

DIMINUTIVES AND PLURALS OF DUTCH NOUNS

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1. DIMINUTIVES AND PLURALS

In the major reference dictionary for Dutch, Van Dale (1992), the entry for a noun such as *monster* ('monster') starts as in (1).

(1) **monster** (o.; -s; -tje) [<Fr. *monstre*] 1 [...]

The information in brackets is the grammatical information. It consists of an indication of the gender ("o." stands for *onzijdig* ('neuter')), the plural (*monsters*) and the diminutive (*monstertje*). This places plural and diminutive at the same level, a practice that is quite common in Dutch lexicography. Indeed, the two categories can be described in very similar terms.

The plural ending in *monsters* shows one of two regular formation processes in Dutch, the other one being *en*. With few exceptions, all nouns have one of these two endings. Whether a noun is singular or plural influences the form of the verb (if it is the subject), of the adjective, and of the determiner. It also has an influence on the meaning.

The diminutive *monstertje* shows the base form of the diminutive suffix. As explained by de Haas & Trommelen (1993: 279-282), there is only one basic diminutive ending, but it has a number of phonologically determined variants. The diminutive influences the gender of the noun and therefore the form of adjectives and determiners modifying it. It also has an influence on the meaning.

The morphosyntactic influence of the plural and diminutive is illustrated in (2).

- (2) a. Het monster verdwijnt. ('The monster disappears')
b. De monsters verdwijnen.

- c. Het monstertje verdwijnt.
- d. De monstertjes verdwijnen.

The plural in (2b) triggers the plural form of the verb and the determiner. The diminutive in (2c) seems to have no influence on the form of surrounding words. The diminutive plural in (2d) is parallel in agreement to the plural in (2b). In (3), we see the effects on a non-neuter noun.

- (3) a. De bloem verwelkt. ('The flower withers'.)
- b. De bloemen verwelken.
- c. Het bloempje verwelkt.
- d. De bloempjes verwelken.

In terms of gender, Standard Dutch distinguishes neuter and non-neuter, but not feminine and masculine. The non-neuter definite article has the same form as the plural article, *de*. Therefore, the plural in (3b) only influences the verb. In (3c), the diminutive is seen to be of neuter gender. As (3d) shows, the plural diminutive form has the plural definite article.

The common way to classify these data is to say that the verb agrees in number with the noun and the determiner in gender and number, not that the determiner agrees in diminutive. However, (2) and (3) suggest that the diminutive could in principle also be an agreement property. In fact, both number and diminutive are categories that can vary cross-linguistically in their classification as inflection or word formation. The Japanese example in (4) shows that number does not trigger agreement in Japanese.

- (4) a. Koko ni hitori no mazushii kodomo ga nete iru.
 ('Here PRT one PRT poor child PRT sleep AUX')
- b. Koko ni sannin no mazushii kodomotachi ga nete iru.
 ('Here PRT three PRT poor children PRT sleep AUX')

The suffix *tachi* makes *kodomo* ('child') plural, but this does not trigger any change in the form of the adjective *mazushii* ('poor'), the verb *nete* ('sleep') or the auxiliary *iru*. There is no reason to consider number an inflectional category in Japanese. We find the opposite situation in Fula. The example in (5) is from Arnott (1970: 92).

- (5) a. tuutaawal baleewal
 'flag_{AFF} black_{AFF}', i.e. a black flag
- b. tuutayel baleeyel
 'flag_{DIM} black_{DIM}', i.e. a little black flag

Here, the adjective *balee* ('black') agrees with the noun *tuutaa* ('flag') in diminutive. It should be noted that in (5b), it is not the adjective that is diminutivized ('a flag that is a little black'), but only the noun ('a little flag that is black'). Therefore, there is every reason to consider diminutive an inflectional feature of Fula.

In sum, features such as plural and diminutive can be inflectional or derivational, depending on how they behave. If they trigger agreement, they are inflectional. However, if they trigger another feature, e.g. gender, which in turn triggers agreement, they are not inflectional. It is not always immediately obvious which of these two situations applies in a particular case, but careful inspection of the data resolves the ambiguity.

2. MORPHOLOGY IN PA

Jackendoff (2002) proposes a Parallel Architecture (PA) in which any expression is represented phonologically, syntactically, and conceptually and these representations are linked to each other. The idea that the representations are parallel means that they are not derived from each other, but each has its own formation rules. The source of the linking between representations is the lexicon.

In PA, each content word has a lexical entry providing phonological, syntactic, and conceptual information, which serves as a basic linking rule. The PA lexicon can very elegantly account for idioms. The lexical entry for an idiom such as *change one's mind* contains the phonological form of the words in the idiom, the syntactic tree corresponding to its structure, and the conceptual information relating to its meaning. Wherever appropriate, components of these representations are coindexed. The lexical entry of a function word may have an empty conceptual representation if it does not contribute to the meaning but is only required by syntax. As Jackendoff (2002: 167-182) argues, there is no reason to impose any specific boundary between idioms, constructional idioms, and pure formation rules. All of them are lexical entries.

With both formation rules and linking rules represented as lexical entries, we can see the mental lexicon as the individual speaker's knowledge of the language. Against this background, it is not surprising that Jackendoff (2002: 154-162) proposes to encode also rules of morphology as lexical entries. The main distinction he makes is between regular, productive rules and semiproductive rules. For him, the distinction between inflection and word formation has no particular relevance.

An example that he elaborates in detail is the realization of the English past tense. The regular past tense ending *-ed* has a lexical entry with in its

phonological structure the specification that it is a clitic, which makes it an affix (Jackendoff, 2002: 160). The past tense of strong verbs has its own lexical entry, corresponding to that of a full word. This means that *walked* is put together from *walk* and *ed*, but *slept* is an entry of its own. In fact, there is nothing that stops individual speakers from storing *walked* as an entry of its own as well. Speaker A may build up *walked* from *walk* and *ed*, whereas speaker B retrieves it as an entry. A and B will not necessarily find out that their lexicon is different, because the output they produce, i.e. their performance, is the same.

The information that *slept* is connected to *sleep* is not immediately encoded in the entries of these two words. As Jackendoff (2002: 165-167) argues, this is not a problem for the most typical, communicative uses of such entries. The relation can be expressed in a redundancy rule (cf. Jackendoff 1975). Redundancy rules are not lexical entries, but emergent generalizations about lexical entries, which facilitate storage and retrieval. There is also one for connecting *sleep-slept* with *keep-kept*. Originally, Jackendoff assumed that redundancy rules are epiphenomena without explicit psychological reality. Jackendoff (2010) revises this position and argues that they are rules that are marked as unproductive. As mentioned above, rules in PA are encoded as lexical entries.

3. ENCODING THE DUTCH PLURAL

As illustrated in (2) and (3) above, there are two main, regular plural endings in Dutch, *-s* as in *monsters* and *-en* as in *bloemen*. Other endings are illustrated in (6).

- | | | |
|--------|------------|--------|
| (6) a. | ei ('egg') | eieren |
| b. | museum | musea |

The pattern of (6a) is limited to a small number of basic words. According to Booij (2002: 22) there are exactly 15 of them. In ten Hacken (1994: 281-284) I propose a category of *stem formation* for a range of processes that also includes the one adding *-er-* in such cases (ten Hacken, 1994: 150). In this way, (6a) can be analysed as involving an *-en* plural. Booij (2002: 23) also adopts such an analysis. (6b) is an example of a foreign plural.

For the large majority of Dutch nouns, the question is whether they form their plural in *-en* or in *-s*. Booij (2002: 24) proposes the generalization in (7) for this choice.

(7) A plural noun ends in a trochee.

The implication of (7) is that the last syllable is weak and the penultimate one strong. The difference between *s* and *en* is that the latter (but not the former) adds an unstressed syllable. In the cases of *monsters* and *bloemen*, (7) clearly applies and determines the choice of affix. A number of special cases are listed in (8).

(8) a.	<u>methode</u>	meth <u>o</u> des	meth <u>o</u> den	(‘method’)
b.	<u>groene</u>	*groenes	gro <u>e</u> nen	(‘green _{PERSON} ’)
c.	<u>studente</u>	stud <u>e</u> ntes	?stud <u>e</u> nten	(‘student _{FEM} ’)
d.	<u>professor</u>	prof <u>e</u> ssors	prof <u>e</u> ssoren	(‘professor’)
e.	<u>eigenaar</u>	<u>e</u> igenaars	<u>e</u> igenaren	(‘owner’)
f.	<u>wandelaar</u>	w <u>a</u> ndelaars	*w <u>a</u> ndelaren	(‘walker’)

In (8), underlined vowels are stressed. In (8a), the singular ends in a trochee and in a schwa. In such cases, both plural endings are possible, as expected on the basis of (7). An exception occurs with nominalized adjectives involving the suffix *-e*, as in (8b), which generally reject *-s*. (8c) is a more idiosyncratic exception, which can be explained by the form *studenten* (‘students’) as the plural of *student*, used for male students or unmarked for sex. In (8d), we have another example of a singular ending in a trochee. Here, again both endings are possible, but *-en* triggers a stress shift. Booij (2002: 32) mentions a small number of suffixes that idiosyncratically diverge from (7), e.g. *aar*. Both in (8e) and in (8f), *aar* has secondary stress, so that *en* would be the predicted ending. However, (8e) allows both endings and (8f) only *-s*.

Following the pattern of Jackendoff’s (2002: 160) entry for the English past tense suffix *-ed*, we can encode the Dutch plural affix *-en* as in (9).

- (9) a. $[\text{w}_d \text{Wd}_p [\text{cl} \text{en}]]_q$
 b. $[\text{N}_p \langle +\text{plural} \rangle]_q$
 c. $[\text{PLURAL} ([\text{X}]_p)]_q$

In (9), the three levels of PA are represented with indices encoding the links between individual components. (9a) is the phonological structure. It shows *-en* attached as a clitic to a word. As I am not interested in the difference between phonological and orthographic representations here, I will use the latter throughout. The index *p* in (9a) and (9b) shows that this word is a noun in syntax. In the syntactic representation (9b), the feature $\langle +\text{plural} \rangle$ is necessary because it may trigger agreement with a verb, the determiner, or any adjectival

modifier of the noun. Conceptually, as indicated in (9c), the base noun with the index p is pluralized. As the affix *-en* does not itself have a role as a constituent in syntactic or conceptual structure, it is not indexed. The feature <+plural> and the function PLURAL encode its entire syntactic and conceptual contribution.

Taken in isolation, (9) would encode the situation in which all Dutch nouns have a plural in *-en*. The fact that some plurals are irregular, e.g. (6b), can be encoded in the same way as Jackendoff (2002: 161) encodes a strong past tense. This means that *musea* has a separate lexicon entry as in (10).

- (10) a. $[_{wd} \text{ musea}]_q$
 b. $[_N N_p \text{ <+plural>}]_q$
 c. $[\text{PLURAL} ([\text{MUSEUM}]_p)]_q$

Compared to (9), the phonological form in (10a) is unstructured and the variable X in (9c) is specified as MUSEUM in (10c). We can assume that retrieval of *musea* in (10) is always faster than construction of **museumen* from the entry for *museum* and (9), in the same way as Jackendoff (2002) does for strong and weak verbs in English.

A slightly different situation arises for the competition between *-en* and *-s*. Both are regular endings and *-s* will have an entry like (9), only with a different phonological form of the affix. We have to allow for words such as *methode* in (8a) to combine with either affix, while at the same time excluding ungrammatical forms such as **monsteren* and **bloems*. The question is then how (7) is encoded in the system. If (7) is part of the formation rules, it will be difficult to encode the possibility of *eigenaars* alongside *eigenaren* in (8e) and the necessity of *luisteraars* instead of **luisteraren* in (8f). Therefore, it is more attractive to encode (7) as a redundancy rule.

A possible encoding involves features [$\pm en$] and [$\pm s$] on the noun and [$+en$] and [$+s$] on the two suffixes. At first sight, this may seem overly complicated, because each noun bears the information whether it combines with each of the two suffixes. However, by encoding (7) as a redundancy rule, we can minimize the storage effort. This is entirely in the spirit of Jackendoff's (1975) Full Entry Theory. Exceptions to (7) are simply slightly more burdensome to store than the regular choices.

In the case of *museum*, the plural *musea* is encoded as in (10) and **museumen* is impossible as predicted by (7), but *museums* also occurs as a plural. Although condemned in normative grammar, it is the predicted form for (7). The degree of acceptability differs for each speaker, depending on the weight they give to regular forms and Latin etymology.

4. ENCODING THE DUTCH DIMINUTIVE

As mentioned by de Haas & Trommelen (1993: 279-282), there is only one basic diminutive ending, but it has a number of phonologically determined variants, as exemplified in (11).

(11) a.	het monster	het monstertje	(‘monster’)
	b. het boek	het boekje	(‘book’)
	c. de ring	het ringetje	(‘ring’)
	d. de bloem	het bloempje	(‘flower’)
	e. de haring	het harinkje	(‘herring’)

The definite article has been added in (11) to illustrate that all diminutives are neuter, regardless of the gender of the base. In (11b) the *-t-* is elided after a voiceless obstruent. The epenthesis of *-e-* in (11c) occurs after stressed short vowel plus nasal or liquid, but only for monosyllabic words if the liquid is *r*. The assimilation of *-t-* to *-p-* and *-k-* in (11d-e) occurs after long vowel (or short vowel plus liquid) plus *-m* and polysyllabic words in *-ing* with penultimate stress, respectively. The distribution rules are quite complex and differ from one dialect to the next. This is the reason why standard dictionaries specify the outcome explicitly as in (1). As I argue in ten Hacken (2009), dictionaries provide information for problem solving, rather than a linguistic analysis.

Following the pattern in (9), we could encode the diminutive as a lexical entry as in (12).

(12) a.	$[_{wd} Wd_p [_{Cl} tje]]_q$
	b. $[_N N_p <+dim>]_q$
	c. $[DIM ([X]_p)]_q$

The phonological variants of *-tje* can be produced by phonological rules, because there is no other type of information required to predict the form. However, there are two problems with (12). First, it is not obvious why there should be a syntactic feature $<+dim>$. As there is no agreement with $<+dim>$, there is no need for rules of syntax to manipulate this feature. As mentioned above and illustrated in (11), agreement is only with the neuter gender that is invariably assigned by the rule producing diminutives.

The second problem with (12) is the function DIM in (12c). Diminutives do not necessarily imply a small size. Another meaning component is a positive evaluation. The examples in (13) give an impression of the interaction of these meaning components.

- (13) a. *papiertje* ('paper_{DIM}')
 b. *ballonnetje* ('balloon_{DIM}')
 c. *restaurantje* ('restaurant_{DIM}')
 d. *vriendje* ('friend_{DIM}')
 e. *dagje* ('day_{DIM}')

In (13c), both meaning components are approximately equally important. One cannot use *restaurantje* to refer to a very big or an unpleasant restaurant, unless ironically. In (13b) and even more in (13a), the size component is more important than the positive evaluation. The evaluation expressed in *papiertje* is rather neutral and it is compatible with a negative judgement imposed by the context. In (13d) and even more in (13e), the evaluative context is more prominent. One sense of *vriendje* is 'boyfriend'. A *dagje* is not in any sense shorter than a *dag*. Therefore, it is more difficult to specify the exact meaning of DIM than that of PLURAL. Note that it would not be a solution to create two functions, e.g. DIM₁ for small size and DIM₂ for positive evaluation, because in prototypical instances such as (13c) they would both have to be applied at the same time and in somewhat less prototypical ones, e.g. (13b) and (13d), they still both play a role.

Another aspect of the problem with the function DIM in (12c) is so-called *initial specialization*. Whereas specialization is a regular type of diachronic meaning change, initial specialization occurs at the moment of formation. An example is *kaartje*. The base *kaart* has a range of meanings including '(playing) card', 'menu', and 'map'. The most prominent meanings of *kaartje* are 'ticket (for public transport or theatre/concert)' and 'business card'. These meanings cannot be seen as the result of an operation DIM on the meaning of *kaart*. Rather they should be seen as the result of a different process, that of selecting a name for a given concept.

These findings go against Jackendoff's (2002: 155) view that Dutch diminutive *je* is an example of a fully productive affix that should be encoded as a lexical entry. Its syntactic and semantic behaviour differs in crucial respects from the plural suffixes *-en* and *-s*.

5. CONCLUSION: INFLECTION AND WORD FORMATION IN PA

The comparison of the Dutch plural suffixes *-en* and *-s* with the Dutch diminutive *-tje* yields a number of interesting observations on the fundamental difference between inflection and word formation. The differences can be found both in syntactic behaviour and in the encoding of the meaning.

Syntactically, the information that a noun is plural is relevant for agreement in Dutch. In the case of diminutives, the suffix correlates with neuter gender, but there is no agreement with the feature diminutive in Dutch. Therefore, the feature [\pm DIM] has no place in a Dutch syntactic representation. As the examples in (4) and (5) illustrate, the agreement behaviour of plural and diminutive is language-specific.

Semantically, there is a significant difference in the degree of predictability of the result. There are idiosyncratic meanings of the plural, but they are exceptions. For diminutives, however, the meaning is determined not only by the meanings of the base and the diminutive suffix, but also by the concept that is named. I will call the latter effect *onomasiological coercion*, as it is intuitively similar to Pustejovsky's (1995) concept of *coercion*, except that it is brought about by the need to come up with a name.

Together, the differences in agreement and onomasiological coercion make that whereas (9) is a good way to account for plural *en* in Dutch, (12) is not a correspondingly good way to account for diminutive *-tje* in Dutch. As I also proposed in ten Hacken (2010, 2012, 2013) on the basis of other data, such differences make it attractive to introduce a word formation component in PA. Such a word formation component contains rules that are specifically intended for naming new concepts. These rules are not themselves lexical entries, but they operate on lexical entries. In this way, diminutive *-tje* can be accounted for as an operation that can be invoked for naming, whereas the plural remains a regular lexical entry, thus accounting for the observed differences between the processes in a natural way.

In a sense the plural and the diminutive of Dutch nouns can be seen as a minimal pair in the question of whether inflection and derivation should be distinguished. Although they have many properties in common, there are two crucial differences. Plural is syntactically relevant as an agreement feature and not used for naming, whereas diminutive is used for naming and has only an indirect influence in syntax, mediated by gender. As argued here, it is worth encoding this distinction in the model of the lexicon.

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