

Morphological Study and Its Implications for Language Education

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1. Introduction

Previous studies on derivational morphology have revealed a set of rules and principles involved in the morphological mechanism. These rules and principles can be expected to apply directly to the first- and second-language education. The aim of the present study is to show that morphological research is closely related to language education. Specifically, we will elucidate creative and functional aspects of word formation (WF) and its principles/constraints, focusing on the process of English nominalization (§2). Then we propose that the findings contribute to improvement in quality of language education (§3).

2. Properties of Nominalization

2.1. Creativity of Nominalization

We can create and understand complex words which have not been encountered before. Such innovations are easy to find, as illustrated in (1):

- (1) a. anatomization, reinvigoration, ensnarement, enchainment, budget renegotiation, tissue irradiation
b. intender, fledger, disqualifier, entity-identifier, rust-preventer, yawn-provoker, milk-snatcher

The examples in (1) are process or agentive complex nouns and they are all hapax legomena in British National Corpus (BNC), a 100-million-word corpus. A hapax legomena is defined as a word which occurs only once in a corpus. Experimental evidence shows that while highly frequent words are stored and easily accessible, infrequent ones are generally created by some rule (Hay 2003:77-81). This implies that the hapax legomena (token frequency 1) detected in a large corpus can be a reliable barometer of lexical inventions. 247 types of process nominals and 374 types of agentive nominals are identified in BNC. They are found by making use of the “wild card” function of a research engine, in accordance with instruction such as “List all the words ending with *aaer, *aber, etc.”¹

That the relevant nominals are constructed by rules whenever the need arises entails the creativity or productivity of the processes – the capacity to make up new words. Creative WF processes are interesting to morphological theory, since they enable us to produce an infinite number of novel complex words (cf. Baayen and Lieber 1991: 802). The main focus is on productive WF processes, in particular, the formation of *-(a)(t)ion/-ment/-al* process nominals, *-er* agentive nominals, and N-N compounds.

2.2. Three Pragmatic Functions of Nominalization

Nominalization is defined as the process of changing a verb phrase or noun phrase into a complex noun. Thus, the VP *to reduce debt* and the NP *one who reduces debt* are nominalized into *debt-reduction* and *debt-reducer*, respectively. What motivates the use of nominals? There are three communicative functions. The first one is “brevity”: to construct concise and sensible nominals. It has the effect of conceptualizing an entity or activity by giving it a name, often carrying with it smart and witty connotations. In (2), a special conception is produced by compressing the underlined preceding phrase into the word *eye-stopper*. This type of nominals are typically accompanied by the expression *such as* in (3), which introduces the name of a particular entity or activity.

- (2) Rob looked quite different, dressed in a white dinner-jacket with a dark crimson bow-tie and matching cummerbund ... You're quite an *eye-stopper* yourself ... (BNC: HA7)
- (3) It was seen as a victory for a long-running campaign by environmental groups to protect the Antarctic, and also covered issues such as wildlife protection, waste disposal and marine pollution. (BNC: HLC)

The second function is “defocus”: to suppress the prominence of the internal object (Rice and Prideaux 1991: 290). In (4), the sentence *the small rocks and fine dust have been produced* is subsequently nominalized as *dust production*, with its direct object incorporated into a word. Consequently, the object of the designated activity is de-emphasized. The same applies to discourse (5).

- (4) The small rocks and fine dust have been produced by impacts throughout lunar history, and *dust production* has been enhanced by microbombardment. (BNC: GW6)
- (5) If this initial survey proves useful and gets good feedback we shall continue and do a series on all our local rivers. The information is stored on computer and regularly updated by our own network of *river watchers* ... (BNC: G27)

The last one is “cohesion”: to serve as thematic substitute to achieve discourse cohesion. In (6), thematic link is detected, in which what is first introduced as “rheme” (a carrier of information about the theme) shifts to the “theme” (the subject-matter of a clause) in the subsequent text, with the theme typically realized as a pro-form or substitute (cf. Quirk et al. 1985: 1430-31). The same sort of example is provided in (7).

- (6) If the cell loses its charge, it is said to be depolarized, and a cycle of *depolarization* and repolarization accompanies many cellular functions. (BNC: C9V)
- (7) My best protection against people who stare at me is to stare right back ... Another technique is to greet the unsmiling *starer* with a wink ... (J. Kirkup, *Japan, Now*, p. 33)

2.3. Rules and Principles on Nominalization

2.3.1. Affixation

The realization of nominal form is carried out by adding a nominalizing suffix to the base. Two determinants for choosing a relevant suffix are recognized. The first one is base conditions. A nominalizing suffix selects a certain category of base (categorical selection). For instance, the suffixes *-(a)(t)ion/-ment/-al* attach only

to verbs and *-ity/-ness* affix only to adjectives. Moreover, a nominalizer is selected for specific base forms. Thus, the suffix *-(a)(t)ion* productively attaches to verbs ending in *-ize/-ify/-ate* (*legalization, solidification, duplication*) and *-ity*, in contrast to *-ness*, is predominantly chosen to give rise to abstract nouns of *X-able, X-al, X-ic, X-ile*, and *X-ar* (cf. Jespersen 1942: 374, 449). The base conditions are justified by BNC data; the number of types of *[X-ize]-(a)(t)ion* nouns is 252 while *[X-ize]-ment* or *[X-ize]-al* nouns are not found in BNC. Additionally, *-ity* almost exclusively joins to words ending in *-able, -al, -ic, -ile*, and *-ar*: *[X-able]-ity* (386 types) - *[X-able]-ness* (19); *[X-al]-ity* (118) - *[X-al]-ness* (17); *[X-ic]-ity* (35) - *[X-ic]-ness* (2); *[X-ile]-ity* (26) - *[X-ile]-ness* (1); *[X-ar]-ity* (24) - *[X-ar]-ness* (0) (cf. Morita 2008: 154-156).

The second determinant for suffix-selection concerns “Avoid synonymy” or “Blocking.” The most productive affix for a certain class prevents its synonymous affixes from attaching to the class of bases (cf. Aronoff 1976: 43, Kiparsky 1982: 13). For instance, the predominant combination of *-(a)(t)ion* and *-ize/-ify/-ate* forms pre-empt the corresponding *-ment/-al* derivatives. As a result, the attachment of *-ment/-al* to *-ize/-ify/-ate* forms is blocked.

2.3.2. Compounding

Compounding is a process of forming a word by combining two or more existing words and a word formed by this process is called a compound. There are three main rules/principles concerning compounding. The first one is “Righthand head rule.” It signifies that the head of a complex word is the righthand member of the word, with a head element determining the complex word semantically and syntactically (Williams 1981: 248). In (8a), underlined elements are the heads of the complex words, determining the meanings and categories of the whole words. For instance, *catfish* means a kind of fish while *fishwife* is a human being; *man-mad* is an adjective and *potato-peel* is a verb. Example (8b) shows that complex words can be built by recursively adding a new head to the right: *Brook Shields* is compounded with *look-alike* to form *Brook Shields look-like*, which in turn adjoins to *contest* to make the compound *Brook Shields look-alike contest*, which again combines with *winner* to produce *Brook Shields look-alike contest winner*. In principle, an infinite number of nouns can be combined. The important point is that the righthand element is the head of each compound.

- (8) a. catfish vs. fishwife [A man-mad] vs. [NP a mad man] [v potato-peel]
 b. [[[Brook Shields look-alike] contest] winner] ...

The second one is “First sister principle.” It signifies that compounds are created by incorporating a word in the first sister position, the nearest position to the head (Roeper and Siegel 1978: 240). As seen in (9a), the first position of the head verb *trade* is the object *players*, since the object takes the place nearest to the head. In (9b), the first sister *player* is correctly incorporated into the verb *trade* to produce the compound *player-trading*. By contrast, the non-first sister element *off-season* cannot be incorporated into the verb, as evidenced in (9c).

- (9) a. They trade players in the off-season.
 b. [player-trading] in the off-season
 c. *[off-season trading] (of) the players

Thirdly, the lexical head of nominalization is a noun and is therefore subject to restrictions imposed on a word (X^0). A representative of these restrictions is the “Domain size restriction”: no phrase occurs within the domain of X^0 (Emonds 2005: 235). For example, while *contest winners* in (10a) is fine, *every-contest winners* is ill-formed. This is because the latter compound contains the phrase *every contest*, in violation of the Domain size restriction. The same obtains for the examples in (10b).

- (10) a. [_N[_N contest] winners] vs. *_N[_{NP} every/thrilling/long-contest] winners]
 b. [_N [_N player] trading] vs. *_N[_{NP} inspiring/accomplished/young-player] trading]

2.4. Comparison of English and Japanese Nominalization

The last sections have demonstrated the fundamental aspects of word formation, in particular, nominalization in English: (i) creativity, (ii) functions (brevity, defocus, cohesion), (iii) affixation conditions (base conditions, Avoid synonymy), (iv) compound conditions (Righthand head rules, First sister principle, Domain size restriction). A similar observation holds for the Japanese nominal formation. We will confine discussion below to cases (i), (ii), and (iv).

Let us first look at the creativity of Japanese nominalization. As many as 81 types of Japanese agentive hapaxes are identified in Balanced Corpus of Contemporary Written Japanese, a 105-million-word corpus (e.g. *rekishi-kijutsu-sha* ‘history describer’ and *jinshin-shoouaku-sha* ‘public-sentiment grasper’). The suffix *-sha*, a Japanese counterpart of *-er*, can produce hapaxes such as *hoofuku-sha* ‘one who retaliates,’ *seisan-sha* ‘one who calculate a sum,’ and *honshi-aidoku-sha* ‘one who admires our journal.’ As laid out in §2.1, hapax legomena drawn from a large corpus can be a significant barometer of lexical innovations. That *-sha* coins a variety of hapax nouns demonstrates the derivational potentials of the agentive suffix.

As outlined earlier, one of the functions of word creation is “cohesion”: to serve as a thematic substitute to achieve discourse cohesion. This function is recognized in Japanese as well. Passage (11) exemplifies this:

- (11) ... dentootekina kachikan-ga kuzure, hakkirishita taido-o tori nikuku
 traditional value-Nom break down clear attitude-Acc take hard
sasete iru. *Taido-mikettei-sha-ga* ooi koto-wa ...
 make Pres attitude-undecided-er-Nom many that-Top
 ‘... traditional values have broken down, which makes it hard to take a clear attitude. That there are many people who do not define their attitude ...’

Responding to the rhematic verb phrase *hakkirishita taido-o tori nikuku sasete iru*, the agentive noun *taido-mikettei-sha* is afterwards coined as a preferred substitute, with the result that a thematic connection is achieved that effectively links different units of discourse.

We have seen in §2.3.2 that the head of a complex word is the righthand member of the word (Righthand head rule). This rule applies to Japanese as well. The examples in (12) indicate that a righthand element semantically determines the whole word; *yakyuu-shoonen* is a kind of boy while *shoonen-yakyuu* is a kind of baseball.

- (12) *yakyuu-shoonen* ‘baseball boy’ — *shoonen-yakyuu* ‘boy baseball’

piza-haitatsu ‘pizza delivery’ — *haitatsu-piza* ‘delivery pizza’
saru-yama ‘monkey mountain’ — *yama-zaru* ‘mountain monkey’

Thus, the essential mechanism of nominal formation is the same in both languages.

3. Implications for Language Education

Preceding sections have focused on the formal, semantic, and functional aspects of word formation. The aim of this section is to apply this linguistic knowledge to language education. Specifically, we make quizzes or exercises from English materials which create a vivid interest in word composition, and then indicate that these exercises help students to improve their vocabulary and writing skills and give them the pleasure of pursuing the wonder of language.²

3.1. Vocabulary Reinforcement

3.1.1. Affixation

Let us consider how the knowledge of affixation leads to a constant enrichment of students’ vocabulary. As outlined earlier, the essential knowledge of affixation is (i) affix meanings, (ii) base conditions, and (iii) creativity. First, if we know that the prefix *re-* means ‘again’ and the suffix *-ity* refers to ‘the quality or state of,’ we can identify the meanings of *redesign/re-meet/ rename* and *flexibility/monstrosity/stupidity*. Second, we never say **ungirl* or **unstudy* and we say *careless* and *speechless*, but not **carefulness* or **speakless*. This is because we recognize that the negative *un-* prefix attaches only to adjectives and *-less* is suffixed only to nouns. And finally, we understand what word formation rules are productive and they permit the coinage of novel words as the need arises. For instance, we can use the productive suffixes *-er* and *-(a)(t)ion* to yield new words like *eye-stopper* in (2), *starer* in (7), *depolarization* in (6), *dust production* in (4), and *marine pollution* in (3). These suffixes then become available for the construction of new word-forms as well as the interpretation of unfamiliar words. In sum, making use of the morphological knowledge, we can understand and generate the most appropriate word in a given context.

There are a variety of exercises to examine and strengthen students’ understanding of the essential linguistic knowledge. In what follows, relevant exercises are presented with explanatory comments. Let us first look at the exercise in (13):

(13) Exercise 1 Give a word for each of the expressions.

- | | |
|---|--|
| a. to understand wrongly | b. to sleep longer than one intended |
| c. act or process of robotizing | d. quality or state of being syllabic |
| e. act or process of taking away the acid character | f. one who proofs (the brochure) again |

Questions a) and b) are intended to confirm affix meanings; if one knows that *mis-* means ‘wrongly’ and *over-* means ‘excessively,’ one can assign *misunderstand* and *oversleep* to questions a) and b), respectively. Questions c) and d) are meant to check base conditions; if one understands that verb ending in *-ize* is

nominalized by *-ation* and *-ity* joins to an adjective in *-ic* to make a noun, it will help one to answer the questions correctly. Questions e) and f) are for checking whether one recognizes that words can be creatively derived; combinations of some affixes may produce complex words such as *deacidification* and *re-proofer*.

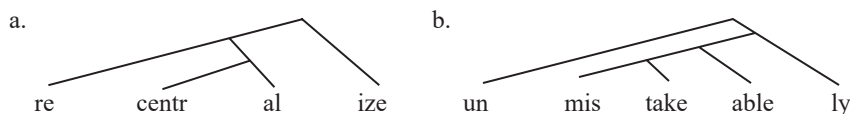
In exercise (14), students analyze the constituent structure of a complex word, paying particular attention to the base category which is selected by an affix. A student can write the structure of $[_N[_A \text{ un } [_A \text{ happy}]] \text{ ness}]$ for (14a), but not $*[_A \text{ un } [_N[_A \text{ happy}]] \text{ ness}]$ if (s)he knows that *-ness* and negative *un-* are added only to adjectives. (14b) is ambiguous: it means (i) ‘not able to be locked,’ *un-* being a negative suffix and (ii) ‘able to be unfastened by a key,’ *un-* being a privative suffix. Accordingly, the corresponding structures are (i) $[_A \text{ un } [_A[_V \text{ lock}]] \text{ able}]$ and (ii) $[_A[_V \text{ un } [_V \text{ lock}]] \text{ able}]$.

(14) Exercise 2 Draw trees to exhibit the structures of the following words.

- a. unhappiness b. unlockable (two different trees)

By the same token, the knowledge of base conditions is needed when the constituent structure of a complex word is analyzed. The answer for question (15a) is “wrong.” The reason is that *re-* generally attaches to verbs, but not adjectives. The answer for question (15b) is also “wrong,” because negative *un-* affixes only to adjectives.³

(15) Exercise 3 Point out tree structures which are wrong, and explain why they are wrong.



3.1.2. Compounding

The essential properties of compounding should be confirmed: (i) Righthand head rule (RHR), (ii) First sister principle (FSP), (iii) Domain size restriction (DSR), (iv) creativity. The compound *clock-burying* in discourse (16) well illustrates the points; head (*burying*) occurs on the righthand side of a compound, the first sister noun (*clock*), but not a phrase (*a clock*) is incorporated, and the compound *clock-burying* is temporarily constructed on the spot.

(16) “What a strange way to bury a clock!” Alice exclaimed. Raymond laughed. “I don’t know just what is the standard of normal in *clock-burying*.” (E. S. Gardner, *The Case of the Buried Clock*, p. 6)

Exercise (17) is intended to check your understanding of RHR and word meaning. The contexts in (17a) and (17b) require the blanks to be filled in with adjectives, but not nouns. According to RHR, you can choose the adjectives *garden-proud* and *animal-free* (as opposed to nouns *proud-garden* and *free-animal*). In question (17c), both of the blanks are filled in with compound nouns. Emphasis is placed on

“TV” in the first compound noun while it is on “commercial” in the second compound noun. According to RHR—again, *commercial TV* and *TV commercials* are selected, respectively.

(17) Exercise 4 Choose the word that best completes the sentence.

- a. These are flowers any () Englishmen would plant. (garden-proud proud-garden)
- b. I have joined () circus. (animal-free free-animal)
- c. A main characteristic of () in Japan is, I hardly need say, the ().
(commercial TV TV commercials)

Exercise (18) is also intended to examine your understanding of RHR and word meaning, using “reversibles.” It is interesting to know that two compounds which consist of the same materials have completely different meanings if the order of the constituents is reversed: *beef stew* refers to ‘stew which contains beef’ while *stew beef* refers to ‘beef which is for stew’; *piano player* denotes ‘person who plays piano’ while *player piano* denotes ‘piano which can play automatically.’ Given RHR, students can readily understand these reversible compounds even if they have not encountered them. It is highly recommended that each answer is shown with pictures or illustrations on a screen.⁴

(18) Exercise 5 Give a word for each of the expressions.

- a. stew which contains beef a'. beef which is for stew
- b. person who plays a piano b'. piano which can play automatically

The same sort of exercises are given in (19). They are a little more difficult than the questions in (18); students are asked to make reversible compounds using a given word. Possible reversibles include a) *lunch bag - bag lunch*; *lunch meat - meat lunch* and b) *education management - management education*; *education college - college education*.

(19) Exercise 6 Give some examples of “reversibles” (e.g. *helicopter attack - attack helicopter*).

- a. using “lunch.”
- b. using “education.”

Exercise (20) is intended to check the understanding of FSP and word meaning. In exercise (20a), object of the verb (*English*), not the adjunct (*in universities*) is incorporated into the verb (*teach*) to derive the compound expression *English teaching in universities*. Similarly in (20b), *plant collecting in the regions* is formed according to FSP.

(20) Exercise 7 Choose the expression that best completes the sentence.

- a. This will affect (). (English teaching in universities university teaching of English)
- b. This study is of great values to researchers working on ().

(plant collecting in the regions region collecting of plants)

Exercise (21) is also intended to check the understanding of FSP and word meaning. The point is, only the first sister of the verb can appear in a compound. *Dance* in (21a) and *snore* in (21b) are intransitive verbs, and so adjuncts can be the first sister of the verbs. This leads to the production of the compounds *beach dancing* and *bed snoring*. The verbs in (21c), (21d), and (21e) are transitive verbs and the objects of the verbs can be incorporated, subject to FSP. Consequently, *mineral exploration in the deep sea*, *bone collecting by harvester ants*, and *appendix operation in an emergency* are obtained.⁵

- (21) Exercise 8 Rephrase each of the expressions with a (noun) compound or a phrase containing a compound.
- a. to dance on the beach
 - b. to snore in bed
 - c. to explore minerals in the deep sea
 - d. to collect bones by harvester ants
 - e. to operate on (one's) appendix in an emergency

The following exercise concerns idiom-based compound nouns. It is for confirming DSR as well as RHR. In question (22a), RHR prevents one from choosing **a puller-leg*, which has the queer meaning of 'leg of puller,' and DSR precludes one from choosing **[my leg]-puller*, a phrase-incorporating compound. In addition, this quiz helps one to acquire a knowledge of underlying verbal idioms. A verbal idiom typically has some lexical properties; *to pull one's leg* has a specific lexical meaning like 'to tease (someone)' and it behaves like a verb so that it is not generally nominalized with a noun phrase (**a puller of my leg*). Consequently, the correct answer is *a leg-puller*. Similar steps will be taken for question (22b) to ensure that *tub-thumping* 'to express opinions in a loud or aggressive manner' is the best answer.

- (22) Exercise 9 Choose the expression that best completes the sentence.
- a. It has long been recognized that John is (). (a puller-leg [my leg]-puller a puller of my leg
a leg-puller)
 - b. It has simply changed its strategy, abandoning () for negotiation. (thumping-tub tub-thumping
[a tub]-thumping thumping of a tub)

Exercise (23) also concerns idiom-based compounds. This time, students are asked to make idiom-based compounds from comparable noun phrases; *hair-splitter* and *straw-clutcher* are built from the relevant phrases, in accordance with RHR and DSR. By this means, students come to learn the meanings of the idioms and the creativity of nominal compounding which allows them to construct nouns from various types of verbs.

- (23) Exercise 10 Rephrase each of the idiomatic expressions with a compound.
- a. one who splits hairs
 - b. one who clutches at a straw

3.2. Improvement of Writing Skills

We have discussed in §2.2 that nominalization is motivated by three pragmatic functions: (i) brevity ‘to construct concise and sensible nominals,’ (ii) de-focus ‘to suppress the prominence of the internal object,’ and (iii) cohesion ‘to serve as thematic substitute to achieve discourse cohesion.’ The aim of this section is to demonstrate that selection of context-relevant nominals enables one to write an elegant and cohesive paragraph.

The pertinent exercises are given below. Let us first consider exercise (24).

(24) Exercise 11 Choose the expression that best completes the sentence.

a. Automatically the guest who ordered a bottle of liquor a few minutes after arrival aroused the credit manager’s suspicion. Most new arrivals who wanted a drink quickly—after a journey or a tiring day—ordered a mixed drink from the bar. () was often starting on a drunk, and might not intend to pay, or couldn’t. (A. Hailey, *Wheels*, 1973, p. 466)

- i) the guest who ordered a bottle of liquor immediately ii) the immediate bottle-orderer
iii) the immediate orderer of a bottle of liquor iv) the guest ordering a bottle after arrival

b. Sally opened the shallow drawer of the writing table, took out a book of stamps, extracted one, affixed it to the letter she held in her hand, dropped the () back in the drawer, and put two pence halfpenny on the desk. (A. Christie, *Hickory Dickory Death*, 1955, pp. 184-5)

- i) stamp book ii) stamps book iii) book of stamps iv) pad of stamps

The answer for question (24a) is ii) *the immediate bottle-orderer*. The preceding phrase *the guest who ordered a bottle of liquor a few minutes after arrival* is paraphrased with the nonce word *immediate bottle-orderer*. The word serves as thematic substitute to achieve discourse cohesion. The other alternatives are all inappropriate, since they are too redundant to be a thematic substitute. It is worth noting that the “brevity” effect is produced as well; the sense that can be verbosely spelled out as *guest who ordered a bottle of liquor a few minutes after arrival* is encapsulated into the compound *immediate bottle-orderer*. Turning to question (24b), we know that the answer is i) *stamp book*. In the context in which she used a stamp and returned the book of stamps to the drawer, *stamp* is defocused, and so it should be incorporated into a word, as in *stamp book*. Additionally, stylistic sense of beauty is recognized, that is, “Don’t repeat a word or phrase; put it in another way.” In this respect too, the phrase *a book of stamps* should be reproduced with the compound *stamp book*. Therefore, the knowledge of these pragmatic functions plays a central role in developing advanced writing skills in English.

The following exercise is also for testing the pragmatic knowledge of “cohesion” and “brevity.”

(25) Exercise 12 Each of the underlined phrases should be changed into a word. Point out the appropriate word, stating the reasons why.

a. The Chancellor portrays Strauss as a dangerous neo-Fascist. Strauss calls the Chancellor a Marxist

who has plunged the nation into debt ... But their calling each other names became so scurrilous that a commission of fair play was established to monitor the insults. (*Newsweek*, Sept. 29, 1980, p. 20)
b. ... he never smiled with his mouth. He did it all with his eyes. ... I was glad my father was a person who smiles with his eyes. (R. Dahl, *Danny the Champion of the World*, p. 9)

The answer for question (25a) is *name-calling*. The first sentence conveys “the Chancellor’s criticism of Strauss” and the second sentence means “Strauss’s criticism of the Chancellor.” These rhematic expressions switch to a new theme in the third sentence. This switch is elegantly facilitated by the nonce word *name-calling*, thereby constructing a closely unified discourse. A very impressive word, *eye-smiler*, is coined in discourse (25b). The agentivity which is deducible from the prior discourse is expressed with the concise and sensible compound *eye-smiler*. Thus, the use of these word formation devices will allow students to produce very cohesive and precisely-worded writing.

Exercise (26) is for giving a title to the passage, making the best use of “brevity” effect of nominalization.

(26) Exercise 13 What is the best headline (title) for the passage?

Make delicious dishes in minutes with Campbell's condensed soups. When life is hectic and you've only got half an hour in the evening to snatch a meal, a heartwarming bowl of Campbell's condensed soup with some crusty bread makes an ideal supper. (BNC: CB8)

(For those who like condensed soup Suppers for soupers Souper suppers)

The best answer is *Souper suppers*. The most enjoyable aspect of language is to play with its sounds and words; in *Souper suppers* we find alliteration and rhyme of *souper* and *supper* as well as association of *souper* ‘one who sips soup’ with its homonym *super* ‘extremely good.’

Last exercise is for strengthening the naming skills, as exhibited in (27). Naming is great fun when one can provide a fanciful name for a particular process or entity.

(27) Exercise 14 Give a name or label to the process or entity given below.

a. American students lose between one and two months of learning during their summer vacations.

We call this (). (learning summer loss loss summer learning summer learning loss)

(S. Lynn, *Q: Skills for Success* 1, p. 89)

b. The department store is going to close down the business and start a two-week final sale in which all clothing and accessories will be offered at half price. They call this ().

(Final closing sale Sale for bargain hunters Buy-bye sale) [with pictures on a screen]

Naming is effective in characterizing a process concerned. In (29a), the process described in the first sentence is categorized with the coinage *summer learning loss*. Notice that **loss summer learning* is wrong, since it would inappropriately mean ‘to learn loss in summer’ in accordance with RHR. The

compound **learning summer loss* is likewise ruled out, because FSP first allows the combination of the head *loss* and the object *learning* to yield *learning loss*, and then allows it to combine with the adjunct *summer*. For question (27b), the compound *Buy-bye sale* is chosen to achieve the “brevity” effect. One can make an amusing pun by the use of an appropriate compound and give the impression of novelty, playing with sounds and words.

In a nutshell, the exercises just presented are comprehensive, enjoyable, and revealing. Because we use familiar examples which may interest students, they are intelligible and pleasant. Our clear step-by-step problem-solving can develop greater awareness of the linguistic systems.⁶

4. Conclusion

We have shown that (i) human ability to be linguistically creative produces a variety of innovative nominals, following some morphological principles, and (ii) the understanding of the morphological mechanism helps students to improve their vocabulary and writing skills. We hope that this approach to language education is applied to other morphological processes, in particular, verbalization (cf. Clark and Clark 1979) to reaffirm that it is highly effective and fruitful.

Notes

* This article is a revised version of the paper read at International Conference on Linguistics, Literature and Cultural Studies in Modern Languages held at Universidad Católica San Antonio de Murcia, Spain on September 11, 2014.

¹ For the collection of process and agentive nominals, I am indebted to the research engine of www.english-corpora.org (BNC).

² In view of the parallelism between English and Japanese nominalization (cf. §2.4), language education will be more effective if we introduce exercises on the native language before presenting parallel exercises on the second language. For reasons of space and clarity, however, our discussion will be confined to exercises on the second language.

³ Other relevant examples include *deconstructionist*, *prereunification*, and *unpremeditated*.

⁴ Other reversible compounds are recognized: *cake flour - flour cake*; *drinking water - water drinking*; *guard dog - dog guard*; *house guest - guest house*; *leg work - working leg*; *push-button - button push/pushing*; *salad chef - chef salad*; *school girls - girls' school*.

⁵ After the incorporation of the argument *minerals* into the head *explore*, the adjunct *in the deep sea* becomes incorporable into the combination, since it is now the first sister of the head verb (cf. *deep sea mineral exploration*). Note, however, that when more than one incorporation is made, it may lower the acceptability of the output and that the incorporability depends on the kind of adjuncts; Place and Time adjuncts are easier to incorporate than an Agent adjunct (cf. *?harvester ant bone collecting*).

⁶ The author has been teaching an introduction class on linguistics: Study of the English Lexicon, where the basic knowledge on English morphology can be learned. The comments from the students show the

importance of morphological knowledge to develop one's vocabulary and communication skills. Here are some of the main comments: (i) I think that synthetic compounding is useful, because it creates a variety of words with predictable meanings (compounding), (ii) since a prefix has a certain meaning, I am often convinced of the meaning of the whole word when I divide it into a prefix and the base (affixation), (iii) if we analyze a complex word with a tree diagram, we can understand the word well and this kind of analysis may lead our understanding of the meanings of unknown words (analysis of word structure), (iv) I wondered why we say *book store*, but not *books store*; but now I am happy to know that there is a rule concerning this (DSR), and (v) I want to create novel words and use them in actual communication (creation of novel words).

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