

## Thoughts on Semantic Change Mechanisms in Grammaticalization\*

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**Seongha Rhee. 2009. Thoughts on Semantic Change Mechanisms in Grammaticalization. *The Journal of Linguistic Science* 51, 175-204.** Studies of grammaticalization have paid special attention to semantic change mechanisms. This paper looks into eighteen mechanisms of semantic change that have been proposed in the study of grammaticalization and attempts to reclassify them according to their hierarchical status. Further, in order to establish true semantic-change mechanisms three criteria are proposed: (i) it should refer to semantic change; (ii) it should refer to what language users do; and (iii) it should refer to a process that can be reasonably generalized. When these criteria were applied to the eighteen mechanisms, a total of ten mechanisms turned out to meet the requirements. These mechanisms are pragmatic inference, metaphor and metonymy, schematicization, reinterpretation, prototype extension, perspectivization, frame-of-focus variation, subjectification, and intersubjectification. What is notable in this hierarchical structure is that only schematicization belongs to metaphor and metonymy. From this exploration of mechanisms, what surfaces as notable is that metonymy is an important mechanism that has numerous different subtypes with unique characteristics. **(Hankuk University of Foreign Studies)**

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## 1. Introduction

Since the introduction of grammaticalization theory in modern linguistics, the major research interests have consisted of grammaticalization principles and mechanisms. In view of the fact that mechanisms refer to cognitive processes that enable language change, and thus grammaticalization as well, it comes as no surprise then that they received much attention by grammaticalization researchers. However, there is yet no consensus as to what are the precise mechanisms of semantic change in grammaticalization. Reviewing and evaluating the concepts proposed as mechanisms in the current grammaticalization scholarship, this paper intends to propose a comprehensive, and unified, set of grammaticalization mechanisms with special focus on those that operate in semantic change. There are other mechanisms that are not included in the discussion that make reference to the change in areas other than semantics, such as phonological, morphological, and syntactic changes.

This paper first examines eighteen 'mechanisms' that supposedly can explain semantic change that occurs in grammaticalization in section 2. In section 3 various issues with reference to the status as a mechanism of each proposed notion, such as compatibility, subsumption, and conceptual network, are addressed, and further discusses the criteria for the notion of 'mechanism' to propose a new hierarchy and typology. Section 4 summarizes and concludes the paper.

## 2. Proposed Semantic Change Mechanisms in Literature

### 2.1 Pragmatic Inference

Pragmatic inference is a way of reasoning in discourse. Based on the encyclopedic knowledge and the information acquired from the discourse, the addressee activates a

bundle of possible meanings of what the speaker said. The notion of pragmatic inference has been extensively discussed and proposed as semantic change mechanism by numerous scholars (Horn 1985, König 1988, García & van Putte 1989, Traugott & König 1991, Bybee et al. 1994, Rhee 1996, 2007b, inter alia). It also bears other names such as pragmatic strengthening, conventionalization, strengthening of informativeness (Traugott & König 1991). Among the significance of pragmatic inference is the stabilization process of one particular inferred functional aspect or component relative to other functional aspects or components. At the incipient stage, grammaticalization usually involves specification achieved through inferencing. This inference, according to Traugott & König (1991), has two kinds: metaphor and metonymy. In this sense, pragmatic inference is an umbrella term that encompasses two major cognitive strategies. A good example of pragmatic inference contributing to semantic change in grammaticalization is that of English go-future as shown in (1):

- (1) From Purposive to Futurity
- |   |             |
|---|-------------|
| a. I am going to London to marry a woman. | (Purposive) |
| b. I am going to miss you.                | (Futurity)  |
| c. I'm gonna come.                        | (Futurity)  |

Likewise, Rhee (2007a) shows that the functional change of English *by*, in its grammaticalization into instrumental, agentivity, causativity, and status marking, exhibits pragmatic inferencing, as shown in (2).

- (2) Instrument-Agent-Causative-Status chain (Rhee 2007a)
- |   |
|---|
| a. If A is by means of B, B is the agent of event A.              |
| b. If B is the agent of A, B caused A.                            |
| c. If B is the agent of A, B has the status (endowed with power). |

## 2.2 Reinterpretation

Reinterpretation has been treated in Sperber & Wilson (1986), Heine (1992, 1995),

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Heine et al. (1991a, b), Rhee (2009), among others, and refers to an act of discourse pragmatic manipulation whereby concepts are subjected to contextual factors in utterance interpretation. Through reinterpretation conversational implicatures become conventionalized to new focal senses. In this sense reinterpretation has two subcomponents: pragmatic inference and conventionalization.

Heine et al. (1991b) make use of the notion 'Context-Induced Reinterpretation (CIR) to show how apparent metaphorical semantic change is in fact mediated by small-step, metonymic processes of reinterpretation induced by the discourse context. This is well illustrated by the use of spatial prepositions *from* and *to* that extend to temporal prepositions, as shown in (3) (Heine et al. 1991b: 164-165):

- (3) Context-Induced Reinterpretation; From Space to Time
- a. From Cologne to Vienna it is 600 miles. (Space)
  - b. From Cologne to Vienna it is 10 hours by train. (Space/Time)
  - c. He was asleep all the way/all the time from Cologne to Vienna.  
(Space/Time)
  - d. To get to Vienna, you travel from morning to evening. (Time)

In (3), a comparison of (3a) and (3d) seems to warrant a [space > time] metaphor analysis. However, the leap across these two domains is mediated by (3b) and (3c) where the prepositions are compatible with both spatial and temporal interpretations.

### 2.3 Analogy

Analogy is a process whereby a grammatical form or pattern is altered so as to conform to another form or pattern that already exists in the language. Thus analogy is a kind of simplification. This mechanism was discussed in Traugott & Heine (1991), Heine & Reh (1984), Greenberg (1985), Heine et al. (1991a), Givón (1989), inter alia.

Metaphor is thought to be based on analogy, even though Greenberg (1985: 277) asserts that there are metaphors that do not involve analogy. Heine et al. (1991a: 102)

suggest that analogy is a characteristic of macro-structure relations resulting from grammaticalization. Likewise, in the prototype extension model (cf. Heine et al. 1991a), prototype-like categories are extended through analogy or metaphor. According to Lehmann (1982: 159), the 'canalization' phenomenon in grammaticalization is due to the existence of models which exert an analogical strain. Since the model already exists in the language, analogy is often called an internal borrowing. Examples in (4) show analogical change that occurred, or is occurring, in the history of English.

- (4) a. kine > cows (replacement by analogical plural marking)
- b. editor > edit (back-formation from analogized suffix *-or*)
- c. bore with > bored of (replacement by preposition from a semantico-syntactically similar construction)

## 2.4 Metaphor

Metaphor is one of the most frequently cited mechanisms in studies of semantic change. Its conceptual or linguistic treatments have been presented in numerous studies, egs. Lakoff & Johnson (1980), Bybee et al. (1994), Sweetser (1988, 1990), Bybee & Pagliuca (1985), Claudi & Heine (1986), Heine & Claudi (1986), Heine et al. (1991a&b), Geeraerts (1992), inter alia. Metaphor is commonly defined as "understanding one thing in terms of another" (Lakoff & Johnson 1980), and is known to be based on analogy, on a perceived or construed similarity between vehicle and topic. Since it operates on the similarity, it is iconic in nature. Categorization, an innate human tendency in the construal of the world, crucially involves metaphor (Lakoff & Johnson 1980, O'Dowd 1992).

Among the characteristics of metaphor is that it shows (i) unidirectional abstraction, (b) reduction of semantic complexity, and (c) decategorialization (Claudi & Heine 1986). The following examples show the relationship of the senses characterizable as metaphor.

- (5) a. The crack in the stone let the water flow through. (Physical)

b. I begged Mary to let me have another cookie. (Social)

(Sweetser 1990: 52)

(6) a. You must finish your homework. (Social)

b. You must have been home last night. (Epistemic)

In the above, the verb *let* in (5a) shows the removal of physical obstacle whereas in (5b) it denotes the removal of social barrier imposed by the social notion of possession. Likewise in (6a) the auxiliary *must* is used to encode social obligation, i.e. deonticity, whereas in (6b) *must* encodes a logical necessity, i.e. obligation in the epistemic realm.

## 2.5 Metonymy

Metonymy refers to the semantic transfer through contiguity. Due to its grounding in contiguity, it is indexical in nature, contrasting with the iconicity associated with metaphor. Metonymy surfaces as an important mechanism in the studies of Traugott & König (1991), Heine et al. (1991a&b), Geeraerts (1992), and many others. According to Traugott & König (1991) it is largely correlated with shifts to meanings situated in the subjective belief-state or attitude toward the situation. Rhee (2002) asserts that subjectification is fundamentally based on metonymization, i.e. the use of metonymy and that since semantic change occurs in the course of meaning negotiation in discourse, which occurs in such small steps as to be inferable from the given context, metonymy may be involved in nearly all semantic changes (Rhee 2002).

The contiguity relationship in metonymy can be, in principle, very diverse. However, among the most important type of metonymy is that of conceptual contiguity. The following example well illustrates the role of metonymy in the evolution of futurity marking and concessivity marking.

(7) a. I am going to marry her. (Purpose > Futurity)

b. You must be good while others pursue evil profits. (Time > Simultaneity  
> Concessive)

In the above, (7a) originally denoted "I am in the process of physical locomotion with the purpose of marrying her," whose meaning evokes the contiguity relationship between the locomotion event in the present and the marriage event in the future. In other words, the two events are conceptually related in the space of our world knowledge. Likewise, in (7b), where the connective *while* was originally denoted pure temporal relation of designating the reference point, the sentence had the meaning "You must be good at the point of time when others ...," which evoked the simultaneity meaning "You must be good during the time span when others...," which, in turn, brought forth the concessive meaning "You must be good even though others..."

## 2.6 Enrichment

Enrichment refers to the act of strengthening of meaning (Antilla 1972), and is thus often equated with gain (Lessau 1994). According to Lakoff (1968) and Bußmann (1990) it is the same notion as reification. It is also equated with such terms as semanticization and concretization. As is the case with pragmatic inferencing, enrichment can be said as a stabilization process of one particular inferred functional aspect or component relative to other functional aspects or components. Traugott & König (1991: 210) consider enrichment a type of metonymy. This is reasonable, since the act of enrichment results in strengthening of informativeness, which invariably occurs in a discursive scene where lots of situationally-motivated, pragmatically-induced meanings are simultaneously available. The following example of *go*-future in English illustrates the gain (i.e. enrichment) of the futurity meaning.

(8) He is going to come to the party. (gaining of future meaning)

## 2.7 Bleaching

Bleaching is an antonymic notion of enrichment. It has been discussed in a large

body of literature, egs. Gabelentz (1901[1891]), Givón (1975), Matisoff (1991), Haiman (1991) and numerous others. It goes by many other terms, such as 'loss' (Lessau 1994), and 'weakening' (Guillaume 1964, Guimier 1985), 'semantic depletion' (Lehmann 1995[1982]), 'semantic reduction', or 'decrease in semanticity' (Lehmann 1995[1982]), 'desemanticization' (Greenberg 1991, Heine & Reh 1984), 'emptification', 'fading', 'generalization of semantic content' (Bybee et al. 1994, Bybee & Pagliuca 1985), 'fleshing out of meaning' (Sweetser 1988), Decay (Heine et al. 1991a), etc.

Despite the multiplicity of terminology, bleaching is understood as a process whereby the loss of all lexical content of an entity occurs while only its grammatical content is retained. In other words, bleaching is the loss of semantic content, whose resultant target meaning is lesser, smaller, weaker, poorer, more abstract, more general, simpler than the source meaning. Matisoff (1991: 384) aptly describes the bleaching process as "the partial effacement of a morpheme's semantic features, the stripping away of some of its precise content so it can be used in an abstracter, grammatical-hardware-like way." In a similar vein, Haiman (1991: 154) asserts that grammaticalization is always associated with two changes: semantic generalization or bleaching and phonetic reduction.

The following diagram illustrates the bleaching process of the semantics of French *de* which was derived from Latin *de* via Romans *de*, in an excellent manner (taken from Lehmann 1995[1982]).

(9) Latin <i>de</i>	> Romance <i>de</i>	> French <i>de</i>
down from the top	from	of
moves down		
away from		
(Delative)(Ablative(+Motion))	(Ablative(+Motion))	(Genitive)

## 2.8 Generalization

Semantic generalization refers to semantic change which, by reduction of semantic specificities, leads from less to more general items (Bybee et al. 1994). Therefore, it



involves the loss of semantic specificities. It has been often evoked in grammaticalization studies, egs. Geeraerts (1992), Bybee et al. (1994), Bybee & Pagliuca (1985). Since semantic generalization persists throughout, is coextensive with, the course of grammaticalization, Bybee et al. (1994) view that the degree of generalization is actually an indicator of the degree of grammaticalization. Bybee and Pagliuca (1985: 72) say that one of the important mechanisms of generalization is metaphorical extension which gradually develops into regular use.

The following example of English *can* shows the gradual semantic generalization as attested in the history of English.

(10) English *can*

- |                              |  |
|------------------------------|--|
| Stage I: mental ability:     | mental enabling conditions exist in an agent for the completion of the predicate situation |
| Stage II: general ability:   | enabling conditions exist in an agent for the completion of the predicate situation        |
| Stage III: root possibility: | enabling conditions exist for the completion of the predicate situation                    |

In (10) the semantics of English *can* is shown to have undergone a series of generalization in stages. Progression from a stage to the next stage involves the expansion of the semantic domains from a more restrictive to a more general ones. This is not an inter-domanial progression because the later stage usage includes all the previous stage usages, as is shown by the fact that in Modern English *can* can be used in contexts referring to root possibility as well as mental and general abilities.

It is to be noted, as Bybee et al. (1994) concedes, that generalization may not be an actual mechanism of change itself but a description of the results. If this is the case, the generalization process may be actuated by other conceptual mechanisms such as metaphor and metonymy, and semantic generalization is simply an effect of such operations.

## 2.9 Harmony

Harmony as a semantic mechanism proposed by Bybee et al. (1994) refers to the use of a form in semantically harmonious contexts only and then spreading to similar contexts. In order for a linguistic form to undergo harmony, its semantic content needs to be sufficiently generalized as a pre-condition. Therefore, harmony is restricted to cases in which the grammaticalizing element had already lost most of its semantic content, because it must be interpreted as not contributing its own meaning to the clause, and thus it is applicable to later stages of grammaticalization (Bybee et al. 1994). Due to such semantic paucity, existence of multiple harmonious forms does not increase the meaning. The following shows the contextual characterization of functional progression of English *should* as illustrated by Bybee et al. (1994).

### (11) English *should*

Stage 1: Use in weak obligation

Stage 2: Use in weak obligation, with no semantic contribution

Stage 3: Use in non-obligation contexts

## 2.10 Absorption

Absorption, as proposed by Bybee et al. (1994), is a process whereby a synsemantically evoked reading is reinterpreted as an autosemantic meaning, i.e. a process whereby a sign absorbs parts of its contextual meaning (Lessau 1994: 4). It refers to meaning change of losing more and more appropriate contexts and is observable in older grams, which are already in the process of being replaced by newly developed grams (Bybee et al. 1994). Lessau (1994: 4) views it as semantic consequence of the pragmatic process of inference.

Absorption was supposedly a mechanism that operated in the development of English subjunctive, as shown in (12).

### (12) English subjunctive

Stage 1: Subjunctive form in subordinate clauses survives as subjunctive

Stage 2: Use restricted to subordinate clauses

Stage 3: Absorption of subjunctive meaning

### 2.11 Merger

Merger refers to a process whereby the meaning or function of two linguistic units merges into one new meaning or function which is different from that of the combined units (Heine & Reh 1984: 43ff). Lessau (1991: 25ff) characterizes merger as a process by which two distinct entities are combined into one. It typically affects adjacent morphemes, and usually precedes compounding (Heine & Reh 1984: 44). When merger is viewed from a larger perspective, generalization and abstraction may be referred to as paradigmatic functional mergers (Lessau 1994: 565).

This can be illustrated by the following examples in Korean.

(13) Korean *-ess* & *-eysepwuthe*

a. Serialized Verbs *-e iss* > Resultative *-e iss* > Past/Anterior *-ess*

b. Stacked Particles *-ey-se-pwuthe* > Ablative *-eysepwuthe*

In (13a) above, the serial verb construction V-*e iss* with two lexical meanings of the serialized verbs develops into a grammatical marker V-*e iss* with the resultative meaning, a merge process whereby a slightly different meaning or function has been obtained. Further, it develops into *-ess*, which functions as past or anterior. Likewise in (13b), the stacked particles, i.e. locative *-ey*, locative *-se*, ablative *-pwuthe*, form a single grammatical morpheme *-eysepwuthe*, whose meaning is not a compositional whole from its components. It is noteworthy that *-pwuthe* itself was derived from a verb of adhesion and a non-finite marker, thus the componential analysis could be more fine-grained.

### 2.12 Subjectification

Subjectification, as proposed in Traugott (1982, 1989), Traugott & Dasher (2002), Traugott and König (1991), Rhee (2002, 2007a,b&c, 2008), and numerous others, refers to a pragmatic-semantic process whereby meanings become increasingly based in the speaker's subjective belief state/attitude toward the proposition. Rhee (2002, 2007a,b&, 2008) characterizes it as a process whereby speaker involvement is reflected in semantic change. This is well illustrated in the following examples.

(14) English *after*

- a. Shut the door after you. < spatial posteriority
- b. Brush your teeth after breakfast. < temporal posteriority
- c. After we heard the lecture we felt greatly inspired. < causality-chain posteriority

In the above, *after*, originally referring to a spatial relationship develops into one making reference to a temporal relationship, a clear case of metaphor. However, this further develops into a causal relationship, a process whereby the posteriority relationship shifts from an objective world (space and time) to a subjective world (cause and effect). A similar process is observed in the following examples.

(15) English *since*

- a. I have done quite a bit of writing since we last met. < temporal
- b. Since Susan left him, John has been very miserable. < temporal & causal
- c. Since you are not coming with me, I will have to go alone. < causal
- d. Since you are so angry, there is no point in talking with you. < causal

(Traugott & König 1991: 194-195)

In the above, *since*, which was originally designating purely temporal relationship changes its function in the causality domain. This is a change largely parallel with the case of *after* described above.

### 2.13 Intersubjectification

Intersubjectification, as suggested by Traugott (1982, 1989), Traugott & Dasher (2002), Traugott and König (1991) among others, refers to a process whereby meanings relating to "interpersonal" relations emerge (Traugott & Dasher 2002: 23). Intersubjective meanings have to do with the self-image (=face) needs. Therefore, intersubjectification is reflected in the emergence of overt social deixis, attention management (hedges, politeness markers, honorific titles), etc. The common distinctions between plain vs honorific, plain vs. humble pronominal forms are a good example of the result of intersubjectification. In English, the discourse marker *in fact* has undergone intersubjectification as shown in the following usage.

(16) In fact, I don't like to see him.

#### 2.14 Abstraction

Abstraction as a semantic change mechanism was proposed by Matisoff (1991) and Heine et al. (1991a&b). It refers to a process leading from something more concrete to something more abstract. Lessau (1994: 9) comments that it is "a dead sure concomitant of grammaticalization" and Matisoff (1991: 384) views grammaticalization fundamentally as a result of abstraction by saying that "grammaticalization is a metaphorical shift toward the abstract." The abstract nature of resultant forms in grammaticalization has been observed by Heine et al. (1991b: 156) who commented that the "output of grammaticalization is more abstract than its input." Inevitability of abstraction in grammaticalization is seen in the claim of Heine et al. (1991a: 214) who viewed abstraction as a unidirectional process in grammaticalization.

Heine et al. (1991a: 43ff; 1991b: 156ff) propose three types of abstraction: generalizing abstraction, isolating abstraction, and metaphorical abstraction. Considering that the temporal notions are more abstract than the spatial notions, the following examples (and numerous other cases) in Korean exhibit the abstraction process.

(17)a. -eyse: spatial > temporal

*cip-eyse* 'from home' > *10-seyki-eyse* 'from the 10th century'

b. *-pwuthe*: spatial > temporal

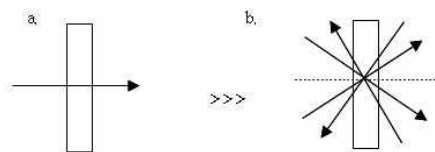
*Seoul-pwuthe* 'from Seoul' > *achim-pwuthe* 'from morning'

## 2.15 Schematicization

Schematicization has been discussed in Sweetser (1988), Rubba (1990), Langacker (1992), inter alia. It refers to a process whereby a schematic structure is applied to previously non-schematic entities and events. Rubba (1990) comments that "by applying, in everyday usage, a more concrete concept (A) across a large number of contexts (C), individual differences are backgrounded and similarities are foregrounded, the result being a schema (B) that represents an 'idealization' of that concept." By schematicization, Langacker (1992, as cited in Lessau 1994: 758) refers to the cognitive ability to conceive of a situation at varying levels of abstraction. This is one of the approaches that attempt to account for context-induced reinterpretation, as proposed by Heine et al. (1991).

The schematicization process is well illustrated by English preposition or adverb *across*. From a series of its semantic development it can now apply to a set of spatial configurations that do not depend on exact metric properties such as shape, size, and distance. It depends on the global properties and configuration of the thing doing the crossing and the thing crossed (Tversky & Lee 1998: 158). Likewise, Chung (2003) shows that English *across* at the beginning made reference to 'crossing' of two entities in an alignment of ninety degrees. However, the angular specification is loosened and any type of traversing event became compatible with *across*, as shown in (18) (Chung 2003: 269).

(18)



## 2.16 Perspectivization

Perspectivization is a process whereby the language user's perspective is applied to a linguistic form, or more broadly, a process whereby the language user adopts particular perspective in using a linguistic form. Thus, Taylor (1989: 90) notes that different uses of a linguistic form tend to highlight different components or senses of that form, a process that gradually shades into metonymic extension. It is thought that perspectivization is largely responsible for context-induced reinterpretation.

The path of semantic development taken by English preposition *with* is an excellent example of perspectivization. According to Rhee (2004), English *with* has gone through intriguing semantic change as summarized in (19) and (20).

### (19) English *with*

- a. OE *wi*: opposition (cf. *at war with*, *compete with*, *go to law with*)  
proximity/towardness (cf. *be frank with*, *lose temper with*)  
reciprocity (cf. *communicate with*)
- b. ME *with*: association/instrumentality (cf. *with a hammer*, *with silence*)  
agentivity (cf. *inhabited with*)
- c. MoE *with*: accompaniment (cf. *go with a friend*)

- (20) OPPOSITION > RECIPROCITY > ASSOCIATION > ACCOMPANIMENT  
COMBINATION  
ATTENDANT CIRCUMSTANCE  
INSTRUMENTALITY > AGENT

Different uses of the same linguistic form *with* can be attributed to the use of different perspectives (cf. Rhee 2004 for detail in conceptual motivation).

## 2.17 Prototype Extension

Prototype extension refers to the semantic extension pattern based on the prototype of the linguistic form concerned. In this process the prototype functions as a focus from which the other meanings can be derived by extension. The extensions from the focus coincide with possible semantic changes (Aijmer 1985: 12). According to Givón (1989), prototype extension is the most general principle of categorization in human perception, cognition and language, and the extension of the prototype is enabled by the fact that the periphery of the categories is not clear-cut but fuzzy.

The semantic extension pattern of English auxiliary *will* illustrates prototype extension. English *will* was originally a verb of volition, and thus could be used only with human subjects, which are sentient and have the conative faculty. However, this prototypical volitionhood is extended to non-human subjects, and even to expletive subjects. This extension was possible just because the notion of volition has non-discrete boundaries with its closely associated notions such as habit, capacity, disposition and futurity (cf. Aijmer 1985: 19 for more detail).

## 2.18 Frame-of-Focus Variation

Frame-of-focus variation, as suggested by Rhee (1996, 2000), refers to a conceptual manipulation of an image or event schema by way of modifying the size of the focus frame in viewing. Also espoused in the studies of Baik (2006), K. Ahn (2007), and M. Ahn (2009), this mechanism is known to account for the linguistic puzzle of antonymization phenomena effectively. For instance, there are numerous cases that show association-dissociation ambiguity across languages, as shown by English example of *out of* in (21) (taken from Rhee 1996).

- (21) a. It was out of my intention. : with intention; intentionally  
 b. I asked out of curiosity. : with curiosity  
 c. His behavior was out of decorum. : without decorum  
 d. Fish cannot live out of water. : without/outside water  
 e. We are out of milk. : without milk



The same point can be made with Chinese *gen* which has many different meanings including 'heel, follow, Allative (to), Comitative (with), existential, Conjunction (and), and Ablative (from)', where Allative and Ablative are in a clear antonymic relation. The Korean postpositional particle *-pwuthe* also serves as an example, as it originated from a verb of adhesion to a postposition of separation, i.e. ablative. Rhee (2004) proposes a progression of [motion toward x > with x > from x] in this process. All these differences arise from the microscopic vs. telescopic focus frame being used in conceptualization of the two entities involved in the schema.

### 3. Discussion

Thus far we have extensively reviewed the semantic change mechanisms individually. An exploration of the relationships that exist among these mechanisms is in order. We will first discuss the compatibility issue and the subsumption issue. We will proceed to an exploration of the network created by the notions, which will be followed by a discussion of criteria for semantic change mechanisms. By applying these criteria a new hierarchical typology will be proposed.

#### 3.1 Compatibility Issue

Among the mechanisms discussed in the preceding sections, some of them are apparently in incompatible relationship. Among such opposite relations are metaphor and metonymy, and enrichment and bleaching.

##### 3.1.1 Metaphor vs. Metonymy

The first issue relates to the opposition of metaphor and metonymy. It is clear from the definition of each notion that metaphor and metonymy are largely antonymous, for the former occurs across domains while the latter typically occurs within a single domain. In other words, metaphorical change proceeds with conspicuous leaps ('jumps'), whereas metonymic change proceeds in unnoticeable small-steps. However, it is also true that there are areas where metaphor and

metonymy are not sharply distinguishable, suggesting that they are not mutually exclusive.

There are two aspects involved in this puzzle. First of all, the apparent incompatibility results from the crossing and non-crossing of domain boundaries. However, the boundaries cannot be effectively drawn because the fine-grained the domain classification is purely a matter of theoretical convenience. For instance, in their now-classic expository work of grammaticalization, Heine et al. (1991) proposed a continuum of ontological domains that can be summarized as in (22).

(22) PERSON > OBJECT > PROCESS > SPACE > TIME > QUALITY

It is clear that these are not sufficiently fine-grained in discussion of semantic domains. However, modern linguistic scholarship is not equipped with an unequivocal inventory or hierarchical structure of domains. For instance, the semantics of English prepositions typically involves transition among Location, Direction and Motion. However, it is not clear if the changes of [Location > Direction] and [Direction > Motion] involve domain change or not. Location, Direction and Motion may be interpreted as being in the same domain of SPACE. However, they may be in different domains as Location in the domain of STATIC PHYSICAL SPACE, Direction in the RELATIONAL PHYSICAL SPACE domain, and Motion in the DYNAMIC PHYSICAL SPACE domain.

The second aspect involves the macro- vs. micro-structure of change events. Heine et al. (1991) proposed a model of semantic change that can incorporate the two seemingly contradictory, yet both empirically attested, mechanisms of metaphor and metonymy. The model suggests that in the micro-structure, the semantic change occurs in small steps, i.e. via metonymy, motivated by context-induced reinterpretation, whereas in the macro-structure, due to the integral accumulation of the small steps, the change seems to have crossed the domain boundaries. This model emphasizes the role of metonymic conceptual change, because what may seem to be a result of metaphorization is nothing but an effect of the temporal lapse or of series of contiguous conceptual shift, i.e. metonymization. Therefore, in this model, metaphor is

an accumulated metonymy (cf. 2.2 for a discussion of reinterpretation).

### 3.1.2 Enrichment vs. Bleaching

The second issue involves enrichment and bleaching. The concept of enrichment is found in such names as 'semanticization,' 'conventionalization,' 'absorption' etc. which contrast with the concept of bleaching with such alias as 'desemanticization,' 'loss,' 'reduction,' 'generalization' etc.

A traditional view of semantic change associated with grammaticalization is largely one that support the bleaching view, largely due to the loss of concrete lexical meaning of the source en route to the emergence of grammatical forms in the target domain.

Viewed slightly differently from this perspective, where the source and the target are directly compared and the levels of richness of the meanings are respectively contrasted, Rhee (1996) looks at the internal semantic 'structure' of the two opposing poles and characterizes the process as the loss of semantic components, semantic features, or semantic specificities. The loss of semantic features actually emancipates the linguistic form from its formerly restricted semantic domain and helps it to acquire new meanings in a different domain. In this process the linguistic form has a larger number of semantic designations, which is commonly observed in semantically-bleached, semantically-general words. In other words, increase mechanisms are related to individual semantic designations, and decrease mechanisms are related to semantic components/domains. Thus, according to Rhee (1996), semantic bleaching is in a sense semantic gain or semantic generalization. From this view, semantic enrichment, ironically, is a result of semantic bleaching, and vice versa. The contradicting concepts, therefore, are a matter of nomenclature of the two sides of a same coin.<sup>1)</sup>

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1) Note, however, that Rhee (1996) suggests that not all instances of semanticization are instances of semantic bleaching. Among such exceptional cases are the acquisition of speaker's viewpoints such as undesirability, contempt, etc. In these processes there is no loss of semantic components, and the new meanings are introduced through pragmatic inferencing.

### 3.2 Subsumption Issue

The other issue relates to subsumption relations among the mechanisms. Since diverse mechanisms are proposed and each notion is of different size and of different conceptual hierarchy, it should be fruitful to investigate the super-ordinate and sub-ordinate relations among them. As a preliminary of the investigation each mechanism can be characterized as follows:

Inference, or pragmatic inference, in particular, is a comprehensive concept. Since everything in a speech situation may be pragmatic in nature and everything in a speech situation may be a result of inferential reasoning, practically all mechanisms should be placed under the notion of pragmatic inference. If viewed more narrowly, pragmatic inference is largely a metonymic process, because pragmatic inference operates in a given context of a speech situation, making use of available information based on the relevance of the information to the given situation. However, the other aspect of pragmatic inference is that it does not have to be always metonymic, because pragmatic inferencing does not have to be constrained within a particular ontological domain. For instance, the mechanism that makes an appropriate connection based on similarity between two ontological domains, say, PERSON and PLANT from a metaphorical statement 'My girlfriend is a rose,' is pragmatic inference. Therefore, pragmatic inference encompasses all discourse-based mechanisms including metaphor (or metaphorization) and metonymy (or metonymization).

Enrichment is a description of meaning addition through pragmatic inferences, and therefore, it is either equal or subordinate to pragmatic inference. In this aspect, the process is metonymic in nature. However, enrichment may also occur through metaphorical extension, which enables the form to cross the domain boundary. In this sense, enrichment is metaphorical in nature.

Bleaching is a description of meaning loss (=generalization). The reductive process may result from metaphor or metonymy. Since enrichment and bleaching are inseparable (cf. 3.1.2), bleaching can be either metaphorical or metonymic.

Merger describes the emergence of new meaning from combination of semantics of two or more forms. This process can come about through metaphor or metonymy.

Abstraction is a description of semantic change from domain change. Since it involves domain change by definition, it is metaphorical in nature.

Schematization is a description of categorization. It involves two aspects: formation of a schema from an existing events or states, and application of the schema to previously non-schematic events or states. These two aspects need to be separated, because they seem to employ different conceptual strategies. In terms of forming a schema, it is abstracting the structure of an already existing events or states, therefore, it is invariably in the part-whole metonymic relations.<sup>2)</sup> In terms of applying a schema, it is the act of finding a similarity between the source and the target, and thus it is definitively metaphorical. In sum, schematization is based on metonymy or metaphor.

Perspectivization is a description of specialization. It is highlighting certain components or senses of a word leading to metonymic extension. Therefore, perspectivization is based on the part-whole metonymic relations.

Prototype extension is a description of the increase in semantic domains. Prototype extension occurs at the fuzzy periphery of the prototype domain, the extension is enabled by the contiguity relation. Prototype extension is metonymic in nature.

Frame-of-focus variation is a selective decision on specific aspects of schemata. Insofar as it involves highlighting certain aspects of an entity it resembles perspectivization, even though there is a crucial difference in that frame-of-focus variation operates on a schema whereas perspectivization is largely a matter of a sense of a word. Likewise, as long as frame-of-focus makes reference to certain local aspects schema, it resembles the notion of 'active zone' as proposed by Langacker (1984, 1991). However, it is different from the latter in that frame-of-focus variation is a dynamic operation, whereby the frame size can be manipulated to be either telescopic or microscopic. The relational configuration formed by the entities in the schema varies depending on this variational operation. However, as long as it involves the part-whole relationship on a schema, frame-of-focus variation can also be said to

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2) The part-whole relationship is called 'synecdoche' in a more fine-grained terminology of figure of speech. However, since synecdoche is also based on the contiguity relation, metonymy is used to subsume synecdoche here.

be metonymic in nature.

Reinterpretation operates in, and is induced by, the context the speech is situated. Even though it does not preclude crossing an ontological domain boundaries, the shift from the previous to the next stages is based on contiguity relationship, and is thus metonymic.

Analogy is a problem-solving strategy of finding a comparable form from what is available now. The comparability here is basically a matter of similarity, and thus analogy is metaphorical in nature.

Generalization occurs through the enlarging of use context. This enlarging event may typically involve releasing a form from its previous domain it was confined to. This, then, is a metaphorical operation. On the other hand, the extension may occur at the boundary of a domain based on similarities. Therefore, generalization may be a metonymic operation as well.

Harmony and absorption may involve syntagmatic relationship as well as paradigmatic relationship. The relationship may be more of physical contiguity on a string of linguistic symbols, or more of conceptual contiguity within a paradigm. Either case they are motivated by the contiguity, and therefore, both mechanisms may be said to be metonymic in nature.

Subjectification is a process that changes the meaning to be more subjective, typically based on the speech situation. Even though subjectification may involve as a result the change of semantic domains from more concrete to more abstract ones, thus resembling abstraction and metaphORIZATION, it may be metonymically motivated primarily, because the process itself may be based on relevance, or conceptual contiguity.

Likewise, intersubjectification may be motivated by metonymy since it is anchored to a particular speech situation where the speaker considers the interpersonal relationship with the addressee. Therefore, intersubjectification is also a metonymic process.

### 3.3 Inside Metaphor and Metonymy

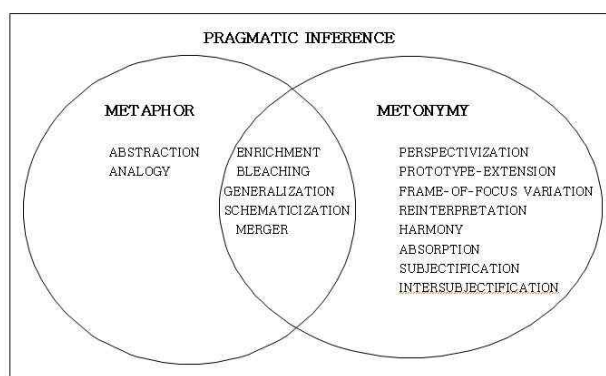
One notable aspect of metaphor and metonymy is that since they are comprehensive cover terms, they have complex internal structures. For instance, metaphor may have different aspects as to where the cross-over or 'leap' lies. If the conceptual crossing involves semantic domains, it may be typically realized as abstraction. If it involves use contexts, it may result in generalization.

Likewise, the contiguity relation central to metonymy may be of diverse types. For instance, if it is of conceptual contiguity, many mechanisms may belong to metonymy, such as bleaching, generalization, abstraction, inference, enrichment, perspectivization, split, reinterpretation, subjectification, intersubjectification, schematization, and frame-of-focus variation. If it involves syntagmatic contiguity, absorption and merger may be within this domain. Further, if it involves paradigmatic contiguity, harmony and reinterpretation may come into this subcategory of metonymy.

### 3.3 Network of Mechanisms

Based on the discussion in the preceding section, mechanisms may be classified in the two superordinate categories of mechanisms, i.e. metaphor and metonymy, which, in turn, are placed under pragmatic inference. These notions of mechanisms in fact form networks as in (23).

(23) Conceptual Network of Mechanisms



### 3.4 The Notion of 'Mechanism' Revisited

The notion of 'mechanism' needs to be refined if it should have the explanatory power to capture how semantic change occurs in grammaticalization. In order to qualify as a semantic change mechanism, the candidate, it is proposed here, needs to qualify the following requirements.

- (24) (i) It should refer to semantic change (contra functional or formal change).
- (ii) It should refer to what language users do (contra description of state).
- (iii) It should refer to a process that can be reasonably generalized (contra too local or too global).

From the first requirement that the mechanism should make reference to semantic change, other changes such as analogy (and specialization, split, etc.) get eliminated, because they refer to functional or formal change.

From the second requirement that the mechanism should refer to what language users 'do', though not with conscious effort, such notions as bleaching, absorption, merger, etc. (probably generalization as well) are excluded, because they 'describe' the states of affairs, not 'bring about' them.

From the third requirement that the mechanism should refer to a process that can be reasonably generalized, such notions as generalization, harmony, abstraction, enrichment, merger, etc. are excluded, because the processes they refer to are either too local or too global.

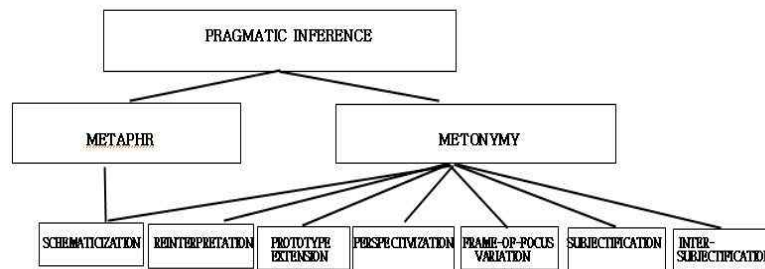
From these elimination processes the remaining 'true' semantic-change mechanisms in grammaticalization are pragmatic inference, metaphor, metonymy, schematicization, perspectivization, prototype extension, frame-of-focus variation, reinterpretation, subjectification, and intersubjectification.

### 3.5 Proposed Typology and Hierarchy



In the preceding discussion ten mechanisms were proposed to be true mechanisms that can account for semantic change in grammaticalization. These mechanisms form a hierarchy within the broad functional domain. The hierarchy may be represented diagrammatically as in the following.

(25)



#### 4. Summary and Conclusion

This paper looked into eighteen mechanisms of semantic change that had been proposed in the study of grammaticalization. Pragmatic inference is the largest cover term that includes all mechanisms. When these mechanisms were further classified into two superordinate-category mechanisms, i.e. metaphor and metonymy, it was found that as many as eight of them fell under metonymy; five of them could be cross-classified; and only two mechanisms could be properly placed under metaphor.

Further, in order to establish true semantic-change mechanisms three criteria were proposed: (i) it should refer to semantic change (contra functional or formal change); (ii) it should refer to what language users do (contra description of states of affairs); and (iii) it should refer to a process that can be reasonably generalized (contra too local or too global). When these criteria were applied to the eighteen mechanisms, a total of ten mechanisms turned out to meet the requirements. They are pragmatic inference, which is comprehensive of all the mechanisms; metaphor and metonymy, the two major cognitive strategies; and seven subordinate mechanisms such as schematization, reinterpretation, prototype extension, perspectivization, frame-of-focus variation, subjectification, and inter-subjectification.

variation, subjectification, and intersubjectification. In this hierarchical structure only schematization belongs to metaphor and metonymy simultaneously.

From this exploration of mechanisms, what surfaces as notable is that metonymy is an important mechanism that has numerous different subtypes with unique characteristics. This is counter to the widespread tendency to give primacy to metaphor and to disregard metonymy in the studies of semantic change.

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