the notions 'up' and 'down', and hear the word *an-* 'hold: in: arms', for example, when they are picked up, there is no reason for us to expect the children to infer that the expression means 'motion upward', because the children also hear the same verb when motion downward or motion along the horizontal axis takes place. If the Paths followed by the Figure in real world situations when children hear *an-* 'hold: in: arms' are varied and inconsistent with each other, children probably would not be motivated to relate the verb with a specific Path that is only one element in the set of different Paths compatible with the verb.

When Korean children have acquired "pure" Path verbs expressing upward and downward motion, for example, we may presumably say that they now have the semantic notions of upward and downward Paths, as captured by these distinct linguistic labels. Would we then expect these children to overextend between certain "pure" Path verbs and verbs such as *an-* 'hold: in: arms'? Probably not, because there is simply no match between the specific Path expressed by a "pure" Path verb and the underspecified Path information carried by *an-*. In fact, Korean children do not commit such an overextension even in later stages, long after their use of "pure" Path verbs are well established. As Choi and Bowerman observe, Korean often combines - for caused-motion and posture verbs - Path information with Figure and Ground information, and that may make it harder

for children to extract Paths as abstract semantic notions. Building on that insight, perhaps I would add that it may not simply be that Path is confounded with other semantic information, but rather be that the Path component of certain expressions for caused-motion and posture verbs is *UNDESPECIFIED* which makes it harder for children (and adults) to perceive the aspect of Path (implicitly contained) in those expressions.

This tendency in Korean to underspecify Path when it is confounded with other semantic elements may be a phenomenon rather limited to a small group of lexical items, or it may be a general characteristic of the language. What might be related with the characteristic of underspecified Path found in certain verbs is that when these verbs combine with other Path verbs in serial-verb constructions, the other semantic information besides Path which they carry comes to the fore, perhaps because the underspecified Path information they express is "light". This point can be illustrated by a set of *kki*+V compounds:

- (15) a. *kki-e-tul-* 'fit-CONN-move: in' (= 'wedge/cut into'(a line))
 b. *kki-e-ip-* 'fit-CONN-put: clothing: onto: trunk' (= 'put on clothing in layers')
 c. *kki-e-sin-* 'fit-CONN-put: on: socks/shoes' (= 'put on socks in layers')
 d. *kki-e-an-* 'fit-CONN-hold: in: arms' (= 'hold tight someone in arms')

In (15a), the tight-fit relationship between the Figure (the Actor) and the Ground ('the line') expressed by *kki-* indicates that there was no room provided for the actor to go in, and therefore that the actor carried out the action of thrusting her/himself into the line forcibly (Manner of motion). The compound verbs in (15b) and (15c) also express that the action is carried out with a bit of force, bringing out the tight-fit relationship between the body and clothing items and also between layers of clothing items. Likewise, (15d) indicates the Manner in which the actor carries out the action of holding someone, i.e., tightly.¹¹ In these compound/serial verb construc-

¹¹ Choi and Bowerman (1991) also note that *kki-* 'fit' and *ppay-* 'unfit' carry some Manner information in addition to Path information (i.e., that the action requires a bit of force), and that they can be used as a Manner verb in combination with a second Path-conflating verb.

tions, *kki-* 'fit' combines with Path-conflating verbs expressing different Paths and functions itself as a Manner verb, probably because it carries underspecified, though not null, Path information.

This characteristic of the underspecified Path may also help account for the polysemous use of *ppa-ci-*. The two meanings of *ppa-ci-* in children's utterances express the information of opposite directed Paths - 'out' and 'into'. We may hypothesize that these (light) Path- and Manner-conflating verbs' characteristic of expressing underspecified Path information gave rise to their polysemous meanings with opposite Paths, although it is certainly possible that children in the earliest stage perceive the two uses of *ppa-ci-* as a homonymy rather than as a polysemy.

Since I suggested the underspecification of Path information as an account of the lack of overextension between verbs such as *an-* 'hold: in: arms' / *anc-* 'sit', and "pure" Path verbs expressing 'up' and 'down', we may now want to test the hypothesis against Path-conflating verbs carrying relatively specified Path information. Such an example would be *neh-* 'put in' vs. *tul-e-ka-* 'go in'. Shall we then expect that children would overgeneralize within these pairs, saying *neh-* 'put in', for example, when they go into the bathtub? Choi and Bowerman (1991) report that this never happens, which is contrasted with English-speaking children's early use of Path particles across the causation boundary.

There is a good reason to expect that such an overgeneralization of Path verbs across causation boundary would not occur. It is well-known that children crosslinguistically do not violate the distinction between spontaneous- and caused-motion expressions. Errors such as **I come (=bring) it closer so it won't fall* (2;9) (Bowerman 1974) occur, but not until late in development, and are attributed to a learned rule, not an ignorance that a verb is basically intransitive (Choi & Bowerman 1991). Figueira (referred to in Clark 1985) reports Portuguese children's use of *sair* 'go away, leave' for *tirar* 'take away' (2;11); *cair* 'fall' for *derrubar* 'drop' (3;8); *vir* 'come' for *trazer* 'bring' (3;11); and *subir* 'go up' for *illevantar* 'raise', but as in English, these errors occur only in later development.

If English-speaking children who already have acquired *up* and *down*, and hence the corresponding semantic notions of upwardness and downwardness, do not make errors such as **I fall (=drop) it* until later when they reorganize the rule system, it shows how conservative children are about the

distinction between spontaneous- and caused-motion expressions at the early stages. Such a crosslinguistic developmental tendency suggests that there must be an independent reason for Korean children not to overextend between fully specified Path verbs across the boundary between spontaneous motion and caused motion.

8. Conclusion

In this paper, I proposed within Talmy's (1975, 1985) framework, an analysis of motion-conflation patterns found in Korean verbs. There seems to be a unified internal structure of (serial) verb lexicalization in Korean, regardless of whether the verb expresses a spontaneous or a caused motion. When simple verbs expressing different semantic categories are combined to form a compound/serial verb, the most frequently obeyed ordering is Manner/Cause verbs preceding Path verbs, which in turn precede Deixis verbs, or any subpart of the sequence.

I also discussed the significant issues raised by Choi and Bowerman (1991) from a somewhat different perspective. I suggested an alternative account for the relatively late acquisition of "pure" Path verbs in Korean. I proposed that the existence of lexically different expressions for spontaneous and caused motion in Korean may not be general enough to render the entire language typologically unique, and I suggested a pragmatic explanation for the resistance of certain passive/inchoative forms of verbs to a spontaneous-motion interpretation. I also pointed out that children do not always start by using Path verbs to express physical motion, but they may start with non-motion, metaphorical extension of the core meaning, to the extent that the input models uses such. The data presented in this paper suggest that the heuristic sequence in the acquisition of a full semantic notion does not necessarily have to start from the most central members of the semantic category to the peripheral members from the adult/linguistic point of view. Finally, I suggested the possibility that certain verbs in which motion conflates with Path as well as other semantic information may actually express *UNDERSPECIFIED*, or "light" Path information.

The overall results from acquisition data seem to support Choi and Bowerman's suggestion that the semantic structure of the input plays a significant role in children's acquisition of semantic notions, though in a some-

	mek- 'eat'	
	cwu- 'give'	
	tat- 'close'	
	calu- 'cut'	
	kaci-e-o- 'bring'	
	po- 'look'	
	al- 'know'	
21months	o- 'come'	iss- 'exist'
	tul-e-ka- 'go in'	toy- 'become'
	oll-a-ka- 'go up'	ka- 'go'
	na-ka- 'go out'	olu- 'move up' ¹⁴
	tol-a-ka- 'turn around'	na-o- 'come out'
	nall-a-ka- 'fly away'	oll-a-ka- 'go up'
	sayngki- 'come into being'	ppa-(ci)- 'fall into'
	kel-li- '(wheel) get stuck'	ppa-ci- 'fall out'
	nem-e-ci- 'fall over'	ttel-e-ci- 'fall'
	ttel-e-ci- 'fall'	ccic-e-ci- 'become torn apart'
	pes-ki-e-(ci)- '(clothing) fall off'	nem-e-ci- 'fall over'
	anc- 'sit'	ephtuli- 'lie on stomach'
	nwup- 'lie down'	ca- 'sleep'
	tha- 'get on (vehicle)'	ket- 'walk'
	tal-li- 'attach [intrans]'	nalu- 'fly'
	wuncen-ha- 'drive'	ttwi- 'run'
	ca- 'sleep'	cel-ha- 'bow'
		kule- 'say so'
	neh- 'put in'	ppay- 'unfit'
	tha- 'mix in liquid'	ccic- 'tear apart'
	kki- 'fit'	kka- 'peel off'
	ppay- 'unfit'	kki- 'fit'
	ttut- 'tear off'	tam- 'put in'
	tay- 'put to, hold against'	kkenay- 'take out'

¹⁴ Wanting to go up, P (1;9) said *oll-a* (move: up-CONN/DECL) repeatedly, to which the adult replied *oll-a-ka-ci ma* 'move: up-CONN-go-CMPLR NEG: IMP) (= 'Don't go up'). In later samples, P used *oll-a-ka-* to express 'go up.' This occurrence of *olu-*, may be an incomplete form of *oll-a-ka-*.

	ip- 'put on (clothing)'	ssot- 'pour out'
	sin- 'put on (shoes)'	ppay-as- 'take away'
	mal-li- 'dry'	palu- 'put on (ointment)'
	pis- 'comb (oneself)'	neh- 'put in'
	pis-ki- 'comb (others)'	ttey- 'take off'
	thul- 'turn on (TV)'	kkoc- 'stick into'
	khye- 'turn on (TV)'	cap- 'hold/catch'
	(kho) phul- 'blow (nose)'	ssu- 'put on (hat)'
	kochi- 'fix'	pes- 'take off (clothing)'
	chac- 'look for'	ponay- 'send'
	ilk- 'read'	calu- 'cut'
		nwulu- 'push down'
		kkay- 'break'
		twutuli- 'knock'
		ha- 'do'
		kaci- 'have'
		kulk- 'scratch'
		(kho) phul- 'blow (nose)'
		kwan-twu- (=kuman-twu-) 'quit'
		kitali- 'wait'
		pakkwu- 'change'
		capswus- 'eat:HON'
		noh-a-twu- 'leave as is'
22months	nayli-e-ka- 'go down'	mut- '(liquid) stick onto'
	tul- 'move in' ¹⁵	na- '(sweat/trouble/anger) move out'
	il-e-se- 'rise'	kkay-ci- 'break [intrans]'
	him-tul- 'energy-move:in'	hulu- 'flow'
	(='require exertion')	wus- 'laugh'
	sin-na- 'spirits-move: out'	wul- 'cry'
	(='be excited')	salang-ha- 'love'
	teph-e-ci- 'get covered'	kongpu-ha- 'study'
	sal- 'live'	

¹⁵ Trying to close a formula can, W said: *an tul-e-* (not move: in-CONN/DECL) '(It) would not go in'. *Tul-* in this utterance may be an incomplete form of *tul-e-ka-*.

cwuk- 'die'
 wul- 'cry'
 (chwum)chwu- 'dance'
 yayki-ha- 'talk'

mac-chwu- 'fit [trans]'
 ssot- 'pour out'
 ccilu- 'poke at'
 cip- 'pick up'
 sit- 'load onto'
 kkenay- 'take out'
 pus- 'pour in liquid'
 cip-e-neh- 'put in'
 cep- 'fold'
 an- 'hold person in arms'
 mey- 'carry thing on shoulder'
 ep- 'carry person on back'
 sa-o- 'buy-come'
 yel- 'open'
 kaci- 'have'
 ssis- 'wash'
 phi-wu- 'smoke (cigarette)'
 mantul- 'make'
 masi- 'drink'
 mek-i- 'feed'
 pulu- 'call'
 V+noh- 'have Ved'

mac-chwu- 'fit [trans]'
 anc-hi- 'make sit'
 masi- 'drink'
 huntul- 'wave'
 kam- 'wash (one's hair)'
 an- 'hold person in arms'
 ep- 'carry someone on back'
 sin- 'put on (shoes)'
 ip-hi- 'clothe (others)'
 kal- 'change (diaper)'
 teph- 'cover'
 puth-cap- 'hold'
 yel- 'open'
 khye- 'turn on (TV)'
 takk- 'clean'
 mek-i- 'feed'
 po- 'look'
 nay-peli-e-twu- 'leave, neglect'

23months

na- '(noise) come out'
 tani- 'go and come repeatedly'
 ket- 'walk'

mac- 'fit [intrans]'
 nayli- 'bring down'
 ephcill-e-ci- 'spill [intrans]'
 nol- 'play'
 pakswu-chi- 'clap'
 cangnan-ha- 'work mischief'
 cenhwa-ha- 'telephone'
 nokum-ha- 'record'

	kwup- 'broil'	ket- 'roll up (sleeve)'
		cha- 'put on (diaper)'
		ephcilu- 'spill [trans]'
		phula 'undo (button)'
		cip- 'pick up'
		pegi- 'throw away'
		noha 'put, leave'
		ipa 'put on (clothing)'
		pat- 'receive'
		tal- 'give to speaker'
		tol-li- 'turn [trans]'
		manci- 'touch'
24months	na- '(eruption, anger) move out/break out'	tha- 'get on (vehicle)'
	na-o- 'come out'	tul-e-o- 'come in(to)'
	eph-e-(ci)- 'fall over'	il-e-na- 'stand up'
	ssot-a-ci- 'spill'	anc- 'sit down'
	eps-e-ci- 'disappear'	al- 'know'
	nem-e-ka- 'fall over'	nall-a-ka- 'fly away'
	cina-ka- 'pass by'	kuli- 'draw'
	se- 'stand up'	mokyok-ha- 'take a bath'
	il-e-na- 'stand up'	selkeci-ha- 'wash dishes'
	salaci- 'disappear'	
	puswu-e-ci- 'break'	
	telew-e-ci- 'get dirty'	
	kil-e-ci- 'get long'	
	kel-e-tani- 'walk around'	
	nolla- 'be surprised'	
	sanpo-ha- 'take a walk'	
	haphum-ha- 'yawn'	
	ccic- 'tear apart'	kaci-e-o- 'bring'
	noh- 'put, leave'	chac-a-o- 'fetch'
	twu- 'put, leave'	puth-i- 'stick onto'
	palu- 'put on (lotion)'	tul- 'hold thing by hand'
	kki-wu- 'fit'	ttu- 'open (eyes)'

mul- 'hold sth. in mouth, bite'	kkunh- 'cut'
pes- 'take off clothing'	pis- 'comb (oneself)'
pul- 'blow'	tenci- 'throw'
tol-li- 'turn [trans]'	ttayli- 'hit'
twutuli- 'knock'	mantul- 'make'
nwulu- 'push down'	yatan-chi- 'scold'
ic- 'forget'	
sicak-ha- 'begin'	
chieta-po- 'look up'	
ccik- 'take (picture)'	
puswu- 'break'	
sik-hi- 'cool'	
kkulh-i- 'boil'	
mou- 'collect'	
pele- 'throw away'	
kaluchi- 'teach'	

Appendix B

Additional Verbs Produced by C, H, and J Up Through 24 Months

<i>pikhi-</i> 'step aside'
<i>ol-li-</i> 'cause to move up'
<i>noh-a-noh-</i> 'leave as is' (H 1;10)
<i>cwup-</i> 'pick something up from the ground'
<i>palp-</i> 'tread upon'
<i>kku-</i> 'turn off (light)'
<i>kkuth-na-</i> 'finish [intrans]'
<i>camku-</i> 'lock'
<i>puleci-</i> 'break, snap [intrans]'
<i>tachi-</i> 'get hurt'
<i>kulk-hi-</i> 'get scratched'
<i>mil-</i> 'push'
<i>cha-</i> 'kick'
<i>ppal-</i> 'suck'
<i>phye-</i> 'straighten'
<i>talm-</i> 'resemble'

molu- 'do not know'
po-i- 'be visible'
swuyeng-ha- 'swim'

References

- Bowerman, M. (1973) *Early syntactic development: A crosslinguistic study with special reference to Finnish*, Cambridge: Cambridge University Press.
- Bowerman, M. (1974) 'Learning the structure of causative verbs: A study in the relationship of cognitive, semantic, and syntactic development,' *Papers and Reports on Child Language Development*, 8, 142-178.
- Bowerman, M. (1989) 'Learning a semantic system: What role do cognitive predispositions play?,' In M. L. Rice & R. L. Schiefelbusch (Eds.), *The teachability of language*, Baltimore: Paul H. Brooks.
- Chae, H. -R. (1994) 'Verb classification and a definition of movement verbs,' *Papers and Handouts of the 4th Korean-French Conference on Grammar and the Lexicon*, 67-74.
- Choi, S., & Bowerman, M. (1991) 'Learning to express motion events in English and Korean: The influence of language-specific lexicalization patterns,' *Cognition*, 41, 83-121.
- Chung, T. (1993) *Argument structure and serial verbs in Korean*, Unpublished doctoral dissertation, The University of Texas at Austin.
- Clark, E. V. (1985) 'The acquisition of Romance with special reference to French. In D. I. Slobin (Ed.),' *The crosslinguistic study of language acquisition* Vol. 2, Hillsdale, NJ: Lawrence Erlbaum Associates.
- Kim, Y. (1995) 'Verb lexicalization patterns in Korean - with a focus on motion conflation in complex verb constructions,' *A Paper presented at the Sixth Annual Japanese/Korean Linguistics Conference*, The University of Hawaii at Manoa.
- Kim, Y. (in press) 'The acquisition of Korean,' In D. I. Slobin (Ed.), *The crosslinguistic study of language acquisition* Vol. 4, Hillsdale, NJ: Lawrence Erlbaum Associates.
- Lee, K. (1976) 'Cotongsa-uy uymi punsek (Semantic analysis of auxiliary verbs),' *Munpep Yenkwu (Grammar Research)* 3, 215-236.

- Park, J. -W. (1994) *Morphological causatives in Korean : Problems in grammatical polysemy and constructional relations*, Unpublished doctoral dissertation, University of California at Berkeley.
- Slobin, D. I. (1973) 'Cognitive prerequisites for the development of grammar,' In C. A. Ferguson & D. I. Slobin (Eds.), *Studies of child language development*, New York: Holt, Rinehart & Winston.
- Slobin, D. I. (1985) 'Crosslinguistic evidence for the Language-Making Capacity,' In D. I. Slobin (Ed.), *The crosslinguistic study of language acquisition* Vol. 2, Hillsdale, NJ: Lawrence Erlbaum Associates.
- Slobin, D. I. (1991) 'Learning to think for speaking: Native language, cognition, and rhetorical style,' *Paper presented at Wanner-Gren Symposium 'Rethinking linguistic relativity'*, May, Ocho Rios, Jamaica. (To appear in J. J. Gumperz & S. C. Levinson (Eds.), *Rethinking linguistic relativity*.)
- Slobin, D. I., & Hoiting, N. (1994) 'Reference to movement in spoken and sign languages: Typological considerations,' *Berkeley Linguistics Society*.
- Sohn, H. -M. (1976) 'Semantics of compound verbs in Korean,' *Ene (Language)* 1.1, 142-150.
- Talmy, L. (1975) 'Semantics and syntax of motion,' In J. Kimbell (Ed.), *Syntax and semantics* Vol. 4, New York: Academic Press, 181-238.
- Talmy, L. (1985) 'Lexicalization patterns: Semantic structure in lexical forms,' In T. Shopen (Ed.), *Language typology and semantic description : Grammatical categories and the lexicon* Vol. 3, Cambridge: Cambridge University Press, 36-149.
- Talmy, L. (1991) 'Path to realization: A typology of event conflation,' *Proceedings of the Seventeenth Annual Meeting of the Berkeley Linguistics Society*, 480-519, Berkeley, CA: Berkeley Linguistics Society.
- Wienold, G. (1990) 'Semantic functions of Korean motion verbs expressing a path in typological perspective,' In E. -J. Baek (Ed.), *Papers from the Seventh International Conference on Korean Linguistics*, 477-492.
- Wienold, G. (1992) 'Up and down: On some concepts of path in Korean motion verbs,' *Language Research*, 28. 1, 15-43.
- Wienold, G., & C. Schwarze, (1989) *Lexical structure and the description of motion events in Japanese, Korean, Italian and French*, Fachgruppe Sprachwissenschaft, Universitat Konstanz, Arbeitspapier Nr. 5.

ABSTRACT

Verb Lexicalization Patterns in Korean and Some Issues of Language Acquisition

Young-Joo Kim

This paper presents an analysis of Motion-conflation patterns of Korean verbs in Talmy's (1975, 1985) framework, and examines children's acquisition of motion verbs. I propose that when simple verbs expressing different semantic categories are combined to form a compound/serial verb, the most frequently obeyed ordering is that of manner/cause verbs preceding path verbs, which in turn precede deictic verbs, or any subpart of the sequence, regardless of whether the verb expresses a spontaneous motion or a caused motion. Then I suggest the possibility that in Korean, certain verbs in which Motion conflates with Path as well as other semantic information may actually express UNDERSPECIFIED, or "light" Path information. Finally, I point out that children do not always start by using Path verbs to express physical motion, but that they may start with non-motion, metaphorical extension of the core meaning, to the extent that the input models uses such.

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