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Analogy-Driven Grammaticalization across Categories: The Case of 'Exactness' in Korean*

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Rhee, Seongha. 2024. Analogy-Driven Grammatizalization across Categories: The Case of 'Exactness' in Korean. ***Sign Languages and Linguistics Convergence Research,*** *1*(2)*,* 405-430. In grammaticalization theory, a widely held view is that, unlike reanalysis, which creates new forms and rules in grammar, analogy does not create new grammatical structures but instead contributes only to the spread of an already innovated rule. However, based on an analysis of a dependent/defective noun mankhum 'exact amount', this paper argues that there are cases that support the thesis that grammaticalization may be actualized by analogy. This study addresses mankhum 'exact amount' from a grammaticalization perspective, based on historical and contemporary corpora and reveals a number of significant aspects of grammaticalization of mankhum. The lexeme emerged in Early Modern Korean as a variant, reinforced form of the dependent noun ma 'exact amount', and grammaticalized into postpositions and connectives of diverse functions, especially with variable scalar functions, such as downward, upward, and exact focus. In terms of semantic change, mankhum has undergone extensive subjectification, i.e., a lexeme objectively designating a particular amount has developed into one carrying perspectivized,

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scalar meanings of exact, upper- or lower-limit focus as well as one denoting the subjective interpretation of an event along the chain of causality, also with scalar meanings. In terms of the cross-categorial change, the meaning-based extension across diverse syntactic environments is likely to have been triggered by analogy based on semantic and structural affinity. (214 words)

Key Words: Grammaticalization, Cross-Categoriality, Analogy, Subjectification, Exactness, Korean

1 Introduction

In grammaticalization theory (Heine et al. 1991; Hopper and Traugott 2003[1993]), a widely held view from its early history (Meillet 1912: 133) is that analogy is of lesser importance in grammaticalization. In other words, unlike reanalysis, which can create new grammatical structures, analogy does not create new grammatical structures but instead contributes only to the spread of an already innovated rule (Hopper and Traugott, 2003[1993]: 63-69). However, this paper, while acknowledging the critical role of reanalysis in grammaticalization, argues that there are cases that support the thesis that grammaticalization may be actualized by analogy (Fischer 2008).

Korean has a large number of dependent nouns (also referred to as 'defective' nouns or 'formal' nouns), an idiosyncratic feature observed as early as in Ramstedt ('post-participial nouns' 1997[1939]: 109-123) and Martin (1954: 15-16). They constitute a class of nouns that lack syntactic autonomy and semantic completeness, and thus require modifiers in order to occur in a sentence. Dependent nouns often lack concrete meanings and their participation in creating grammatical constructions is extensive. Their departure from the prototypical features of a lexical category of noun and acquisition of behavior typical of grammatical categories have attracted attention of researchers.

Mankhum (historically *maskom, kakhom, mankom,* etc.; see below) from Late Middle Korean (LMiK; mid-15th c. ~ 16th c.) is one such defective noun with the original meaning of a nominal 'exact amount', and its grammatical function has been extended across diverse grammatical categories over time. This study

addresses the defective noun *mankhum* ‘exact amount’, which has been underexplored in earnest from the grammaticalization perspective, and argues that its development exhibits the analogy-driven grammaticalization.

Given the background, the objectives of the present paper are fourfold: (i) to trace the historical development of *mankhum* from Late Middle Korean (LMidK; mid-15th ~ 16th c.); (ii) to analyze various functions that *mankhum* carries in Present-Day Korean (PDK; 21st c.); (iii) to discuss significant issues in grammaticalization theory with respect to parameters; and (iv) to argue that the developmental patterns of *mankhum* exemplifies analogy-driven grammaticalization.

The organization of the paper is as follows. Following the introduction, Section 2 briefly describes the typological profile of the Korean language and reviews the literature relevant to the present study. It also describes research methodology adopted here. Section 3 provides an account of the source forms and meanings of *mankhum* from its earliest occurrence prior to Modern Korean. Section 4 offers an exposition on diverse grammaticalized functions of *mankhum* in Modern Korean. Section 5 discusses the development, focusing on its select aspects from a grammaticalization perspective. Section 6 summarizes the findings and concludes the paper.

2. Preliminaries

2.1 Typological features of Korean

Among a number of typological characteristics of Korean, our description is limited to a few that have relevance to the present study. Korean is an agglutinating, head-final, SOV language, and in line with the SOV word order characteristics in morphology, it is suffixal and postpositional. Multiple suffixes and postpositions may occupy slots of a relatively fixed order. For this reason, the nominal morphologies developing from the noun is likely to become a postpositional particle hosting a noun phrase.

Finite verbs, occurring sentence-finally, are marked for tense, aspect, mood,

modality, and evidentiality, all of which constituting a constellation of agglutinated morphemes. These finite verbs are further marked by a sentence-type marker, such as declarative, imperative, interrogative, hortative, exclamative, promissive, propositive, etc., occurring at the ultimate slot of verb morphologies. Non-finite verbs, on the other hand, are often marked with converb-markers, whose main function is adverbializing a non-finite verb (Haspelmath 1995), or with other verbal morphologies, carrying the function of connecting phrases or clauses, with diverse connective meanings, such as sequentiality, causality, conditionality, etc. There are connectives that developed from a noun, albeit not large in number, and, as shall be seen below, *mankhum* is one of such nouns.

2.2 Literature review

The lexeme *mankhum* has received much attention of Korean linguists, from both prescritivists and descriptivists, largely because it displays quite unusual behavior in terms of categorial properties and semantic-functional features in interaction with other grammatical formants. It appears in J Lee's (2009) list of dependent nouns throughout Late Middle Korean (LMiK), Early Modern Korean (EMoK), and Modern Korean (MoK), the state of affairs also reflected in major dictionaries. But its categorial versatility has been noted by H Choe (1971), S Kim (1987), M Wang (1988), H Im and S Chang (1995), J Kim (1998), K Ha (1999), I Lee and W Chae (2000[1999]), Y Nam (2000), K Nam (2001), E Na (2000, 2011), K Oh (2004), J Kim (2014), K Nam and Y Ko (2014), among many others.

J Kim (2014), in particular, offers an intensive analysis of the functions of *mankhum*, such as dependent noun, case particle, adnominalizer, adverbializer, connective, particle, etc., with special focus on its occurrence in polylexemic constructions involving other cooccuring formants. Her analysis is notable in that it takes into account the form's elaborate interaction with the other forms in generating diverse meanings. Most studies are in agreement in asserting that the function of *mankhum* is marking equality in degree.

The above-referenced studies have made significant contributions to a better understanding of *mankhum* in terms of its contemporary functions and its commonality and differences in comparison with its functional relatives such as *chelem* 'like' and *kathi* 'like'. These contributions notwithstanding, analyses of *mankhum*'s developmental patterns, especially from a grammaticalization perspective, and the motivations behind the innovation of new functions have largely been underrepresented. This paper intends to fill the research gap by tracing the developmental patterns and reviewing the parameters with respect to its developmental processes.

2.3 Research methods

The present study is a conceptual study not involving experiments or quantitative analyses, solely based on the corpus data. The data used in the paper are taken from two main sources: The Sejong Historical Corpus (15 million words; 1446-1913), for historical data, and the Drama and Movie Corpus (24 million words), for contemporary data. The Sejong Historical Corpus was developed as part of the 21st Century Sejong Project by the Korean Ministry of Culture and Tourism and the National Institute of Korean Language (1998-2006). The Drama and Movie Corpus is a collection of 7,454 scenarios of dramas and movies dating from 1992 through 2015, compiled by Min Li. The data collection was made by search engine Uniconc, developed by Jinho Park, which enables concordance search with variable window sizes.[1)]

3. Source forms and meanings

The lexeme *mankhum* is compositionally complex, the emergence of which is based on its LMiK root ma denoting the 'same amount'. The lexical development can be illustrated as in (1) and its variants are shown in (2), based on the description of *Wulimalsaym*, an online-searchable open dictionary by the National Institute of Korean Language:

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1) Special thanks go to the developers of these corpora and search tools, who generously granted their use for research.

(1) a. ma 'same amount'
b. ma + n 'same amount' +Epenthesis
c. ma + kom 'same amount' +Distributive
d. ma + s + kam 'same amount' +Adnominal +Distributive

(2) a. makom: 15th~17th centuries
b. maskam: 15th~17th centuries
c. makhom: 17th century
d. mankhom: 17th~19th centuries
e. mankhum: 18th~21st centuries

The involvement of the distributive particle *kom/kam* 'each' suggests that it makes reference to a certain feature with respect to more than one entity as part of its base semantics. Evidently, this source semantics has contributed to the development of the comparative marker. The following exerpt (3) is one of the earliest attestations of *ma* 'exact amount' in the historical data, in which the wife of Buddha laments the pitiable condition of herself and her son as a result of desertion by his husband (note that ma is glossed as 'amount' for simplicity):[2)]

(3) *ma* 'exact amount' (size, degree, quality, etc.)
(Since my husband (Buddha) has completely forgotten his family)
pilok salAm-Ay mwul-ey sani-ko-to
even.though people-Gen group-Loc live.move-and-Add
cyungsAyng-ma-to mot-ho-ngi-ta
beast-amount-even cannot-be-A:Hon-Dec
'Even though (my son and I) live and move about among people, (our life) is not even as good as that of animals.'
(1447 *Sekposangcel* 6:5)

2) The romanization of the Korean data follows the Extended Yale System (S Rhee, 1996) and in accordance with the convention of Korean historical linguistics, Chinese characters in the source text are rendered in upper-case with the modern pronunciation.

In the historical data of the same period, the variant form of *ma*, reinforced with the epenthetic nasal *-n, i.e., man,* is also attested, as shown in (4):

(4) *man* 'exact amount' (size, degree, quality, etc.)

KAKKAK	YU-lAl	CONG-ho-m-i	thelek
each	kind-Acc	follow-Nomz-Nom	hair
kut-man-to	ani	kulu-key	hA-nA-ni
tip-amount-Add	not	be.wrong-Advz	do-Pres-Conn

'They follow the principles in each type not failing even as small as the tip of hair, in observing them, so...' (1447, *Welisekpo* 19: 121)

Incidentally, the lexeme *man* 'exact amount' developed into a marker of diverse functions including that of marking an exclusive focus (see 5.5). In the same historical period, another variant of *ma,* reinforced with the distributive marker *kom,* i.e., *makom,* is attested, as exemplified in (5), an excerpt taken from a medical guidance book:

(5) *makom* 'exact amount' (size, degree, quality, etc.)

cyemcyem	taycho-psi-makom	mAngkAl-a	mek-ula
repeatedly	date.nut-pit-amount	make-Conv	eat-Imp

'Make (the pills) the size of a date-nut pit and take them repeatedly.' (1489, *Kwukupkanipang* 2:19b)

The following example is that of still another variant *maskam,* one involving the adnominalizer (*-s*) and the distributive (*kam*), taken from a dialogue between the travelers and the house-owner, who provides them with a room and food for hospitality. The excerpt is what the house-owner says in response to the compliments from the travelers for whom he served dinner:

(6) *maskam* 'exact amount' (size, degree, quality, etc.)

hyey-etun	i-maskam	pwi-n	pap-i
contemplate-if	this-amount	empty-Adn	meal-Nom
musukes-i	kinha-l-ko		

what.thing-Nom be.important-Fut-Q
'To think about it, what's a big deal with this much of a meager meal (without good side-dishes)?'

(c. 1510 *Penyeknokeltay* I: 41b)

In the foregoing exposition, we have seen that the precursor forms of *mankhum*, i.e., *ma, man, makom, maskom* and *maskam,* all denoting 'exactness' with respect to amount, size, degree, quality, etc., depending on the context, which provides the clues as to the aspect being compared and equated. It is possible that the reinforced forms may have had a stronger sense of exactness of the quality being compared, but no discernible differences between them can be identified. The latest form *mankhum* first appeared in the 18th century and survives to this day. On ther hand, all other forms, except for man which developed in a seprate route (cf. 'divergence', Hopper 1991), have fallen into disuse over the course of history.

4. Development in Modern Korean

The modern form *mankhum* has inheritied the core semantics from its precursor forms, i.e., the 'exact amount'. The semantics has undergone much extension, with variable degrees of semantic bleaching, and the semantic extension, as is often the case with many lexemes, has led to the emergence of grammatical forms, i.e., grammaticalization. Consequently, in contemporary Korean, mankhum is among the most versatile forms in terms of meaning and function, as shall be illustrated in the following.

4.1 (Dependent) noun

From its first occurrence in the 18th century, i.e., 1765 *Pakthongsa sinsekenhay* in the historical corpus, *mankhum* has maintained its nominal status until PDK. Since its semantic content is not substantive enough and its occurrence required a qualifier in the form of an adnominalized phrase, the best

characterization in this use is that of a dependent noun. The following is an example of the nominal usage of *mankhum,* found in the contemporary corpus:

(7) *mankhum* (dependent) noun, 'exact amount'

ce-nun	yenpong-un	cak-telato	ilha-n
I:Hum-Top	annual.salary-Top	be.small-Conc	work-Adn
mankhum	taywupat-ko.siph-supnita		
amount	be.treated-Desd-Fml.Dec		

'As for me, my annual salary may be low, but I want to be treated for the amount of my work (= amount commensurate to my work).'

(2005, Drama *Pwulkkoch* Episode #11)

Considering that the dependent noun usage with the same meaning of the 'exact amount' has remained from LMiK, we can surmise that the semantic 'persistence' of a lexeme can be extensive. In fact, all later developments, to be discussed below, are outgrowth of this core semantics, though to a varying degree.

4.2 Similative postposition of upward-focus

The nominal lexeme *mankhum* develops into a postposition signifying comparability (similative; 'like') of a feature of an entity to that of another, which serves as the standard of comparison. Comparability or similitude is a fundamentally scalar concept, and implies gradience from one polar end (i.e., maximally similar) to the other end (i.e., minimally similar) on a continuum. Furthermore, the mental operation of determining similitude may involve directionality of focus, e.g., an upward focus ('up to, as much as'), a downward focus ('down to, as little as'), and exclusive focus ('exactly like'). For instance, the following exerpt exemplifies the postposition *mankhum* as a similative marker of upward focus, wherewith a person's noble character is compared with the excellence of tea, which the speaker poetically implies is the ultimate form of virtue:

(8) *mankhum*, similative postposition 'like, up to, as much as'

phwungcin.seysang-ey cha-mankhum alumtaw-un
mundane.world-Loc tea-Sim.Foc be.beautiful-Adn
phwumkyek-ul kacchwu-n salam-ul manna-ki-nun
dignity-Acc have-Adn person-Acc meet-Nomz-Top
chamulo him.i.tul-ci-yo
truly be.hard-End-Pol
'It is truly difficult to find someone who has the noble character like tea (= as good as tea).'

(2008, Drama *Eyteynuy tongccok* Episode #8)

Grammaticalization of a noun into postposition is among the most common scenarios in Korean, for its idiosyncrasy of free compounding, a nominal analog of verb serialization (cf. S Kim 1982; Y Han 2003; H Lee 2016; S Rhee 2023).

4.3 Postposition of exclusive focus

As indicated above, the directionality of mental focus may be of exclusive focus ('only'), highlighting exactness of focusing. This usage is exemplified in the following excerpt, in which the speaker uses the postposition mankhum to signal that 'you' is the only concern of his:

(9) *mankhum,* exclusive focus postposition 'only'

ne-mankhum-un na-l silmangsikhi-ci.anh-ki-lul
you-Exc.Foc-Top I-Acc disappoint-Neg-Nomz-Acc
pala-n-ta
hope-Pres-Dec
'For no one else but you, I hope you don't disappoint me.' (= I don't care about others, but as long as you are concerned...) (2002, Movie *YMCA yakwutan*)

One thing to note is that even the exclusive focus may sometimes lend a downward focus interpretation in contexts like (9) (see 4.4 below). Thus, the

example above may be interpreted as ‘at least you’ (i.e., since everyone else has disappointed me) instead of ‘just you’ (i.e., since I don’t care about others as much as I do about you), which strongly suggests that the scalarity interpretation strongly depends on the context.

4.4 Postposition of downward focus

Still another postpositional function of *mankhum* is that of marking downward focus, i.e., indicating the lower-limit, denoting ‘just (at least)’. By using *mankhum* in this function, the speaker implies that the designated entity is the final member of the continuum, and that he or she disregards the members mapped above it along the continuum. This form is in common use in scenes of imploration by a desperate prayer or of negotiation by the disadvantaged party. This is well illustrated in the following excerpt, in which the speaker implores that the addressee should save the life of Eun-young:

(10) *mankhum,* lower-limit focus postposition ‘just (at least)’

cipal	wuli	unyengi	mokswum-mankhum
by.all.means	our	[name]	life-Dwn.Foc
sally-e.cwu-so			
save-Ben-Req			

‘By all means, I plea to you to save just the life of my (beloved) Eun-young.’ (= The only thing I want you to save is her life...; if only she can live, other things don’t matter.)

(2006, Drama Pomuy walchu Episode #3)

As indicated above, downward focus (strongly scalar) and exclusive focus (weakly scalar) may be ambiguous in interpreting natural language data. In the case of (10) above, however, the interpretation strongly leans towards the downward focus interpretation by virtue of occuring in the context where the implorer highlights the scalar lower-limit, disregarding everything above it in the continuum.

4.5 Similative connective of upward-focus

In contrast with the functions of mankhum as a nominal morphology described above, mankhum has also developed into a verbal morphology of various functions, still retaining its core lexical meaning of similitude or comparability. As was the case with the nominal morphology, the verbal morphology involves scalarity. The following excerpt exemplifies the usage of mankhum for the function of similative connective with upward-focus:

(11) *mankhum,* similative connective of upward-focus 'up to the point, as much as'

na-hanthey-nun	seysang-hakwu-twu		
I-Dat-Top	world-Com-even		
pakkwu-l.swu.eps-ul.mankhum		coh-un	appa-ø-ntey
exchange-cannot-Sim.Conn		be.good-Adn	father-be-Conn
talun	salam-hanthey	kuleh-ci-ka	anh-napw-a
other	person-Dat	be.so-Nomz-Nom	be.not-Infr-End

'He is my father who is so good that I cannot even exchange for the whole world, but perhaps it is not so to other people.'

(2000, Drama Kkokci Episode #23)

The above example shows that *mankhum* forms a bimorphemic connective *-ul.mankhum,* along with the prospective adnominalizer *-ul* (S Rhee 2012b; cf. a secondary future marker, Lyons 1977: 689; a relative future marker, Dahl 1985). The prospective marker indicates the conceptualizer's fictive motion along the continuum, e.g., in (11), the speaker moves along the continuum of entities that she thinks she may exchange for her father (and finds that the world, the apparently highest one on the continuum still fails to qualify for exchange with her father).

4.6 Similative connective of exactness focus

Another connective function of *mankhum* is that of marking exactness focus ('just as much as'). For the focus is on exactness of the properties being

compared (i.e., A's quality X is exactly B's quality X), scalarity is not (at least strongly) present in the interpretation. This is well exemplified in the following, a title of a documentary program:

(12) *mankhum,* similative connective 'just as much as'

alumtaw-un.mankhum	wihemha-n	ku	ilum
be.beautiful-Sim.Conn	be.dangerous-Adn	that	name
himallaya			
[name]			

'The Himalayas, the name just as much dangerous as it is beautiful.' (A title of a documentary program by KBS)

As is evident in (12), the Himalaya's property of being dangerous is not mapped onto the continuum of different degrees of dangerousness, but is directly mapped onto the degree of beauty of the Himalayas. In other words, the (extreme) degree of dangerousness is implicit, only carried over from the (extreme) degree of beauty of the mountains against which dangerousness is compared.

4.7 Causal connective of exactness focus

Another line of development of *mankhum* is its development into causal connectives. The functions of causality marking are also scalar, highlighting exactness ('just because') or the lower-limit with downward orientation ('at least because'). The exactness focus is illustrated in the following excerpt:

(13) mankhum, causal connective 'just because'

manh-un	nwun-i	ssah-nteytaka	pingphan.kil-i
be.much-Adn	snow-Nom	pile.up-Addn	icy.road-Nom
mikkulew-un.mankhum		cosimha-yse	
be.slippery-Caus.Conn		be.careful-Seq	
itongha-sy-eyaha-kyess-supnita			
move-S.Hon-must-Fut-Fml.Dec			

'Just because snow has accumulated and in addition the icy road is slippery, you are advised to exercise (= must) caution while moving about.'

(2021, Yonhap News weathercast Jan.7.2021)

The above example pinpoints the exact causes or reasons of the necessity for exercising caution for the motorists or pedestrians, i.e., heaped snow and icy road. Just as it was the case with the similative connective for marking exact focus, briefly exemplified in (12) above, the causal connective for marking exact focus does not strongly imply scalarity present in the property being focused. In other words, the solicited caution is not directly from the continuum of different degrees of cautiousness, but is carried over from the continuum of inclement traffic conditions that require caution.

4.8 Causal connective of downward-focus

Still another function of causal connective of mankhum is that of marking downward focus ('at least because'), whereby the lower-limit is presented. This is exemplified in the following excerpt:

(14) *mankhum,* causal connective 'at least because'

hoysa.ipcang-eyse	twu.tal-tongan-uy	cekca-lul	
company.part-at	2.month-period-Gen	loss-Acc	
kamswuha-nun.mankhum		silphayha-yss-ul	ttay-nun
accept-Caus.Conn		fail-Pst-Adn	time-Top
pwunmyeng	ku-ey	sangungha-nun	chaykim-i
surely	that-to	correspond-Adn	responsibility-Nom
ttalu-n-ta-nun-ke-l			myengsimha-yla
follow-Pres-Comp-Adn-Nomz-Acc			remember-Imp

'At least because the company management is willing to make up the loss for two months, you must keep in mind that you will be held responsible when (your suggested plan) fails.'

(2004, Drama *O! Philsung pongswunyeng* Episode #5)

In the excerpt, the speaker uses the causal connective -nun.mankhum, a composite form involving the simultaneous adnominalizer -nun, to signal the bottom-line cause or reason for the addressee's accountability for a plan with potential failure.

5. Discussion

5.1 Grammaticalization

The preceding section offered a cursory exposition on diverse functions of the grammaticalized *mankhum* across various categories, e.g., from its lexical function of (dependent) nominal, to postpositions and connectives. Even though they were exemplified with authentic corpus data, the exposition and illustration gloss over an enormous amount of semantic subtlety and morpho-syntactic complexity. However, the development of the cross-categorial polyfunctionality of *mankhum* clearly indicates extensive semantic and functional extension, thus constituting an excellent example of 'poly-grammaticalization' (Craig 1991). In this section we will briefly look at the state of affairs with respect to the four grammaticalization parameters, proposed by Kuteva et al. (2019), desemanticization, extension, decategorialization, and erosion.

The first parameter is desemanticization, also commonly known as semantic bleaching, semantic generalization. Considering that the source meaning of *mankhum* is 'exact amount', it is evident that desemanticization in the development of *mankhum* is not extensive. The semantic feature of 'exactness' may have become somewhat loosened in its change into the similative ('similarity'). What is crucial in this context is that the notion of 'exactness' is inherently subjective and scalar, with room for variability.

In terms of semantic change, mankhum has undergone extensive subjectification, i.e., a lexeme merely designating a particular amount or degree developed into perspectivized meanings of upper- or lower-limit, as well as the subjective interpretation along the chain of causality. Acquisition of subjectified meanings is an instance of gaining meaning or semanticization (or 'semantic

enrichment'), a reversed direction of the notion of desemanticization, the core concept of which is loss in semantic content.

The second parameter is extension, also known as expansion of use context. Extension has been extensive from the hypothetical full-noun usage to the dependent noun usage and then to nominal particles and verbal connectives. The full-noun stage is hard to prove due to the shallow depth of documentation, but from the uniformitarian principle, a dependent noun can be safely hypothesized to have been developed from a full noun. Extension does not seem to be extensive because most connectives still occur in syntactic nominal position, as evidenced by the preceding adnominalizer, the syntagmatic position of which is before a nominal. In other words, morpho-syntactic contexts for the form largely stay the same. Some exceptions, i.e., true extensions, include the connectives *-ni.mankhum, -li.mankhum,* etc. (which we did not exemplify in the above), which occur with the the causal connective *-ni* and the future tense marker *-li* (S Rhee and Khammee 2024), which precede *mankhum*. For its nominal characteristics, *mankhum* would not have been able to occur in a position following these markers, had it not been grammaticalized into bimorphemic connectives along with those markers. In this sense, *mankhum* has undergone extension, but its extent is rather limited.

The third parameter is decategorialization, a process whereby a grammaticalizing form gradually loses its characteristic features associated with the major categories, such as nouns and verbs. Nominal category features include modifiability by an adjective, pluralizability, coordination, etc. Thus, it is expected that the source lexeme *mankhum*, by virtue of its membership in the nominal category, had such nominal category features at an early state (e.g., **taylyak mankhum* 'approximate(ly) exact amount'; **mankhum-tul* 'exact amounts'; **mankhum-kwa chwusan* 'exact amount and approximation'; etc.) and that some of such features had been lost in the course of its development. However, the referenced historical data do not provide such nominal features in the early stages. When a new lexeme *mankhum* was innovated through reinforcements on the earlier form (i.e., ma 'exact amount'), it inherited the dependent noun features (thus, already unable to occur with such morphosyntactic features characteristic of a full-fledged noun). Based on the fact

that the loss of nominal category feature is not observable in the historical data, we can hypothesize that if ma did indeed undergo decategorialization, the process must have occurred early in history, i.e., before LMiK. A more conclusive answer, however, should await further research.

The final parameter of grammaticalization to review is erosion, or the loss of phonological volume of the grammaticalizing form. An investigation into historical data makes it plain that *mankhum* does not exhibit phonological reduction. Instead, it shows the reverse, i.e., phonological strengthening (e.g. *ma* > *man, makom, maskam, makhom, mankhom, mankhum*, etc.). Phonological erosion is commonly observable in grammaticalization processes crosslinguistically, but its reverse process, phonological strengthening is not uncommon in language change scenarios, either in grammaticalization or in degrammaticalization (cf. S Rhee 2010, 2012a, for Korean, S Rhee and Khammee 2024 for Thai; Norde 2009, 2011, Giomi 2020 for Irish; among others). The phonological strengthening may have been due to the desire for enhanced expressivity in describing exactness or similarity.

A review of the grammaticalization of *mankhum* in view of the four grammaticalization parameters leads us to a conclusion that the grammaticalization of mankhum either does not or, if ever, very weakly, conform to the the commonly attested developmental patterns. This strongly points to the facts that grammaticalization patterns exhibit strong tendency of unidirectionality but, at the same time, that individual developmental scenarios may involve much variability.

5.2 Analogy in grammaticalization

An issue that becomes apparent in an investigation of development of *mankhum* is the role of analogy. As briefly alluded to in the introduction, analogy has rarely been given due attention in grammaticalization, largely because it was thought that analogy, unlike reanalysis, does not create new grammatical structures but instead contributes only to the spread of an already innovated rule (Hopper and Traugott, 2003[1993]: 63-69).

However, this paper, while acknowledging the critical role of reanalysis in

grammaticalization, argues that there are cases that support the thesis that grammaticalization may be actualized by analogy (cf. Fischer 2007, 2008, De Smet 2009, 2012, Delbecque and Verveckken 2014, among others). The development from a noun to a postposition is commonly observed. When two nominals occur juxtaposed, one of them can often lose 'salience' and become 'discursively secondary' (Harder and Boye 2011: 60), in much the same way as one of the two serialized verbs loses salience and become an auxiliary verb (cf. Lehmann 2015[1982]; DeLancey 1991). In the case of Korean, due to the SOV word order characteristics, affixes are predominantly suffixes, hence the grammaticalizing form is likely to be the second one in the N-N configuration. This process is responsible for the grammaticalization of postpositions, e.g., *kAz* 'edge' > *-kkaci* 'to, till' (C Ryu 1962; S Kim 1982, 1986, 2004; Y Han 2003; J Park 2015; H Lee 2016; S Rhee 2022), *hantey* 'one place' > *-hanthey* 'to' (S Kim 1982; J. Heo 2007; Y Han 2003), *mali* 'head' > *-meli* pejorative suffix (H Koo 2009), and many others.

In the case of *mankhum*, by analogy, based on semantic affinity (similitude) and structural affinity (hosted-host), postposition can easily trigger the emergence of a connective, an instance of extension from the nominal host to clausal host. For example, the analogy-driven extension as reported in S Rhee and H Koo (2015), in their analysis of the tepidity particle −na from the verbal connective in Middle Korean, displays much parallelism with the development of *mankhum*. The reported diachronic pattern of extension of the units hosted by −*na* (S Rhee and H Koo 2015: 35), an instance of analogy-driven inter-categorial grammaticalization, is as follows (for individual functions, see S Rhee and H Koo 2015):

(15) ~ 10th c. Verbal > Nominal
15th c. Adverbial
16th c. Adjectival
19th c. Finite-clausal
Late 19th c. ~ 21st c. Sentential, Auxiliary, Non-finite marker, Complementizer, Nominal, Adverbial

Evidently, analogy is a common cognitive operation in grammaticalization processes involving changes from nominal hosts to verbal hosts and vice versa, not only in Korean but also across languages (Genetti 1991, S Rhee and H Koo 2015, S Rhee 2022). The present analysis lends support to the analogy-driven inter-categorial grammaticalization thesis.[3)]

5.3 Forms of scalarity in grammaticalization

As briefly indicated above, the notion of the 'exact amount' inherently comparative, which makes it scalar. Exactness is subjective and variable. In other words, exactness is a matter of degree. For this reason, the exactness may be mentally approached in downward direction or upward direction. At the extreme case, the directionality may become irrelevant and only the exactness may be highlighted. For this reason, various grammatical meanings such as 'as much as', 'as little as', 'just like', 'just because', 'at least because', etc. have come into existence.

This type of scalar meaning is often observed with Korean delimiting particles. In an analysis of the focus particles *-ya, -nun,* etc., M Kim (2024) observes that the particle can evoke the two opposite scalar implicatures, i.e., 'the most likely one' and 'the least likely one', triggered by the context (e.g., *sa-l.swu-ya iss-ci* '(I) can surely live' vs. *cwuki-ki-ya ha-keyss-e?* 'will (he) kill? (of course he won't)'. Similar phenomena are observable with *-nun, -na,* etc. This is not restricted to Korean particles; focus particles tend to form a few groups: (i) 'additive'/'inclusive' focus (e.g., English *also, even, as much as*) and 'restrictive'/'exclusive' focus (e.g., English *just, only*) (König 1991: 32); (ii) scalar focus particles (e.g., English *even, as much as*) (König 1991: 38); and (iii) evaluative-stance focus particles (König 1991: 43) (as cited by M Kim 2024). This state of affairs suggests that *mankhum*, as a focus particle, functions

3) As an anonymous reviewer suggests, an in-depth investigation of of grammaticalization of 'equality' lexemes across languages can significantly contribute to a better understanding of the issue. For instance, English has even, as, etc. that denote 'equality' or 'exactness' from Old English (*Oxford English Dictionary*), and just with a similar meaning from the 14th century. Since these carry grammatical functions across diverse categories, they constitute an excellent study subject.

as a scalar focus particle. Given the situation, Korean focus particles such as *mankhum* may be fruitfully investigated with respect to what contexts trigger different scalar interpretations and how markers of such functions become grammaticalized.

5.4 Remaining issues

Historically, the lexeme *mankhum* can be traced back to LMiK lexeme ma (see (1), (2), and (3) above), which further changed to man. This defective noun has survived until MoK and has become one of the most productive focus particles in MoK. For sharing the origin, its function is similar to its later variant mankhum, particularly as a nominal morphology. In extant literature, the MoK connective of the same shape, *-man* (sometimes occurring as an elongated variant *-manun*), has not been linked to the particle -man, but the topic warrants further research.

It has been already observed that well before the emergence of mankhum, man was among the productive lexemes, carrying the delimiter function of comparative marker ('than, as, like, as compared to, as much as') and exclusive-focus marker ('only') (cf. S Kim 1982; J Park 1995; J Kim 1995; S Kim 2000; K Ha 2005). With divergence and different specialization, *-man* has become primarily an exclusive-focus marker ('only') and *-mankhum,* as a postposition, primarily a comparative similative marker ('as much as, like') (S Kim 1982; J Kim 1998: 182-200; Y Hong 1976: 215-219; M Wang 1988; K Oh 2003, among others). K Oh (2003: 103) notes that in their comparative similative marker function, *-man* and *-mankhum* have no fundamental differences, but that *-man* has more severe occurrence restrictions than *-mankhum* does.

This paper has restricted its attention to the scalar functions of mankhum and the involvement of analogy in its grammaticalization processes. It could not pursue a macroscopic investigation for space limitation. For a fuller understanding of grammaticalization of *-mankhum*, however, a more in-depth exploration into the dynamics between *-mankhum* and -man and their interaction in functional competition is called for. In addition, a quantitative analysis across time would constitute a desirable follow-up study. It is also to be noted that an

analysis of degree operators constraining *mankhum* and its kindred delimiters in comparison and contrast can be a further study.

6. Summary & conclusion

This paper investigated the development of *mankhum* from its lexical meaning of the 'exact amount' into various grammatical markers, such as postpositions and connectives. An investigation based on historical and contemporary corpora revealed a number of significant aspects of grammaticalization of *mankhum*. In terms of semantic change, *mankhum* has undergone extensive subjectification, i.e., a lexeme objectively designating a particular amount has developed into one carrying the perspectivized, scalar meanings of upper- or lower-limit as well as one denoting the subjective interpretation of an event along the chain of causality. A review of the grammaticalization patterns of *mankhum*, with reference to the four grammaticalization parameters (Kuteva et al. 2019), revealed that the patterns' compliance with them is rather limited. In terms of the cross-categorial change, the meaning-based extension across diverse syntactic environments is likely to have been triggered by structural analogy (cf. Genetti 1991, Hoffmann 2005, Fischer 2008, De Smet 2009, S Rhee & H Koo 2015, among others, for similar analyses).

Abbreviations:

A:Hon: addressee-honorific; Add: additive; Adn: adnominal; Advz: adverbializer; Ben: benefactive; Caus: causative; Com: comitative; Comp: complementizer; Conc: concessive; Conn: connective; Conv: converb; Dat: dative; Dec: declarative; Desd; disiderative; Dwn: downward; End: sentence-ender; Exc: exclusive; Fml: formal; Foc: focus; Fut: future; Gen: genitive; Hum: humilitive; Imp: imperative; Infr: inferential; Loc: locative; Neg: negation; Nom: nominative; Nomz: nominalizer; Pol: polite; Pres: present; Pst: past; Q: question/interrogative; Req: requestive; S.Hon: subject-honorific; Seq: sequential; Sim: similative; Top: topic

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