# On the Role of the Eventuality in Case Assignment on Adjuncts\*

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In some languages, case-marked adverbials may appear in the accusative case and indicate the boundedness of an event. In Korean, duration and frequency adverbials may show accusative or nominative case, with no apparent difference in their temporal or aspectual semantic contribution. We first discuss two main factors influencing case on adverbials, the animacy of the subject and the semantic properties of the predicate involved. We then show that in addition to these two factors, case assignment is also influenced by how the speaker presents an event —as involving an entity participating in an action, or as a holistic event.

Key words: case-marked adverbials, eventuality, predication

# 1. Structural case marking on adverbials

It is well-known that the domain of case assignment extends beyond the arguments of a predicate to a range of adverbials in some languages, including Korean (e.g. Li 1990 for Chinese, Maling 1993 for Finnish, Przepiórkowski 1999 for Polish, and Fowler 1987, Sullivan 1998, and Pereltsvaig 2000 for Russian). In this paper we concentrate on case-marked Duration or Frequency (D/F) adverbials in Korean, characterized as 'extensive measures' by Wechsler & Lee (1996).

In some languages, case-marked adverbials are in the accusative and indicate the boundedness of an event (cf. Kuryłowicz 1964, Kiparsky 1998, Kratzer 2004).<sup>1</sup> This is

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Abbreviations used in this paper are: ACC: Accusative; COMP: Complementizer; CONJ: Conjunction; DAT: Dative; DECL: Declarative; GEN: Genitive; LOC: Locative; MOD: (Prenominal)

not the case in Korean (see e.g., (5) below). In Korean, D/F adverbials can show accusative or nominative case, with no apparent difference in their temporal or aspectual semantic contribution.<sup>2</sup> Some illustrative simple examples are given in (1). In each example the relevant case markers are underlined, and are typically presented in the order nominative-accusative:

- (1) a. ku chayk-i twu sikan-i/ul ilk-hi-ess-ta the book-NOM two hour-NOM/ACC read-PASS-PAST-DECL 'The book was read for two hours.'
  - b. ku khun kong-i twu pen-<u>i/ul</u> kwul-ess-ta the big ball-NOM two times-NOM/ACC rotate-PAST-DECL 'The ball rotated twice.'

Important previous work on Korean which we build on can be found in Maling (1989), Kim & Maling (1993), Wechsler & Lee (1996), and Maling, Jun & Kim (2001; hereafter 'MJK'). MJK propose the conditions in (2) for adverbial case marking (see also Wechsler & Lee 1996, ex. (23)):

- (2) On a Duration/Frequency (D/F) adverbial:
  - a. Accusative is the only possible case if the verb has an external argument;
  - b. Accusative and Nominative are both possible if the verb has no external argument (underlyingly);
  - c. Nominative is the only possible case for 'simplex' psychological predicates or adjectival predicates such as *silh-ta* 'dislike' or *kwiyep-ta* 'be cute' (in contrast to the periphrastic *silh-e ha-ta* 'dislike', etc.).

With regard to the classification of verbs in (2c), simplex psychological predicates in Korean are formally transitive but take nominative objects, while the periphrastic ones are canonically transitive and take accusative objects (see e.g., Y.-J. Kim 1990). This 'external argument' approach is intended to capture the case patterns in (3):

Modifier; NOM: Nominative; PASS: Passive; PLU: Plural; PRES: Present; PROC: Processive; TOP: Topic.

<sup>&</sup>lt;sup>2</sup> There may be very subtle differences in interpretation with the same case-marking patterns on D/F adverbials, and also differences between these and bare duration adverbials, and those suffixed with -kan ('period of time'), or with tongan ('during'). We ignore all such subtleties here. See Jun et al. (2001), Kim & Sells (2006), and references cited therein.

- (3) a. John-i han sikan tongan-\*<u>i/ul</u> talli-ess-ta
  John-NOM one hour for-\*NOM/ACC run-PAST-DECL
  'John ran for an hour.'
  - b. pi-ka han sikan tongan-<u>i/ul</u> o-ass-ta rain-NOM one hour for-NOM/ACC come-PAST-DECL 'It rained for one hour.'
  - c. i pang-un nac tongan-<u>i</u>/\*<u>ul</u> etwup-ta this room-TOP day time for-NOM/\*ACC dark-DECL 'This room is dark during the day time.'

MJK account for the alternation in (3b) by first associating nominative with a predicate having (only) an internal argument, as (2a) might imply, followed by an optional process of 'externalization'. If the internal argument becomes externalized, the predicate will license accusative on its D/F adjunct (hence (3b) covers two circumstances). The predicate in (3a) takes an external argument, and so only accusative is licensed on the adverbial in the first place. Finally, in (3c), the predicate is one that does not allow its internal argument to be externalized.

In this paper, we re-evaluate some of the evidence in MJK and offer an elaboration of the semantic properties which influence the case on D/F adverbials. We begin with two main factors which influence adverbial case marking: the first is whether the subject is animate or inanimate, and the second is whether the verb is interpreted as an activity (for which we provide a very broad definition) or as a pure stative. For the animacy property, we show that an adverbial is accusative in almost every example with an animate subject; only pure stative predicates allow a nominative modifier with an animate subject. With inanimate subjects, the property of the predicate as being an activity or a state comes more into focus. We argue that many predicates in Korean which appear to be stative are in fact activities of some kind in terms of eventuality, and we offer their acceptability in the internally-headed relative clause construction as corroborating evidence. With regard to the notions of 'activity' and 'state' in the eventuality type, we shall suggest a slightly more refined distinction, appealing to the stage-/individual-level partition of predicate types (see Carlson 1977, Dowty 1979). Here again, we build on an observation in MJK, who recognize the relevance of events vs. states in their paper (pp.105-107), in particular the fact that pure statives take nominative on their adverbials.

The semantic distinction between stage- and individual-level predicates is known to be related to the possibilities for judgment types of 'Categorical' and 'Thetic' judgments (see Kuroda 1972, Heycock & Lee 1990, Ladusaw 1994), and this appears to be the basis on which the final analysis should be founded. Accusative case indicates

that there is a predicate which is predicated of an entity or set of entities, in the sense of the categorical judgment. Nominative case does not give this indication, and instead suggests a thetic judgment, where a proposition describes an eventuality.

Our proposals here are inspired by the approach to (English) change of state verbs in McKoon & Macfarland (2000), who argue that speakers have a certain amount of flexibility as to how they present or describe an event, exploiting choices among lexical items for communicative effect, sometimes perhaps deviating from an abstract grammatical ideal of the usage of a given predicate playing a crucial role in determining the event type. However, we feel that there is a solid if subtle, semantic basis to the judgments that we report.

The paper is organized as follows. In §2 we present data which is problematic for the simple internal/external-argument approach, and in §3 we offer two semantic generalizations, involving the animacy of the subject, and a notion of 'generalized activity'. In §4 we present the semantic basis of the analysis: the classification of predicates into stage- and individual-level, and types of stative predicates, some of which are true only at intervals, and some at moments, and the relation of these properties to categorical and thetic judgments, in the sense of Kuroda (1972).

#### 2. Predicates lacking an external argument

The idea of an external argument governing accusative case assignment has its roots in 'Burzio's Generalization' (Burzio 1986), if not earlier, and it provides a good basis for the characterization of accusative arguments in Korean (e.g., Y.-J. Kim 1990: 211ff.). However, on D/F adverbials, the semantic basis of case does not square well with the external/internal argument distinction.

Many unaccusative verbs allow either NOM or ACC on a D/F adverb, perhaps with some subtle different implications about the involvement of the subject:

- (4) a. pi-ka twu sikan-<u>i/ul</u> o-ass-ta rain-NOM two hours-NOM/ACC come-PAST-DECL 'It rained for two hours.'
  - b. hay-ka twu sikan-<u>i</u>/<u>ul</u> pichi-ess-ta sun-NOM two hours-NOM/ACC shine-PAST-DECL 'The sun shone for two hours.'

These are analyzed by MJK as predicates with optional externalization of their internal argument. Essentially, this is a claim that all of the relevant predicates are

ambiguous to some degree between unaccusative and unergative uses.<sup>3</sup> Some predicates, such as 'melt' (intransitive), are usually taken to be canonical unaccusatives which lack the accusative-assigning property, yet 'melt' in Korean favors accusative on an adverbial modifier:

(5) ku elum cokak-i han sikan-?<u>i/ul</u> nok-ass-ta that ice piece-NOM one hour-?NOM/ACC melt-PAST-DECL 'That piece of ice melted for one hour.'

Incidentally, this example means that the ice melted for an hour, without necessarily melting away, regardless of the case on the adverbial; the case-marking does not give the adverbial a different interpretation with respect to the overall event.

Unlike the accusative case on adverbials reported for other languages (see e.g., Maling 1993, Pereltsvaig 2000, and Przepiórkowski 1999, Anttila & Kim 2007 for languages such as Russian, Finnish, and Hungarian), there is nothing in Korean restricting only accusative case to a delimiting function, either (cf. Wechsler & Lee 1996). For example, the German equivalent of (5) has the same interpretation as (5), but there is no choice about the case of *eine Stunde*—it must be accusative.

(6) Der Eisblock hat eine Stunde lang geschmolzen the ice have.PRES one hour long melt.PART 'The ice block melted for an hour.'

In fact, on our account below, delimitation of the event is not a crucial part of the meaning of the case on the adverbial.

Returning to the idea that accusative case is correlated with the presence of an external argument, it is somewhat unexpected that the verb *iss-* 'be' in many contexts favors accusative:

(7) noyey-tul-i ku sem-ey ipayk nyen-kan-\*<u>i</u>/<u>ul</u> slave-PLU-NOM the island-LOC 200 years-period-\*NOM/ACC iss-ess-ta exist-PAST-DECL 'Slaves were on the island for 200 years.'

We are aware that there are detailed studies, e.g. Levin & Rappaport Hovav (1995) and Hale & Keyser (2002), which have shown that some verbs may function either as unaccusatives or unergatives. These studies in turn raise the question of the semantic bases for such variation.

(8) Bill-un Seoul-ey halwu tongan-\*<u>i/ul</u> iss-ess-ta Bill-TOP Seoul-LOC one day for-\*NOM/ACC exist-PAST-DECL 'Bill stayed in Seoul for one day.'

Although 'be' regularly allows an ACC adverbial, it is rather difficult to conceive of it as a predicate taking an external argument, for it patterns in other respects with predicates which are stative and clearly lack an external argument. For example, the verb *iss*- (example (9c)) acts differently from a non-stative verb like *cenhwaha*- 'telephone', but behaves just like a true stative predicate like *chincelha*- 'honest' in terms of a case alternation on the verb itself (cf. Kim & Maling 1998):

- (9) a. ku salam-un na-eykey cenhwaha-ci-\*<u>ka/lul</u> anh-ass-ta the person-TOP I-DAT phone-COMP-\*NOM/ACC not-PAST-DECL 'The man didn't telephone me.'
  - b. ku salam-tul-un chincelha-ci-<u>ka/lul</u> anh-ass-ta the person-PLU-TOP kind-COMP-NOM/ACC not-PAST-DECL 'The people were not kind.'
  - c. ku salum-tun-un ku sem-ey iss-ci-<u>ka/lul</u> anh-ass-ta the person-PLU-TOP the island-LOC exist-COMP-NOM/ACC not-PAST-DECL 'They were not on the island.'

The data here involve a case alternation inside a complex predicate, formed with the negative auxiliary verb *anh-ta*. In this complex predicate, case-marking can appear on the first verb, the main verb (cf. Kim & Choi 2004). The examples show that 'be' patterns with 'be kind' and not 'telephone'.

Even with an inanimate subject, 'be' still takes an accusative D/F adjunct:

- (10) a. ce san-un i sem-ey chennyen tongan-\*<u>i/ul</u>
  the mountain-TOP this island-LOC 1000 years for-\*NOM/ACC
  kkomccakha-ci anh-ko iss-ess-ta
  budge-COMP not-COMP exist-PAST-DECL
  'The mountain was on this island for 1000 years, without budging.'
  - b. ce cangsung-un i kos-ey swu sip nyen tongan-\*<u>i/ul</u>
    this totem.pole-TOP this place-LOC dozen years for-\*NOM/ACC
    pyenhamepsi iss-ess-ta
    without change exist-PAST-DECL
    'That totem pole has been on this island for dozens of years without any change.'

The idea in MJK that case marking is tied to an external argument (see also Wechsler & Lee 1996:643-645) is a good first step, but it falters on some verbs, and overall is not fine-grained enough. In the following sections, we discuss in detail the two semantically-based factors that seem to be strong predictors of the case marking patterns.

# 3. Semantic generalizations

Here we clarify the two factors that directly influence adverbial case. MJK focused on the internal/external argument distinction, and also recognized the relevance of stative vs. non-stative predicates; we argue that the phenomena are brought into sharper relief in terms of animacy of the subject, and whether the predicate is truly stative or represents a very generalized notion of activity.

#### 3.1 Animacy

As might be suggested by MJK's focus on whether the predicate has an external argument or not, the animacy of the subject affects adverbial case marking. In this subsection we present a variety of examples which illustrate this. If the predicate has an animate subject, adverbial case marking is almost always accusative, regardless of the basic meaning of the predicate. We believe that it is animacy, and not an external/internal-argument distinction, which is an important property in determining case marking. Hence we focus in this subsection on predicates which might be presumed to be unaccusative, yet which have animate subjects.

For the notion of animacy itself, we assume the standard 'animacy hierarchy' in which humans outrank nonhuman animates, which in turn outrank inanimates. As first introduced by Silverstein (1981) (see also Dixon 1979 and Croft 2003), such a hierarchy plays an important role in topicality, restrictions on number in nouns and pronouns, case marking, and the direct/inverse system of some languages.

The verb *sal-ta* ('live') might be considered to be a canonical unaccusative, yet in Korean it always has an accusative modifier:<sup>5</sup>

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<sup>&</sup>lt;sup>4</sup> The observation about animacy may explain in turn MJK's observation that the duration adverbial *phyengsayng* ('lifetime') only ever takes ACC.

In Korean, case marking patterns and object-sharing in serial verb constructions can be tests for the unaccusative/unergative distinction (Y.-J. Kim 1990). Korean resultatives exhibit the same asymmetry between unergatives and unaccusatives as English (J.-B. Kim 1999, Park & Lakshmanan 2007). As in English, resultatives in Korean are compatible with transitive objects and unaccusative subjects, but not with unergative subjects:

halwusali-nun halwu(-tongan)-ul sa-n-ta dayflies-TOP one day(-for)-ACC live-PRES-DECL 'Dayflies live for one day.'

This is because the subject of 'live' is necessarily animate. The contrasts in (12) illustrate the effects of animacy:

- twu pen-\*?i/ul (12) a. haksayng-tul-i o-ass-ta student-PLU-NOM two times-\*?NOM/ACC come-PAST-DECL 'Students came (here and left) twice.'
  - b. yecin-i twu pen-i/\*ul o-ass-ta aftershock-NOM two times-NOM/\*ACC come-PAST-DECL 'Aftershocks came twice.'
  - c. pesu-ka achim-ey twu pen-i/?ul o-ass-ta bus-NOM morning-LOC two times-NOM/?ACC come-PAST-DECL 'Buses came twice in the morning.'

As noted here, even though we have the same predicate o-ass-ta 'come-PAST-DECL' in all the examples, the animate subject in (12a) allows an accusative adverbial, but the inanimate subject in (12b) does not. When the inanimate subject has more of an individuated character as in (12c), it is possible to have an accusative adverbial, though

(i) a. Unaccusative

tantanha-key el-ess-ta kang-i river-NOC solid-COMP freeze-PAST-DECL 'The river froze solid.'

b. Unergative

\*ku-nun aphu-key kichimha-yess-ta He-TOP sick-COMP cough-PAST-DECL

"He coughed sick."

sal-ta can occur with a resultative phrase, implying that it may function as an unaccusative:

(ii) ku-nun chingsong-pat-key sal-ass-ta

he-TOP praise-receive-COMP live-PAST-DECL

'He lived well and that brought the resulting state of being praised.'

One interesting point is that if the Korean verb sal-ta 'live-DECL' combines with an inanimate subject, it needs to be used in a kind of 'serial verb' construction (meaning "live and be"):

(iii) a. \*kiek-i sal-ass-ta

b. kiek-i sal-a iss-ta memory-NOM live-COMP exist-DECL 'Memories live on.'

These facts suggest that the verb sal-ta is unaccusative, and selects an animate subject.

nominative is preferred. This preference can be reversed when the inanimate subject is in an example with a more episodic interpretation which individuates the subject:

(13) pesu-ka achim-ey twu pen-??<u>i/ul</u> o-ass-taka bus-NOM morning-LOC two times-??NOM/ACC come-PAST-DECL ka-ss-ciman nohchi-ko mal-ass-e go-PAST-but miss-COMP end-PAST-DECL 'Even though the bus came twice in the morning, I missed it.'

Accusative here somehow favors the slightly surprising interpretation that it was the same bus that came twice. In a similar spirit, we can say that when the referent of the subject is anthropomophized, the D/F adverbial can get accusative. For example, in a children's book or cartoon in which the bus in (13) has a human name, only accusative is possible here. This indicates that the case assignment on the adjunct depends on how the speaker chooses to present the participants in the event in question, and their role in it.

We can observe a similar effect in lexical passives. Even though transitive verbs take accusative modifiers, their lexical passives strongly prefer nominative, with inanimate subjects. MJK state that lexical passives equally allow accusative, but for many examples, it may be correct to say that nominative is preferred and accusative is marginal at best:

- (14) a. ku mwun-i twu sikan tongan-<u>i/ul</u> yel-li-ess-taka the door-NOM two hour for-NOM/ACC open-PASS-PAST-CONJ tat-hi-ess-ta close-PASS-PAST-DECL 'The door was opened and closed all day long for two hours (for some reason).'
  - b. ku chayk-i halwu naynay-??<u>ka/lul</u> ilk-hi-ess-ta the book one day long-??NOM/ACC read-PASS-PAST-DECL 'The book was read all day long (by someone).'

Further, a strong contrast in case marking can be observed in examples with a stative predicate whose subject can be animate or inanimate; the examples in (15) illustrate with subjects decreasing in animacy:<sup>6</sup>

As a reviewer pointed out, in a canonical context, the example (15a) would sound rather unnatural. However, in a context where the princess used not to be pretty, but she needs to turn into a pretty one to attend a ball, this event can be interpreted as an interval stage predication (that is, the eventuality is presented as a categorical judgment). This will allow us to assign accusative to the adverbial here. See §4.2 for further discussion.

- (15) a. kongewu-nun halwu tongan-<u>i/ul</u> yeypp-ess-ta princess-TOP one day for-NOM/ACC pretty-PAST-DECL '(lit.) The princess was being pretty for a day.'
  - b. ce kkoch-un halwu tongan-<u>i/??ul</u> yeypp-ess-ta that flower-TOP one day for-NOM/??ACC pretty-PAST-DECL 'The flower was pretty for a day.'
  - c. ku namwu-un ttak han kyeycel-<u>i</u>/\*<u>ul</u> yeypp-ess-ta this tree-NOM just one season-NOM/\*ACC pretty-PAST-DECL 'The tree was pretty for just one season.'
  - d. ce cip-un halwu tongan-i/\*ul yeypp-ess-ta that house-TOP one day for-NOM/\*ACC pretty-PAST-DECL 'The house was pretty for a day.'

Examples with body parts can be used to illustrate similar subtle distinctions:

- (16) a. Mary-nun sahul tongan-?i/ul aph-ass-e
  Mary-TOP three days for-?NOM/ACC sick-PAST-DECL
  'Mary was sick for three days.'
  - b. Mary-nun tali-ka sahul tongan-<u>i</u>/??<u>ul</u> aph-ass-e

    I-TOP leg-NOM three days for-NOM/??ACC sick-PAST-DECL
    'Mary's leg hurt for three days.'

Here the predicate is the same, but the subject is animate in (16a) and inanimate (though inalienably possessed) in (16b). The less likely the body part is to stand for the whole, the lower the acceptability of the accusative modifier:

(17) ?\*nay sonkalak-i sahul tongan-<u>ul</u> aph-ass-e my finger-NOM three days for-ACC sick-PAST-DECL 'My finger hurt for three days days.'

MJK also list the 'semantically passive' predicates *pat-ta* 'receive', *tangha-ta* 'undergo', *mac-ta* (lit.) 'be hit'. These verbs canonically have animate subjects, leading us to expect that they will take accusative adverbials. The prediction is borne out:

(18) a. John-i sang-ul yele pen-\*<u>i/ul</u> pat-ass-ta

John-NOM award-ACC several times-\*NOM/ACC receive-PAST-DECL

'John received awards several times'

b. John-un sensayngnim-kkey sey pen-\*i/ul John-TOP teacher-DAT(HON) three times-\*NOM/ACC yatan mac-ass-ta be.scolded-PAST-DECL 'John was scolded by the teacher three times.'

However, observe that in such passive-like constructions, if we replace the animate subject with an inanimate one, the case-marking on an adverbial should now be nominative:

- (19) a. ku ceyan-un yelepen-<u>i/??ul</u> piphan pat-ass-ta the proposal-TOP several times-NOM/??ACC criticism receive-PAST-DECL 'The proposal received criticism several times.'
  - b. ku pepan-un yele pen-<u>i</u>/\*<u>ul</u> phyeyki tanghay-ss-ta the bill-TOP several times-NOM/\*ACC discard undergo-PAST-DECL 'The bill was discarded several times.'

We do not think that the subject has to be volitionally or intentionally involved, though being animate may imply this. That is, it is animacy, not volitionality or intentionality, which largely correlates with accusative on the modifier. This is because animate entities are naturally interpreted referentially, as part of a categorical judgment. Inanimate entities such as 'bus' in (13) may also become sufficiently referentially salient. A bus coming is not necessarily a statement about any particular bus, but the same bus coming twice is.

# 3.2 Activity predicates

Moving to the properties of the predicates themselves, we focus on the verb *iss-ta*, which we would expect to be a core unaccusative and perhaps stative predicate. We propose that *iss-ta*, though stative, is canonically used as a generalized activity predicate in Korean (cf. Martin 1992). As a first approximation, we believe that the key for understanding the accusative adverbials is the generalized notion of 'activity', though we shall clarify it below in terms of stage- vs. individual-level predicates. In English, there are verbs which intuitively have subjects which are animate, and perhaps volitional, which nevertheless allow inanimate subjects, in describing stative-like situations:

<sup>&</sup>lt;sup>7</sup> Van Valin & Wilkins (1996) propose that most transitive verbs take an Effector (a 'doer') as their first argument, not an Agent, and that the intuition of an agentive first argument is an implication due to the presence of an animate subject, as animacy implies volitionality and intentionality, noted in DeLancey (1984).

- (20) a. The food was sitting in the fridge for two days.
  - b. The clothes were lying all over the floor.

In Korean, both *iss-ta* 'exist' and *ha-ta* 'do' almost always take accusative modifiers—because they are both generalized activity predicates. (21) is a typical example:

(21) Bill-un sahul tongan-\*i/ul Seoul-ey iss-ess-ta
Bill-TOP three day for-\*NOM/ACC Seoul-LOC be-PAST-DECL
'Bill was in Seoul for three days.'

While *ha-ta* is incompatible with nominative, *iss-ta* has some uses with nominative modifiers, in which case a pure stative interpretation results. For example, and in contrast to the several examples given above, 'to have (money)' seems to work like a stative even though it involves *iss-ta*:<sup>8</sup>

(22) na-nun ton-i sam nyen tongan-<u>i</u>/\*<u>ul</u> manhi I-TOP money-NOM three years for-NOM/\*ACC much iss-ess-ciman . . . exist-PAST-but . . . 'I had a lot of money for three years, but . . . '

Our claim about the generalized notion of 'activity' and the categorization of predicates receives support from the predicates that are possible internally-headed relative clauses (IHRCs). The predicate inside an IHRC must denote an action or activity, and cannot be an individual-level stative (see e.g., Y.-B. Kim 2002, Chung & Kim 2003):<sup>9</sup>

- (23) a. ku-nun [Bill-i talli-nun kes-ul] manna-ss-ta he-TOP Bill-NOM run-MOD thing-ACC meet-PAST-DECL 'He met Bill, who was running.'
  - b. \*ku-nun [Bill-i ttokttokha-n kes-ul] manna-ss-ta he-TOP Bill-NOM smart-MOD thing-ACC meet-PAST-DECL 'He met Bill, who was smart.'

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Martin (1992:319ff.) notes that there are probably three core meanings for *iss-ta*—'be', 'stay', and 'have'. Only the last one is truly stative. Interestingly, the honorific form is the suppletive *kyeysi-ta* for the first two meanings, but the regular *iss-usi-ta* for the 'have' meaning.

<sup>&</sup>lt;sup>9</sup> We gloss the nominalizer *kes* here as 'thing' even though it may have no semantic content in these uses.

The verb iss- can naturally occur as the main predicate of the IHRC:<sup>10</sup>

(24) ku-nun [Bill-i Seoul-ey iss-nun kes-ul] manna-ss-ta he-TOP Bill-NOM Seoul-LOC exist-MOD thing-ACC meet-PAST-DECL 'He met Bill, who was in Seoul.'

All of the predicates that we have identified above as having or at least allowing a 'generalized activity' interpretation are acceptable in IHRCs, including *iss-ta*.

(25) a. John-un [elum cokak-i han sikan-<u>ul</u> nok-un kes-ul]
John-TOP ice piece-NOM one hour-ACC melt-MOD thing-ACC mek-ess-ta
eat-PAST-DECL

'John ate the ice which had melted for an hour.'

b. John-un [umsik-i nayngcangko-ey iss-nun kes-ul]
John-TOP food-NOM fridge-LOC exist-MOD thing-ACC
mek-ess-ta
eat-PAST-DECL
'John ate the food which had been in the fridge.'

The verb *iss-ta* in the sense of 'have' is different, and cannot appear in an IHRC:

(26) \*Tom-un [John-eykey ton-i manhi iss-nun kes-ul]
Tom-TOP John-DAT money-NOM much exist-MOD thing-ACC manna-ss-ta
meet-PAST-DECL
'(intended) Tom met John, who has a lot of money.'

The IHRC data provides an independent test of the 'activity'-like meaning of the predicates in question, and shows that *iss-ta* ('be') in Korean is an activity predicate in many of its uses (see the classification of predicates below in (32)).

We recognize that there are some native speakers who do not allow IHRC constructions. However, as noted in the linguistic literature (cf. Y.-B. Kim 2002) and as found in the Sejong Corpora, Korean (similar to Japanese) certainly allows such IHRCs. Main predicates like *cap-ta* 'catch' will make the examples better.

# 3.3 Animate subjects of stative predicates

While there are many examples with inanimate subjects which have accusative marking on an adverbial, there are very few with animate subjects and nominative. However, these examples can be found, and they typically involve pure psychological predicates:

- (27) na-nun yele hay tongan-i ku salam-i/??ul
  I-TOP several years for-NOM that man-NOM/??ACC silh-ess-ta
  dislike-PAST-DECL
  'I disliked the man for several years.'
- (28) na-nun yele hay tongan-i ku salam-<u>i/??ul</u> kuliw-ess-ta I-TOP several years for-NOM that man-NOM/??ACC miss-PAST-DECL 'I missed the man for several years.'

These are truly stative predicates, whose properties we elaborate on below. <sup>11</sup> For now, MJK's (29) contrasts with our (30) and illustrates an important point.

- (29) ku malathon.senswu-nun chopan tongan-i/\*<u>ul</u> ppal-ass-ta the marathoner-TOP first half for-NOM/\*ACC fast-PAST-DECL 'The marathoner was fast in the first half.'
- (30) ku malathon.senswu-nun chopan tongan-\*<u>i/ul</u> ppalli the marathoner-TOP first half for-\*NOM/ACC fast talli-ess-ta run-PAST-DECL

  'The marathoner ran fast in the first half.'

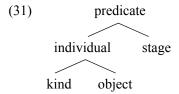
(29) indicates that animacy alone cannot license accusative if the predicate is stative. Intuitively, (29) describes a non-temporary characteristic property of the runner, while (30) describes something about what the runner was doing. The predicate *be fast* is in general an individual-level predicate as in (29) but behaves like a stage-level predicate when he/she was fast in the first half of the race as in (30). This indicates that the predicate type alone cannot be the main factor in assigning case, but it is the type of the given sentence's eventuality that plays a crucial role in assigning a case to adverbials. In the following section we try to provide some formal semantic substance to this intuition.

Only psychological predicates seem to show truly stative properties; other dispositional predicates such as *yeyppu-ta* ('be pretty') and *aphu-ta* ('be sick') are more activity-like (see §3.1).

#### 4. Predications and eventuality

#### 4.1 Stage- and individual-level predications

The semantic generalizations that we have described above find at least a rationalization in the categorization of predicate-types due to Carlson (1977), the famous classification into stage- and individual-level predications:



According to Carlson (1977), stages are time-slices of individuals, who might be lying under the table, or thinking, or simply being alive. Each individual has many stages; individuals themselves may be kinds (roses, mammals), or objects (women, tables). We shall not concern ourselves here with the distinction between kinds and objects, and simply refer to the individual vs. stage partition.

Next, we need a finer-grained understanding of the types of predication involved in the examples that we are interested in. The following extended quote from Dowty (1979:178-179) provides the relevant background:

. . . Carlson's stage-level predicates all seem to have truth conditions that are dependent on the state of the world at the current moment (or the "current" interval) in a relatively straightforward way. We have found . . . what I believe are good reasons for believing that not only activities and definite change-of-state verbs but also the *sit-stand-lie* class should depend on an interval, rather than a moment . . . .

Generic (or "habitual") predicates are, on Carlson's view of them, quite a different matter. Even when we predicate them of an individual at a particular time, it is not really a property that individual's current stage has at that moment that makes them true, but our "total experience" with previous stages of that individual . . . .

But note that classic stative predicates like *know* and *love* are like this as well. Though these are not derived from stage-level predicates of the language as are "habitual" predicates, it is here again our total experience with prior stages of an individual that somehow makes them true . . . .

Following this passage, Dowty proposes to categorize stative predicates as in (32):

- (32) Three types of stative predicate (Dowty 1979:180):
  - a. Interval statives (stage-level predicates true at an interval (but not a moment)), such as *lie*, *sit*;
  - b. Momentary stage-predicates (stage-level predicates true at a moment), such as *be on the table*, *be a hero*;
  - c. Individual-level statives (true at a moment), such as know, love.

According to Dowty, the last two types are true at a moment and are true at an interval if and only if they are true at all moments in that interval. Momentary predicates cannot occur with the progressive aspect whereas interval ones can, as seen in these examples:

- (33) a. \*The book is being on the floor.
  - b. \*There is existing iron oxide on Mars.
- (34) a. The book is lying on the floor.
  - b. The umbrella is standing in the corner.

With this theoretical background, we can assume that non-stative transitive verbs are stage-level and such predicates take accusative on both objects and D/F adjuncts. Assuming a connection between stage-level predicates and accusative case, we can generalize from transitive to intransitive verbs as well: the presence of accusative case on a D/F modifier correlates with a stage-level predication, while nominative correlates with an individual-level predication. That is, nominative will suggest a dispositional property of an individual, while accusative will bring out the stage-level behavior of stages of the individual as summarized as following:

- (35) a. Accusative: the sentence involves a stage-level predication.
  - b. Nominative: the sentence involves an individual-level predication.

(35) refers to properties of the predicate, and this is the basis of the case-marking difference. However, as we have observed the animacy of the subject also plays an important role. This in turn means both the predicate type and the subject's animacy closely interact, in determining the way that the eventuality of a given sentence is presented. For example, it seems that any example with an animate subject strongly favors a stage-level event interpretation, for animates can be viewed as providing a referent about which a predication can be made. Needless to say, our approach assumes

that many predicates do not intrinsically determine the event type of a given sentence including D/F adverbials, following a line of though suggested by McKoon & Macfarland (2000) in their discussion of internally- vs. externally-caused change of state verbs in English.

This is the point at which the notion of judgment type as categorical or thetic (Kuroda 1972) becomes relevant. A categorial judgment can be exemplified by the famous example "Firemen are available." in English, which asserts a property of a set of firemen (see e.g., Ladusaw 1994). This is a stage-level property, which will be true or false over intervals. In contrast, the example "Firemen are altruistic." is a description of a fact, and does not ascribe a property to a certain set of firemen. It is a thetic judgment, and the predicate is individual-level.

Animate NPs are naturally topic-worthy, and the animacy hierarchy was originally conceived as indicating likeliness of topichood. Hence animate NPs are easily conceived of as subjects in a categorical judgment, as are inanimates if they are sufficiently individuated and/or made 'newsworthy'. And from the side of the predicate, stage-level predicates as we have described them here also naturally occur in categorical judgments.

#### 4.2 Eventuality in the clause

The approximation given in (35) seems to be stated at the right level of abstraction, and the intent can be illustrated through a pair of examples from Kim & Maling (1993), who noted a scope difference due to the case marking on a frequency adverbial:

- (36) a. khu-n pakhwui-ka twu pen-<u>ul</u> tol-ass-ta big-MOD wheel-NOM two times-ACC spin-PAST-DECL 'The big wheel spun round two times.'

  (one complex event of one wheel spinning twice)
  - b. khu-n pakhwui-ka twu pen-i tol-ass-ta
    big-MOD wheel-NOM two times-NOM spin-PAST-DECL
    'The/a big wheel spun round two times.' OR
    'A big wheel spun round two times.'
    (This latter interpretation involves different wheel-spinning events, and so, different wheels, possibly.)

Perhaps surprisingly, the nominative shows an ambiguity, having an interpretation (of different wheels) which the accusative version lacks. But we can immediately make sense of this if we take the view that the accusative adverbial necessarily is part of a predicate which applies to some participant in the event, while a nominative adverbial applies directly to the eventuality.

In our view, accusative is intuitively part of a predicate, and therefore part of what is predicated of the subject, even with an intransitive predicate, while nominative does not have this consequence. Hence accusative signifies that there is a subject about whom some property is presented, and nominative does not. This difference in the case markers shows up in the most basic asymmetry in Korean case marking: the fact that accusative canonically marks objects, but never subjects, while nominative canonically marks subjects, but can also mark objects. Accusative can be part of a predicate, but it can never mark a subject.

This allows us to schematize the examples in (36) as in (37):

- (37) a. A/the wheel [spun two times]. (accusative modifier)
  - b. [A wheel spinning] occurred two times. (nominative modifier)

Due to the accusative modifier, 'wheel' in (36) above is picked out as an entity to which the property of spinning twice is ascribed. Let us look again at the contrast between (12a) and (38):

- (12) a. haksayng-tul-i twu pen-?\*<u>i/ul</u> o-ass-ta student-PLU-NOM two times-?\*NOM/ACC come-PAST-DECL 'Students came (here and left) twice.'
- (38) pi-ka twu pen-<u>i</u>/??<u>ul</u> o-ass-ta rain-NOM two times-NOM/??ACC come-PAST-DECL 'It rained twice.'
- (38) has a subject which can never be the subject in a categorical judgment. For example, Kuroda (1972) observed that one function of topic-marked NPs in Japanese is to be the subject of a categorical judgment, but weather nouns like 'rain' can never be topic-marked. We can assume that the same diagnosis holds in Korean. In contrast to (38), (12a) has a subject which can be the subject in categorical predication.

The 'dispositional' nature of nominative case is also illustrated by the contrast between (15a) and (39), where the latter example disfavors accusative:

- (15) a. kongcwu-nun halwu-<u>ka/lul</u> yeypp-ess-ta princess-TOP one day-NOM/ACC pretty-PAST-DECL 'The princess was pretty only for a day.'
- (39) Mary-nun il ha-nun tongan-i/\*ul yeypp-ess-ta Mary-TOP work-PRES for-NOM/\*ACC pretty-PAST-DECL 'Mary was pretty while working.'

The accusative on the modifier in (15a) suggests a temporary property of (the stage of) the princess, while 'making herself pretty while at work' is a dispositional property of Mary in (39), favoring nominative.

In summary, our main claim is that the case marking on adverbials reflect whether the speaker expresses the event in question either as a categorical or thetic judgment, correlating in part with a stage- or individual-level predication, and also influenced by the animacy of the subject.

#### 4.3 Participants in the eventuality

In this final section we present more examples which illustrate how the factors we have isolated explain the patterns of case marking on the adverbials.

The examples in (40) have inanimate subjects and involve predications which are quite stative, but are stage-level, requiring at least an interval within which to be true. There is no kind-level interpretation for the subject in (40a). Hence both examples have accusative on the adverbial:

- (40) a. namwu-tul-i i cip-ul payknyen tongan-\*i/ul twulle ssako tree-PLU-NOM this house-ACC 100 year for-\*NOM/ACC surround iss-ess-ta exist-PAST-DECL 'Trees had surrounded this house for 100 years.'
  - b. (ku) kang-i ku tolo-lul twu pen-<u>ul</u> kalocilu-ess-ta that river-NOM that road-ACC two times-ACC cross-PAST-DECL 'The river cut/crossed the road twice.'

Similarly, (41) is also stage-level, and predicated of a quantity of water, even though the predicate is presumably unaccusative.

(41) ?pwunswutay-uy mwul-i han sikan tongan-<u>ul</u> cecello hule fountain-GEN water-NOM one hour for-ACC by itself fall nayli-ess-ta go.down-PAST-DECL 'The fountain water was flowing down for an hour by itself.'

The less agentive or less animate the subject, the more likely the predication is to be individual-level, in a thetic judgment, and hence to show the nominative adverbial. On the animacy hierarchy, cavemen (humans) are more animate than dinosaurs, which

are more animate than roads, and these distinctions lead to the contrasts in case marking seen in (42):

- (42) a. tongkwulin-tul-i chen nyen tongan-\*<u>i/ul</u> panghwanghay-ss-ta caveman-PLU-NOM 1000 year for-\*NOM/ACC roam-PAST-DECL 'Cavemen roamed for 1000 years.'
  - b. konglyong-tul-i paykman nyen tongan-?i/ul cikwu-ey nelli dinosaur-PLU-NOM 10 million years for-?NOM/ACC earth-LOC widely phecye iss-ess-ta spread exist-PAST-DECL 'Dinosaurs were numerous on the earth for 10 million years.'
  - c. cop-un kil-tul-i chennyen tongan-i/??ul narrow-MOD road-PLU-NOM thousand years for-NOM/??ACC yekiceki nelli phecye iss-ess-ta here.there widely spread exist-PAST-DECL 'Narrow roads were numerous (all over) for 1000 years.'

We can also see that the predicate *manh-ta* ('be many') is less of a stage-level predicate than *manhi* . . . *iss-ta* ('exist numerously'):

- (43) a. manh-un namwu-tul-i ku san-ey chennyen many-MOD tree-PLU-NOM the mountain-LOC thousand years tongan-i/??ul iss-ess-ta for-NOM/??ACC exist-PAST-DECL 'There were many trees on that mountain for 1000 years.'
  - b. namwu-tul-i ku san-ey chennyen tongan-i/\*<u>ul</u> tree-PLU-NOM the mountain-LOC thousand years for-NOM/\*ACC manh-ass-ta many-PAST-DECL 'Trees were numerous on that mountain for 1000 years.'

Unfortunately, the morphological tests for aspectuality in Korean are known to be problematic, and are not always reliable here (for a summary of the tests see Yang 1994). For example, even though both predicates in (44) allow the 'processive' marker -n-, the first is episodic and the second is dispositional, and this is borne out by the case marking on the verbal noun *caktong*.

- (44) a. i kikyey-ka caktong-\*<u>i/ul</u> cal ha-n-ta this machine-NOM working-\*NOM/ACC well do-PROC-DECL 'This machine works well.'
  - b. i kikyey-ka caktong-<u>i</u>/\*<u>ul</u> cal toy-n-ta this machine-NOM working-NOM/\*ACC well become- PROC-DECL 'This machine works well.'

The contrast becomes clear with a duration modifier:

(45) a. i kikyey-ka han sikan tongan-??<u>i/ul</u> caktong-ul cal this machine-NOM one hour for-??NOM/ACC working-ACC well hay-ss-ta do-PAST-DECL

'This machine worked well for an hour.'

b. i kikyey-ka han sikan tongan-i/??ul caktong-i cal this machine-NOM one hour for-NOM /??ACC working-NOM well toy-n-ta become-PAST-DECL

'This machine had the capability to work well for an hour.'

We see perhaps a similar contrast in (46), involving *coswu* ('assistant') either as the complement of the copula, or the verb 'be':

- (46) a. Minswu-nun sam nyen-<u>i</u>/?\*-<u>ul</u> coswu-i-ess-ta Minswu-TOP three year-NOM/?\*ACC assistant-be-PAST-DECL 'Minswu was an assistant for three years.'
  - b. Minswu-nun sam nyen-<u>ul</u> coswu-lo iss-ess-ta Minswu-TOP three year-ACC assistant-as exist-PAST-DECL 'Minswu has been an assistant for three years.'

The contrast here shows the activity-like nature of *iss-ta*, in the sense that it usually forms a stage-level predicate, and occurs with an accusative modifier. The copula is much more stative and dispositional, and is very awkward with accusative. Martin (1992:847) gives an example showing the same as (46b):

(47) sa nyen-<u>ul</u> haksayng-ulo ku hakkyo-ey iss-ess-ta four years-ACC student-as that school-LOC exist-PAST-DECL 'I was 4 years as a student at that school.'

As we have seen above, predicates which describe a state of an individual strongly favor nominative.

- (48) a. mila-nun ttak il cwuil tongan-<u>i/??ul</u> meli-ka nolay-ss-ta Mira-TOP exactly one week for-NOM/??ACC hair-NOM blonde-PAST-DECL 'Mira's hair was blonde just for a week.' (Then she decided to change the color.)
  - ku leysuthorang-uy umsik-un ttak il cwuil tongan-i/\*ul
    that restaurant-GEN food-TOP exactly one week for-NOM/\*ACC
    masiss-ess-ta
    tasty-PAST-DECL
    'The food at the restaurant was tasty/good just for a week.'
    (After that I got sick of it, OR The food wasn't good any more for some reason.)

The example (29), repeated here, also indicates a stative predication of the subject. According to (32c), such a predicate must be true at every moment; so if the runner was fast in the first half, he must have been fast at every moment during that period. This is precisely what the example means:

(29) ku malathon-senswu-nun chopan tongan-<u>i</u>/\*<u>ul</u> ppal-ass-ta the marathoner-TOP first half for-NOM/\*ACC fast-PAST-DECL 'The marathoner was fast in the first half.'

These observations all suggest that the stage- vs. individual-level nature of the predicate sets the baseline for case marking (as MJK noticed): an individual-level predication takes (only) a nominative modifier. However, for some predicates, there is an effect of animacy—an animate subject biases the example towards a stage-level interpretation, even on what otherwise might seem like a 'stative' predication. And finally, some predicates, in particular *iss-ta*, even though stative, can take accusative modifiers even with inanimate subjects when they are used as describing stage-level predications by the speaker.

#### 5. Conclusion

We have discussed two main factors influencing case on adverbials, the animacy of the subject, and the aspectual properties of the predicate involved. However, we have seen that the case marking on adverbials reflects whether the clause expresses a stageor individual-level predication, which itself is influenced by the nature of the predicate and the animacy of the subject. The essence of the system of case assignment we have enumerated in the paper can be summarized as following:

- (49) a. Accusative: is part of the predicate in a categorical judgment.
  - b. Nominative: is part of a description of a whole eventuality, in a thetic judgment.

The accusative part of (49) involves 'stage'-like predication, while the nominative part does not.

The broader idea in our proposal is that accusative marks something as part of a 'predicate' in a subject-predicate relation, while nominative is marking something about the whole eventuality. This means that accusative could never be the case on a subject—which is in fact the only reliable case/function (inverse) correlation in Korean. That is to say, nominative is possible on both subjects and objects, and dative is possible on both subjects and (indirect) objects. Our idea would naturally explain why accusative is the case only of objects—syntactic entities which are necessarily part of the 'predicate', and must appear in the presence of a subject.

What is most important about our proposal here is that the case marking is not determined once and for all by a given predicate, or a given subject, but rather is part of the overall expressive potential of the clause, which is a complex interaction of the animacy and referential properties of the subject and the nature of the predication relative to the type of predicate.

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# 論事件角色對附加成分格位指派之影響

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有些語言,標有格位的附加成分可以帶受格,並且標示所表達事件在時間上的完成性。就韓語而言,期間和頻率附加語都可以帶受格或主格標誌,並且不造成時制上的語意差別。本文首先探討影響附加成分格位指派的兩個主要因素:主語的有生性以及述語的語意屬性。另外,本文還會指出附加成分的格位指派也同時受到說話者是以個體參與或是以完整事件來呈現事件本身。

關鍵詞:帶格位附加成分,事件性,述語性