# Grammaticalization in Derivational Morphology: Verification of the Process by Innovative Derivatives

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### **Abstract**

The present study investigates some creative aspects of derivational morphology in English and Japanese. Focusing on hapax legomena in large corpora, a strong indicator of online composition, relevant English and Japanese hapaxes are extracted from the British National Corpus and Balanced Corpus of Contemporary Written Japanese: agentive hapax nominals (e.g. eyeballer, kakeochi-sha 'one who elopes'), antiagentive hapax nominals (e.g. directee, hi-seikyuu-sha 'one who is demanded'), and hapax adjectivals (e.g. tearable, tooki-kanoo(-na) 'dumpable'). These innovations receive an in-depth analysis from morphological, semantic, and discoursive viewpoints. The BNC/BCCWJ survey indicates that (i) semantic, functional, or morphosyntactic extension, a subprocess of grammaticalization, is constantly made under contextual pressure and (ii) it is primarily motivated by context-induced recategorization.

#### 1 Introduction

While agentive and antiagentive derivatives are essentially non-deictic individual-level nominals (*employer/employee*), the *-er* derivative *secreter* in (1) functions as a deictic and stage-level nominal, which entails that 'one who concealed something treacherous at a certain point in the past.' The *-ee* derivative *packagees* in (2) signifies 'the ones who join a package tour,' but not 'the ones who are packaged into a tour'; the suffix *-ee* uncharacteristically joins to a noun and lacks a patient meaning. These words are coined on the basis of the prior utterance and are used once only in a large corpus, i.e. hapax legomena. What motivates these creative, context-sensitive grammatical shifts?

- (1) "But it looked very black against him ... He was a secreter." (BNC G3E:623)
- (2) The plane is full of young English couples ... When they land the young ones break lanes and stream off down the corridor, hustling for position. This crowd are experienced *packagees* ... (BNC HGU:2840)

The aim of the present study is to elucidate some aspects of the semantic, functional, and formal extension of complex words by analyzing the innovative English and Japanese agentive/antiagentive nominals and deverbal adjectivals extracted from two large corpora, the British National Corpus (BNC) and Balanced Corpus of Contemporary Written Japanese (BCCWJ). After outlining the theoretical background (§2), we show three types of expansion of agentive/antiagentive nominals and deverbal adjectivals (§3) and explore their theoretical implications for grammaticalization (§4).

## 2 Theoretical Background

Bolinger (1972) shows that an intensifier such as *truly* is derived context-basedly from the corresponding "truth identifier" by grammatical shift. We can see in example (3) that the adverb *truly* shifts its function from a truth identifier in (3a), which refers to the truth of the whole sentence, to an intensifier of the adjacent adjective in (3b). Note that a truth identifier may not appear within a noun

phrase. The prime motive of this grammatical shift is contextual "reinterpretation"—to reinterpret an expression not as a modifier of a phrase but as a modifier of its subphrase.

(3) a. He is *truly* a foolish person. (truth identifier)
b. He is a *truly* foolish person. (intensifier)
(Bolinger, 1972:94)

Moreover, Clark and Clark (1979) discuss how a verb is innovatively zero-derived from a noun which is highly salient in a relevant verb phrase. In example (4), a novel verb is innovated in a context requiring the speaker's and hearer's mutual knowledge: Max has a queer habit of rubbing the back of a leg with a teapot. Conversion is thus crucially linked to contextual recategorization.

(4) Max tried to teapot a policeman.

(Clark and Clark, 1979:786)

Thus, an adverb or noun undergoes a contextual operation to induce the expansion of its meaning, function, and occurrence environment. This approach to linguistic potential forms the theoretical basis of this study.

# 3 Three Major Classes of Grammatical Expansion

Contextual operations can promote the semantico-functional and formal extension of a word formation device as well as the related extension of an existing derivative. To obtain a proof of such a creative facet of word formation, it is vital to examine hapax legomena, since hapaxes, words which occur only once in a large corpus, can be a reliable barometer of lexical inventions (Baayen and Renouf, 1996; Jackendoff, 1997:131-133). Our target expressions are mainly extracted from BNC and BCCWJ; we have obtained 643 hapaxes of the suffix -er, 400 hapaxes of the Japanese counterpart (-sha), 83 word types of the suffix -ee including 17 hapaxes, and 54 word types of the Japanese equivalent (hi-VN-sha) including 12 hapaxes. The English nominal suffixes -er and -ee have been widely observed in the literature from a descriptive perspective: Jespersen, 1949; Marchand, 1969; Quirk et al., 1985. There are numerous treatments of the personal nominals in the generative literature, including Levin and Rappaport Hovav, 1992; Lieber, 2004; Baker and Vinokurova, 2009; Barker, 1988. Although rather fragmentary observations have been made on Japanese personal nominals (Nagashima, 1982; Kageyama, 1993), there has been no systematic analysis of them.

#### 3.1 Semantic Extension

In the examples in (5) we can see contextual semantic extension. With an aid of contextual force, the suffix -er comes to stand for 'instrument' (image-blocker) as in (5a). Scalise (1984:45) points out that -ee normally affixes to verbs which allow animate objects, and hence \*tearee is ill-formed. However, the patient nominal selectees as well as selectors in (5b) imply non-human entities. The expansion to inanimate denotation of selectees is promoted by the prior antonymous expression (selectors). Interestingly, the contrast of selectee 'something that is selected' and \*tearee 'something that is torn' provides some evidence for the progression from animate noun to inanimate noun.

- (5) a. ... the camera will not contain so much an image as an *image-blocker*, ie a mask or matte that blocks out part of the image behind it. (BNC FB8:241)
  - b. <u>Selectors</u> may generally be identified by the fact that they presuppose one or more semantic traits of their *selectees*. (BNC FAC:1990)

The second case is the shift of the antiagentive suffix *-ee* to an agentive marker. Barker (1998:717) points out that *-ee* nouns entail the lack of volitional control over the relevant event. In example (6), the persons concerned merely attend a meeting. To emphasize the lack of volition, the typical agentive

<sup>&</sup>lt;sup>1</sup>Hay (2003:79-81) refers to a number of psycholinguistic experiments which have shown that while complex words with high frequency are permanently stored in the mental lexicon, complex words with ultra-low frequencies of occurrence are generally composed by word-formation rules; the former type of words are retrieved from the lexicon without being accessed via formation rules (a memory-based procedure), whereas the latter follows a rule-based access procedure.

noun attenders or attendants is replaced with the -ee noun attendees.

(6) Some 30 <u>named</u> attendees heard a long and detailed speech from the Mayor in which ... (BNC AMY:144)

## 3.2 Functional Expansion

-Er derivatives usually express non-transitory properties of individuals (Baker and Vinokurova, 2009:531). Fiengo (1974:44) adduces good examples to show this: contrast *Jon is a* cheese-eater 'one who (habitually) eats cheese' and '*John was a* cheese-eater *once yesterday*. They may shift to stage-level nominals, though. For example, the agentive noun *inscriber* in (7) has a stage-level property, signifying 'one who inscribed the names at one point in time.' This novel word is directly derived from the prior verb phrase *engrave our names in big letters upon the sand*. Discourse-dependent functional extension can also be seen in the formation of *signee* in (8). It is noteworthy that the definition of the term in the *Oxford English Dictionary* (2<sup>nd</sup> ed.) (OED) is 'one who *has signed* a contract or register.'

- (7) We were on a beach, and someone—probably me in my cheerleader mode—suggested we <u>engrave</u> our names in big letters upon the sand, then one of us would mount the promenade and photograph inscription plus *inscriber*. (BNC EDJ:913)
- (8) But on forty one minutes it was Milton who took the lead as <u>new signee</u> from A E R Harwell ... (BNC KS7:428)

Secondly, as seen in (9), the deictic formation of an agentive is possible: the transient name *time-teller* is given to an entity (clock) which exists in the situation concerned. Recall that *time-teller* 'one which/who *habitually* tells time' is not generally accepted. Similarly, as evidenced in (10), the patient derivative *honorees* can be correctly used only when it refers to the participants in the situation of utterance.

- (9) It lacks but ten minutes to eight of the clock ... With an oath the Weasel hurled the *time-teller* far out into the heather ... (BNC HA3:1724)
- (10) "I feel very elated and <u>honored</u>," said Matlin, who is deaf. "I'm going to scream later." There was another unusual double among the *honorees*: ... (*Time*, February 23, 1987, p. 23)

### 3.3 Morphosyntactic Extension

As is commonly known, the agentive suffix -er essentially attaches to a verb or noun, and the antiagentive suffix -ee principally joins to a verb. In certain contexts, however, these suffixes can be added to other lexical categories. Barker (1998:716) points out that -ee is suffixed to nonverbal bases (giftee 'one who receives a gift'), suggesting the categorial extension of its base. Furthermore, the base of -er is categorially extended to adjective as in (11), where depending on the preceding predicate adjectival up to no good, the same adjectival is incorporated into an -er word. Consequently, the property of an entity is conceptualized in a lexical form.

(11) "I have decided you are <u>up to no good</u>. ... But I prefer you to be <u>up to no good</u> in London. Which is more used to *up-to-no-gooders*." (John Fowles, *The French Lieutenant's Woman*, p. 91)

Secondly, while word formation rules in general refer to no phrasal categories (\*[N[large bank] er]), a relatively "small" phrase may be incorporated into a word, often under the conditions of contextual connection. In (12), the human description which is deducible from the prior text ("one who writes on one subject") is encapsulated into the momentarily constituted form *one-subject writer*.

(12) ... South African Author Nadine Gordimer, 60, has emerged as the most influential home-grown critic of her country's repressive racial policies. ... Nor is Gordimer a *one-subject writer*. (*Time*,

July 23, 1984, p. 54)

And finally, Roeper (1987:295) comments as follows: -er takes only an [AG, TH] thematic grid in which the Theme role can be implicit; that is why \*an intender to play baseball is unacceptable, whose underlying verb takes an [AG, PROP] thematic grid. As shown in (13), however, the -er noun tempter may take a sentential complement in a proper context. Accordingly, -er undergoes recategorization so as to take the Proposition role. It can therefore be seen that nominalizers may context-dependently extend the inheritable complements of their bases as well as the categorial kind and size of them.<sup>2</sup>

(13) The Sun went to more extreme lengths in their massive coverage, <u>photographing Fairley's</u> present wife under the caption "Georgina ... sought psychiatric help" ... Directly underneath was the tempter to move on to the special four-page pull-out section ... (BNC CS1:1181)

# 3.4 Grammatical Expansion in Japanese

Contextual extension of personal nominals are recognized in Japanese as well. Let us first discuss it from a functional perspective. Stage-level agentive nominals can be seen in Japanese, as exemplified in passage (14).

(14) ... sono futatsu-o ketsugoo suru mono-ga arawareru made Tokyo-wa the two-Acc connection do person-Nom appear until Tokyo-Top toki-o matte ita. Sono ketsugoo-sha-ga Tokugawa Ieyasu dearu. time-Acc wait Past-Prog the connection-er-Nom be 'Tokyo was waiting the day when one who would connect the two things would appear. The connecter was Tokugawa Ieyasu.' (BCCWJ)

Here, linked to the antecedent phrase *sono futatsu-o ketsugoo suru mono*, the stage-level nominal *ketsugoo-sha* 'one who would connect (the two things) at a certain time in the past' is succinctly created as a thematic pro-form. It is thus recognized that contextually conditioned recategorization serves to facilitate the functional extension of a nominalizer.

Let us now turn to morphosyntactic extension. While Japanese antiagentive nouns are normally constructed by affixation of "hi-...-sha" to verbal nouns (VNs) (hi-koyoo-sha 'Passive-employmenter'), the base of the affix categorially spreads to non-VN, as exemplified by hi-hoken-sha 'Passive-insurance-er (=one who is insured).' Additionally, the base of the suffix -sha is categorially expanded to (compound) adjective, as in choosa-funoo-sha 'investigation-impossible-er' (=one who is uninvestigable). Furthermore, phrase-incorporation can be observed in Japanese as well, as demonstrated in (15). An agentive name is given to a useful concept in the context of auction; the italicized agentive sono jiten-sha 'the timer' contains the phrase sono jiten 'the time.' Here, as elsewhere, contextual categorization is commonly accompanied by the morphosyntactic extension of a nominalizing suffix.

(15) Ookushon-wa subete taimingu desu. ... Sono-jiten-sha igai daremo auction-Top all timing be the-time-er except anybody nyuusatsu nai-mama kekkyoku owa-tta ... bid not eventually end-Past 'Timing is the most important aspect of an auction. ... Nobody except the timer eventually bid at the auction ...' (BCCWJ)

### 3.5 A Difference in Semantic Expansion between English and Japanese

There is a crucial difference between English and Japanese: relevant semantic extension is likely to occur in English, whereas it is unlikely to take place in Japanese. Let us first consider the expansion

<sup>&</sup>lt;sup>2</sup>Some of the complex words which are only temporarily acceptable in particular circumstances make their way into the lexicon; they may become institutionalized when they can be seen as useful enough to serve as "labels," i.e. as a basis for conceptualization. Since the conventionalized words no longer need contextual clues, it may be difficult to decide whether they are context-induced or not (cf. Morita, 1995:471).

<sup>&</sup>lt;sup>3</sup>VN has a predicate function with argument structure and is accompanied by the light verb *suru* 'do' when used as a verb.

to impersonal denotation of agentive suffixes. The agentive hapaxes detected in BNC and BCCWJ are classified on the basis of their forms (derived words vs. compounds) and meanings (person-denoting vs. non-person-denoting), as displayed in Table 1.

English [+personal] [-personal]	derived words 130 12	compounds 411 90	Total 541 (84.1%) 102 (15.9%)
Japanese [+personal]	123	276	399 (99.7%)
[-personal]	0	1	1 (0.3%)

Table 1: Classification of agentive hapaxes in BNC/BCCWJ

Table 1 shows that English impersonal *-er* nouns (e.g. *weight-reducer*) are often created, while Japanese counterparts are rarely constructed; in English the number of inanimate agentive hapaxes comprises 15.9% of the whole agentive hapaxes, but it comprises only 0.3% of them in Japanese. Secondly, an antiagentive noun never shifts to an agentive in Japanese; unlike English patient derivatives, a *hi-VN-sha* 'V-ee' derivative is never found (in BCCWJ) extended to become an agentive (cf. \**hi-kikan-sha* 'returnee').

We are now in the position to consider why we rarely see the comparable semantic expansion in Japanese. The Japanese agentive suffix -sha has the corresponding content word mono. They share the same ideographic (Chinese) character 者, meaning 'person'; this written form functions as a suffix when it is pronounced in a pseudo-Chinese manner (called onyomi), [ʃə], while it principally functions as an independent word when pronounced in a Japanese manner (called kunyomi), [mɔnɔ]. The suffix -sha is naturally developed from the cognate synonymous word mono. By the same token, the prefix hi-, pronounced in a pseudo-Chinese fashion, originally stems from the cognate synonym koomuru, which is pronounced in a Japanese fashion and means 'to suffer the action.' From the above observations, the lack of semantic expansion in Japanese is deducible from the fact that the Japanese affixes -sha and hi-, derived from Sino-Japanese words, continue to retain their original meanings ('person/be V-ed').

## 3.6 Deverbal Adjectivization

The preceding sections have been concerned with the extension processes of "personal nominalization." In this section, we will show that the same applies to deverbal adjectivization: *-able* derivation and its Japanese counterpart (*-kanoo* derivation). The data samples used for this section are extracted from BNC and BCCWJ; we have gained 595 word types in *-able* including 203 hapaxes and 271 word types in *-kanoo* including 50 hapaxes.

Let us first consider the semantic extension of *-able* adjectivization. *-Able* generally makes an adjective with a mixture of passive and 'ability' senses, 'can be V-ed.' (Quirk et al, 1985:1555). To obtain a proof of this general tendency, we have conducted a close inspection of the meanings of 203 *-able* hapaxes. Our BNC survey indicates that among the four submeanings of *-able*—(a) 'can be V-ed,' (b) 'should be V-ed,' (c) 'apt to,' and (d) 'suitable for'—the number of hapaxes with submeaning (a) accounts for 81% of the whole hapaxes recorded, entailing its dominance over rival senses. Examples (16)-(18) illustrate how the core or prototypical meaning is related to the peripheral meaning of (d).

- (16) a. Knights too were <u>readily</u> *identifiable* ... (BNC CTW:54) b. It has cushion covers that are <u>easily</u> *removable* for dry cleaning ... (BNC A70:1804)
- (17) a. The resulting straight thin poles were <u>readily</u> *saleable*. (BNC F9H:1619) b. a <u>very</u> *saleable* product (BNC CS5:596)/ <u>very</u> *collectable* coins (BNC G2Y:629)
- (18) a. The Thames at Abingdon was barely *fishable* ... (BNC A6R:1594) b. Scientists then set a goal: *fishable*, *swimmable* water that could support existing biota ... (BNC B7L:669)

Derivatives ending in -able often occur with 'facility' adverbs such as easily and readily, as in (16a). The collocational behavior of these terms produces ambiguity, i.e., removable may be interpreted as 'can be removed' or as 'suitable for removing,' as seen in (16b). It should be noted that -able words in the latter sense are no longer related to the passive. This submeaning becomes conventionalized to act as an independent marker of the item's suitability for selling or collecting, as indicated in the examples of (17), where it fits well with the intensifier very. Since -able undergoes recategorization so as to convey an active import, a Locative subject and unergative verb can be involved in -able constructions, as (18) illustrates.

The second case of semantic extension is exemplified in discourse (19):

(19) As a piece of treasure of considerable historical importance, the Wolvercote Tongue was of course <u>beyond price</u>. In itself, however, as an artefact set with precious stones, it was, let us say, "priceable" ... (BNC HWM:3054)

In Webster's Third New International Dictionary, priceable is defined as 'capable of being priced.' (It has no entry in OED.) Priceable in (19), however, denotes 'capable of being highly priced,' an intensive element being added to the original meaning. This is because the existing meaning of the word is extended to include an intensive feature on the basis of the property mentioned in the immediately preceding discourse. Priceable in quotation mark implies a special kind of meaning of the word.

Morphosyntactically, a condition of *-able* derivation may be overruled in certain circumstances. Since *-able* is essentially related to the passive, verbs which cannot be passivized may not be the bases of *-able* affixation (cf. \*The accident was *survived* by Martin/\*John is *had* by Mary) (Chapin, 1967:56-58). In examples of (20), however, *-able* is added to verbs of this kind. Here, "peculiar" *-able* words are generated online with the aids of the related words in the syntactic environments of verb-object and coordination. Accordingly, a property of the relevant subject has become fruitfully conceptualized in a single lexical form.

- (20) a. Martin <u>survived</u> an *unsurvivable* accident. (BNC A6W:586)
  - b. It kept them apart, kept them foreign to each other, him *unhaveable*, her <u>unhad</u>. (BNC A0U:893)

The external argument of *-able* words is restricted to theme argument (Williams, 1981). As (21) illustrates, *-able* constructions are possible only when the Theme is externalized:

- (21) a. Those things are promisable (theme externalized).
  - b. \*Those people are runnable (Actor externalized).
  - c. \*Those people are promisable (Goal externalized).

(Williams, 1981:93)

This syntactic constraint is relaxed in a certain limited way; as we have already seen in (18), Location argument can occur in the external position of an -able adjectival as a result of semantic extension. The same is true of example (22) below. The sentence of (22) is stated in a discourse of the row materials of boats. The relevant small clause implies 'plastic boats are much more suitable for escaping,' but not 'plastic boats can (much more) be escaped from,' with -able undergoing recategorization so as to express an active import. Here, the subject NP corresponds to the Source argument of the related base verb, with this argument being foregrounded and qualifying itself as the topic of property description. Thus semantic extension, together with the contextual pressure for foregrounding Location/Source, may help to expand the possible external argument from Theme to Location and to Source.

(22) ... the development of high molecular density polyethylene has made <u>plastic boats</u> much more *escapable* ... (BNC G27:827)

We turn next to *-kanoo* adjectivization in Japanese (e.g. *pasuwaado-wa henkoo-kanoo-da* 'password is changeable'). First, as with the case of personal nominalization, the semantic extension of *-kanoo* derivatives does not take place; for example, *henkoo-kanoo(-na)* (change-able) 'can be changed' may not be extended to mean 'apt to change.' The suffix *-kanoo* preserves the original

meaning for much the same reason as the one given for *-sha* and *hi-* nominalization; the suffix *-kanoo* shares the ideographic character 可能 'capable' with the adjectival content word *kanoo(-na)*, which helps to prevent semantic shift of the suffix.

In comparison, the morphosyntactic extension figures in -kanoo constructions. Although the suffix -kanoo generally attaches to a verbal noun (VN), it is not difficult to find examples where concrete nouns are the bases of -kanoo, as shown in (i) kaku juuko-no yuka-wa dosoku-kanoo-da (each apartment house-Gen floor-Top feet-in-(dirty-)shoes-capable-be) '(lit.) the floor of each apartment house is possible to walk on with your (dirty) shoes on' and (ii) denshirenji-kanoo-na kobachi (microwave-capable small bowl) 'microwavable small bow' (BCCWJ). Consequently, the range of possible categorial unit with which -kanoo combines is extended from a VN to an entity-denoting noun. It is noteworthy that lessening of selectional restrictions is characterized as a concomitant process typical of grammaticalization. The syntactic condition of "externalize the Theme" is generally valid for -kanoo adjectivization as well; an adjunct-related entity noun is unlikely to occur in the external position of a -kanoo predicate. There may be a case, however, where an entity noun of this kind appears in the external position concerned on the basis of contextual clues, as demonstrated in (23) and (24). Here Instrument/Means and Respect/Location arguments are highlighted as topics of characterizing predication. Notice that these arguments are externalized only if the relevant predicates are accompanied by the related adverbials.

(23) shiteiseki chiketto-wa \*(taishoo geemu nomi shiteiseki-de) kansen-kanoo-da.
reserved seat ticket-Top relevant game only reserved seat-at watch-able-be
'(lit.) The reserved seat ticket is watchable only at the reserved seat for the relevant game.'
(BCCWJ)

(BCCWJ)

(24) sono reesu-wa <sup>?</sup>(juubun) gyakuten-kanoo-da. the race-Top sufficiently reverse-able-be '(lit.) The race is sufficiently reversible.'

## 4 Implications for Grammaticalization

The phenomena discussed in §3 naturally conform to the system of grammaticalization. Grammaticalization is traditionally defined as "the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status" (Heine et al., 1991a:3). Here we define it simply as extending the grammatical functions of a morpheme. Its primary means is to expand the use of existing forms for categorizing new concepts (Heine et al., 1991a:27; Lichtenberk, 1991:476). We will first illustrate semantic extension with English -er and -ee derivatives. The deverbal suffix -er chiefly attaches to action verbs (Marchand, 1969:273) and intransitive -er derivatives such as runner and stander typically involve the components of humanity, volitionality, and action (cf. "Ann stands in a nightgown"). It may happen that the feature [+volitional] turns into a central property in a certain context, that is, it is foregrounded, and additionally the feature [+human] is downgraded in prominence. Then it becomes possible to use an -er derivative for conceptualizing this situation, with the consequence that the word stander is recategorized, as exemplified in (25). In this case, the -er noun no longer refers to an entity but to a volitional activity (standing ovation). <sup>4</sup>

(25) He received 56 bouts of <u>applause</u>, including the interminable *standers*. (*The Guardian*, October 11, 1997, p. 10)

Similarly, the suffix -ee comes to stand for "agent.' Discourse (26) exemplifies the situation in

<sup>4</sup>Two main functions of morphological operations are recognizable: (i) to give a label or name to a useful category (labeling) and (ii) "to use morphologically related words of different syntactic categories," e.g. nominalization (syntactic recategorization), and these functions are not mutually exclusive (Kastovsky, 1986:594-596; Booij, 2005:13-14). All of the hapax nominals and adjectivals in this article are a case of labeling. Moreover, our central claim—contextual grammaticalization— accounts for a much wider range of phenomena, including syntactic recategorization; contextual grammaticalization may have direct connection to what is uttered in its preceding clauses and what an addresser assumes is known to the addressee.

which volitionality among the agentive features is lost and [-volitional] becomes a new focal feature. Then the suffix *-ee*, endowed with this feature, may be invoked for labeling this situation, leading to the coinage of *standee*. Moreover, this type of agentives may be impersonal as seen in (27), where the word *standees* is recategorized as denoting an unvolitional non-human entity.

- (26) On a bus from Northallerton to Thirsk yesterday a sign stated that the vehicle could hold <u>24</u> seated passengers and six *standees*. (BNC K55:6600)
- (27) "You know those life-size <u>cardboard figures that stand around</u> in video shops to advertise films?" she said. "They are called *standees*." (*The Independent*, April 15, 2004, p. 29)

The processes observed in (25) and (27) involve a conceptual transfer from the domain of animate beings to that of inanimate concepts, a specific aspect of grammaticalization (Heine et al., 1991b:151, 157). The grammatical extension of *-er/-ee*—from an agentive to a processual marker or from a patient to an agentive marker—is thus the result of context-induced recategorization. Table 2 presents a flow chart of the grammaticalization process described above.

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semantic extension of -ee: 'patient' \rightarrow 'agent' \rightarrow 'non-human entity' e.g. standee grammaticalization of -ee: -ee_1 \rightarrow -ee_2 \rightarrow -ee_3 a) agent-maker b) marker of non-human entity
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Table 2: On the relation between the semantic extension and grammaticalization of -ee

The functional extension of agentive/patient affixes also goes along with grammaticalization. Discourse (28) clearly illustrates grammaticalization motivated by contextual recategorization.

(28) ... it's the fact that when we tell people the truth, we do so by getting them to believe what we believe. But why do we do that? Why, for a start, do we want to be *tellees*, i.e. to adopt other people's beliefs? (BNC FBD:757)

The -ee derivative tellees in (28) denotes a complex entity of the patient which contains a proposition: 'one who adopts the speaker's belief when it is told.' This deictic, stage-level nominal implies 'one who is told to,' with the propositional complement of the base verb tell being contextually recovered. Significantly, the suffix extends its function from a mere nominalizer of simple verb to the nominalizer which combines with a larger conceptual unit in a discourse so as to give a label to a relevant entity. The "functional" grammaticalization of -ee is depicted in Table 3.

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-ee₁ → -ee₂ e.g. honoree in (10) → -ee₃ e.g. tellee in (28)
a) marker of deictic, stage-level feature
b) function of giving a label to a larger conceptual unit in a discourse
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Table 3: "Functional" grammaticalization of -ee

The same argument applies to the functional extension of the agentive nominal *inscriber* in example (7) as well as the antiagentive nominal *packagees* in (2) above.

As shown in (11), (12), (15), and (2) above, an established notion is temporarily formed for an addresser and the addressee at a particular time and the whole notion is categorized by encoding a prominent part of the notion. It is a personal nominalizer that plays a critical role in carrying out this function. The nominalizers at issue generally join to single words belonging to certain categories in accordance with the relevant morphological conditions. Yet, they may be added to categories different from the specified ones; -ee is suffixed to noun (packagees in (2)), -er is affixed to adjectival (up-to-no-gooder in (11)), and -sha is combined with non-VN (sono-jiten-sha in (15)). Moreover, the agentive suffixes -er and -sha may incorporate a phrase, as illustrated in (11), (12), and (15), resulting in morphosyntactic extension.

#### 5 Conclusion

On the basis of close analysis of the spontaneous coinages discerned in large corpora, we have revealed some facets of the semantic, functional, and formal extension of English and Japanese agentive/antiagentive nominals and 'capable' adjectivals. We have then provided a unified account of them from the perspective of grammaticalization. Hopefully, the present study will shed new light on the origin of morphological potentialities. The refinement of extension conditions and the diachronic verification of grammatical expansion await further investigation.

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