

Article 67: **Defectivity**

(Geert Booij, Christian Lehmann, Joachim Mugdan, unter Mitarbeit von Wolfgang Kesselheim und Stavros Skopeteas, eds., *Morphology. An International Handbook on Inflection and Word Formation*. Vol. 17.1. Mouton de Gruyter, Berlin & New York 2000, 647-654)

**Abstract**

Gaps (holes in the pattern) and related asymmetries in inflectional paradigms are discussed. Gaps are shown to be an extreme case of a skewed frequency distribution of the word-forms of an inflectional paradigm. Normally such phenomena are due to "natural" semantic restrictions whereupon the meanings of certain roots and inflectional endings are mutually incompatible.

**1. The notion "defectivity"**

Defectivity is intimately tied to the notion of an inflectional paradigm. In Finnish grammatical tradition, there is even an established term meaning "paradigm defectivity" (vajaaparadigmaisuus). Also cf. Plank (1981:30) who uses the term "paradigmatische Defektivität". A (full) inflectional paradigm is a matrix defined by the relevant morphosyntactic properties of a language, typically number and case for nouns, or tense/mood/aspect and person for verbs. The cells of the matrix are the word-forms of a given word. A classical

instance of an inflectional paradigm is the Lat. nominal first declension:

	<i>Singular</i>	<i>Plural</i>
<i>Nom.</i>	mensa	mensae
<i>Gen.</i>	mensae	mensarum
<i>Dat.</i>	mensae	mensis
<i>Acc.</i>	mensam	mensas
<i>Abl.</i>	mensa	mensis
<i>Voc.</i>	mensa	mensae

There is a potential ambiguity here. First, the matrix defines a certain **inflectional type**, declension, by way of providing an exemplar that contains a full array of properly inflected word-forms. Second, the matrix lists the theoretically possible word-forms of the lexical item *mensa* which constitute its **word-form paradigm**.

Defectivity normally applies to word-form paradigms rather than to inflectional types. Defective morphological behaviour of a word means that one or more cells in the word-form paradigm are systematically lacking, thereby creating gaps (*lacunae*, holes in the pattern). Occasionally, the term blocking is used. Typical defective behaviour concerns whole subsets of forms, e.g. all plural forms,

or all 1st and 2nd person forms, rather than individual forms in isolation (e.g. the ablative singular, the 1st person past tense).

Defectivity has not been much studied, and in handbooks it is normally mentioned only in passing, e.g. Matthews (1972:197, fn. 1) and Spencer (1991:76,90). Disregarding some well-known examples such as pluralia tantum nouns and monopersonal verbs, the received view in the morphological literature seems to be that words classified as belonging to a certain inflectional type by definition have full word-form paradigms. Studies that pay major attention to inflectional defectivity include Ingo (1978) treating especially Finnish nouns but also corresponding phenomena in several major Indo-European languages, Karlsson (1985; 1986) on frequency-related aspects of the stratification of individual paradigms; Maslov (1964) and Soboleva (1979) on defectivity in Slavic verb inflection; Plank (1981, especially Chapter 3) who focuses on German and English defectivity paying special attention to the semantic basis of defectivity and to the differences

between inflection and derivation; and Wurzel (1988), providing a more detailed comparison of inflectional and derivational defectivity, and also treating some diachronic aspects.

## **2. Types of inflectional defectivity**

First the most obvious and frequent types of defective inflection are presented, divided into groups according to grammatical properties (section 2). In section 3, the reasons for inflectional defectivity are discussed.

### **2.1. Pluralia tantum nouns**

In many languages there are hundreds of nouns that have only plural forms and lack the singular ones. In the literature, this is the most frequently recurring example of inflectional defectivity. There are several typical semantically characterizable subtypes of pluralia tantum nouns that tend to recur in various languages (cf. Ingo 1978, 21-35). These include (all examples all below are given in the NOMINATIVE PLURAL of the respective language):

(a1) Nouns denoting human and divine beings: Lat. *majores* 'ancestors', *Quirites* 'bourgeoisie', *Superi* 'the Gods in heaven', *Penates* 'the home Gods'; Fr. *proches* 'relatives', *jumeaux* 'twins', *gens* 'people'; Germ. *Eltern* 'parents', *Gebrüder* 'brothers', *Leute* 'people'; Sw. *smågossar* 'little boys', *svear* 'inhabitants of Svealand', *betjante* 'servants'.

(a2) Nouns denoting meetings, celebrations, or contests: Lat. *comitia* 'election meeting', *nuptiae* 'wedding', *Olympia* 'Olympic Games'; Fr. *bacchanales* 'bachanals', *épousailles* 'wedding', *funérailles* 'funeral'; Germ. *Pfingsten* 'Pentecost', *Weihnachten* 'Christmas'; Russ. *rodiny* 'birthday', *oktjabriny* 'October (revolution) celebration', *skatcki* 'horse race'; Fin. *hääät* 'wedding', *markkinat* 'market, marketplace', *arpajaiset* 'lottery', *naamiaiset* 'masquerade', *avajaiset* 'opening ceremony'.

(a3) Nouns denoting parts of (the human) body: Lat. *tonsillae*, *glandulae* 'tonsils', *intestina*, *viscera*, *exta* 'intestines', *barbae* 'beard', *genae* 'cheeks'; Eng. *bowels*, *entrails*, *intestines*, *whiskers*,

*genitals*; Fr. *tif(f)es* 'hair', *postères* 'rear, rump'.

(a4) Nouns denoting conditions of illness: Lat. *tormina* 'stomach ache', Eng. *measles, mumps, shivers, shingles, creeps*; Fr. *affres* 'fear of death', *menstrues* 'menstruation'; Sw. *smittkoppor* 'smallpox'.

(a5) Nouns denoting clothes: Lat. *exuviae* 'dress', *crepidae* 'sandals'; Eng. *trousers, unmentionables, shorts*; Fr. *grègues, trouses, chaussees, braies* 'trousers (of various types)'; Germ. *hosen* 'trousers', *Hosenträger* 'braces'; Sw. *kläder* 'clothes', *kalsonger* 'underpants'; Fin. *housut* 'trousers', *liivit* 'waistcoat, vest'.

(a6) Nouns denoting gifts, money, or wealth: Lat. *divitiae* 'wealth'; Eng. *amends, arrears, assets, finances, wages, vails*; Fr. *arrhes* 'down payment', *frais* 'expenditure', *honoraires* 'honorarium', *charges* 'taxes'; Germ. *Kosten, Spesen* 'costs', *Subsidien* 'subsidies'; Sw. *böter* 'fines', *tillgångar* 'monetary property', *finanser* 'finances', *håvor* 'offerings'.

(a7) Nouns denoting materials and utensils: Lat. *impedimenta* 'baggage',

*armamenta* '(naval) fortifications',  
*praebia* 'medicines'; Eng. *victuals*, *viv-*  
*ers*; Fr. *effondrilles* '(the) dregs',  
*béatilles*, 'delicacies', *balayres*, *or-*  
*dures* 'trash, litter'; Germ. *Effekten*  
 'goods', *Spirituosen* 'liquors'; Sw. *spe-*  
*cerier* 'spices, (dry) foods', *kemikalier*  
 'chemicals', *exkrementer* 'feces'.

(a8) Nouns denoting tools and (more or  
 less) technical devices: Lat. *scalae* 'lad-  
 der', *cancelli*, *clathri* 'bars (in pri-  
 son)', *fores*, *valvae* 'double door'; Eng.  
*scissors*, *shears*, *snuffers*, *tongs*, *pin-*  
*cers*, *scales*, *stairs*, *billiards*, *spec-*  
*tacles*, *glasses*; Fr. *forces* '(big) scis-  
 sors', *tricoises* 'tongs', *menottes*  
 'handcuffs'; Sw. *glasögon* 'glasses'; Russ.  
*ocki* 'glasses'; *casi* 'watch'; Fin. *sakset*  
 'scissors', *suitset* 'rein', *urut* 'organ  
 (to play with)'.

(a9) Nouns denoting acts or results of  
 communication: Lat. *acta* 'official news-  
 paper', *monumenta* 'annals', *tabulae* 'ag-  
 reement'; Eng. *archives*, *annals*, *ac-*  
*clamations*, *news*; Fr. *matines* 'morning  
 prayer', *contes*, *chansons*, *histoires*  
 'gossip', *belles-lettres* 'belles lett-  
 res'; Sw. *bannor* 'scolding', *hävder*, *an-*

*naler, tideböcker* 'annals'; *regalier* 'regalia'.

(a10) Nouns denoting human customs or actions: Lat. *caeremoniae* 'ceremonies', *apinae, gerrae, ineptiae* 'hoax, practical joke'; *tricae* 'teasing'; Germ. *Formalien* 'formalities', *Machinationen, Ränke* 'trickery, machinations'; *Repressalien* 'reprisals'.

(a11) Place names: Lat. *Athenae, Syracusae, Cannae, Mycenae, Thebae, Delphi, Pompeji, Alpes, Cyclades*; Eng. *Netherlands, Alps, Bermudas*; Fr. *Pays-Bas* 'Netherlands', *Indes* 'India'; Sw. *Dardanelerna* 'Dardanelles', *Filippinerna* 'Philippines'.

For many of these words, the singular forms are totally ungrammatical and non-existent, e.g. Eng. \**measle*, \**Netherland*, Fin. \**suitsi* 'rein' (pro *suitset*), Lat. \**barba* 'beard' (pro *barbae*), Sw. \**banna* 'scolding' (pro *bannor*). These are prototypical instances of pluralia tantum nouns.

There are however many unclear and borderline cases. Some words have a parallel singular form that seems to fill the hole(s) in pattern or at least to be se-

mantically very closely related to the presumed pluralia tantum word. A case in point is Eng. *scissor*. *Longman's Dictionary of the English Language* (<sup>5</sup>1988) defines *scissor* as 'a brand or type of scissors', separating it clearly from the lexeme *scissors*, whereas *Collins Cobuild English Language Dictionary* (1989) lists *scissor* and *scissors* as belonging to the same lexeme.

Even if regular singular forms are nonexistent there might occasionally occur singular-like stems used as casus componens in compound formation, e.g. Fi. *hää-yö* 'wedding-night', cf. *hää* 'wedding', *markkina-korko* 'market interest rate' (cf. *markkina-t* 'market, marketplace').

The morphological plurality of all presumed pluralia tantum words might be synchronically debatable, even if diachronically clear, e.g. Ger. *Leute* 'people' (originally mittelhochdeutsch *liute* 'people', plural to *liut* 'human being', cf. Wurzel 1988:191). Syntactically, of course, *Leute* behaves as a plural, e.g. in regard to number concord

(*die Leute sind* 'people are  
3RD-PERSON-PLURAL') .

Eng. *news* is even more of a borderline case. Originally plural (Middle English *newe-s*), its synchronic morphological plurality is doubtful, and it fluctuates even in regard to number behaviour (cf. *This is good news.* - *These were good news.* - *The news was/\*were good.*).

A special and somewhat idiosyncratic type of defectivity is demonstrated by words such as Finn. *Parainen*  
NOMINATIVE-SINGULAR 'a certain place name'  
where the nominative and the partitive (the central grammatical cases) occur only in the singular but all other cases only in the plural, e.g. *Parais-i-lla*  
PLURAL-ADESSIVE 'in Parainen', *Parais-i-lle*  
PLURAL-ALLATIVE 'to Parainen'. This is a mixture of pluralia tantum and singularia tantum.

## 2.2. Singularia tantum nouns

Some nouns are inflected only in the singular and lack plural forms. E.g., Quirk & al. (1989:297 ff.) divide the English nouns into three subgroups: (i) singular invariable nouns such as *music*, *gold*,

*Thomas, the Thames*, (ii) plural invariable nouns (cf. *pluralia tantum* above), and (iii) variable nouns displaying a genuine number opposition.

Abstract noncount nouns normally do not have plural forms, e.g. *music, dirt, homework*, neither do ordinary mass nouns or proper names. Some of them can however occasionally be used in the plural. The plural forms might even be due to productive semantic subprocesses such as the one allowing plurals of mass nouns meaning 'kind of x' or 'a certain appropriate quantity of x', e.g. *golds* 'kinds of gold', *beers* 'bottles or glasses of beer'. The 44-million word Wall Street Journal Corpus (courtesy of the Association of Computational Linguistics) contains i.a. the following genuine sentences:

(1) South African *golds* closed lower.

(2) I'm told that's how they've won 15 out of 21 *golds* awarded in the sport ...

(3) Borden sells considerably more whole milk than reduced-fat *milks* in Hispanic markets, he says.

(4) This year's five-day conference, which ran through Sunday, did include a few doubting *Thomases*.

In Finnish, pluralization of proper names is a productive semantic-pragmatic subprocess expressing e.g. a supercilious attitude of the speaker:

(5) Ole-n näh-nyt *Helsingi-t* ja  
*Tukholma-t*.

Be-1ST.PERSON-PRESENT-INDICATIVE  
see-PARTICIPLE Helsinki-NOM-PL and  
Stockholm-NOM-PL.

'I have seen lots of cities like  
Helsinki and Stockholm.'

These data clearly indicate the gradual and somewhat elusive nature of many of the defectivity restrictions under discussion. Although there are a few absolute and exceptionless instances of defectivity (2.1), most defectivity phenomena are in fact just instances of special rare usage, often explicable in semantic and/or pragmatic terms.

### 2.3. Adjectives

One of the defining characteristics of adjectives in languages with appropriate inflection is the propensity to be gradable, in particular to have comparative and superlative forms. However, there are several stative or absolute adjectives

normally lacking these very forms, e.g. Sw. *atomär* 'atomic', *död* 'dead', *euklidisk* 'euclidean', *fyrkantig* 'square', *parisisk* 'relating to Paris', *lockförsedd* 'having a lock'. Here, absence of comparison is due to obvious semantic and pragmatic reasons. Under ordinary circumstances, it makes no sense to predicate of an object that it is for example more or less euclidean.

In several languages, the occurrence of inflectional comparison is dependent on purely phonological and/or morphological criteria. English inflectional comparison is to a great extent determined by the syllable structure and stress properties of the adjective stem (Quirk & al. 1989:461 ff.). Thus, trisyllabic or longer adjectives take no inflectional comparison endings, e.g. *\*perceivabl-er* 'more perceivable', *\*interesting-er* 'more interesting'.

#### 2.4. Verbs

Several of the central verbal inflectional categories might be subject to defectivity restrictions. Auxiliary verbs frequently have defective paradigms, often in fairly

idiosyncratic ways, e.g. Eng. *may*, \**may-ed* may-PAST, \**may-s* may-3RD.PERSON-SINGULAR, \**may-ing* may-PROGRESSIVE, Sw. *måste* 'must' lacks an infinitive \**måsta* (especially in standard Swedish), and Ger. *möchten* 'may' lacks a past tense such as \**möchteten*.

Grammars of several languages traditionally list a subcategory of monopersonal verbs that occur only in the 3rd person but not in the 1st or 2nd. Some such verbs do not even occur in the 3rd person plural. E.g. Finnish has several subtypes of monopersonal verbs, here all listed in the 3rd person singular: (a) modal verbs such as *pitä-ä* 'must', *täyty-y* 'must', *kannatta-a* 'is worth', *kelpaa* 'be suitable, be fitting, do' (these only occur in the 3rd pers. sg.) ; (b) morphologically derived causatives expressing various physiological or mental states such as *aivastutta-a* 'be about to sneeze, make somebody sneeze', *heikotta-a* 'feel weak, make somebody feel weak', *kadutta-a* 'regret, make to feel sorry for' (-*tutta-* or -*tta-* is a causative derivational ending); (c) meteorological and equivalent verbs such as *sata-a* 'rain', *myrskyä-ä* 'storm', *liplattele-e* 'splash'

(predicated of vawes). Neither do these verbs have the so-called passive forms, actually expressing an indefinite agent ("4th person"), hypothetically  
 \**sade-ta-an* sata-PASSIVE-PERSON 'one rains',  
 \**liplatel-la-an* liplattele-PASSIVE-PERSON  
 'one splashes', \**kadute-ta-an*  
 katu-PASS-PERSON 'one is made to feel  
 regret'.

The perfective/imperfective opposition of Russian and other Slavic languages is two-ways defective, there are both perfectiva tantum and imperfectiva tantum. Rus. imperfectiva tantum include *lezhat* 'lay, idle, laze', *spat* 'sleep', *syshestvovat* 'exist', *golodat* 'starve', *stojat* 'stand', *ljubit* 'love, like'. The respective meanings and denotations are such that they cannot be naturally linked to the decisive, resultative, bounded etc. change constituting the core meaning of the perfective aspect.

Perfectiva tantum are e.g. *potantsevat* 'dance for some time', *ryhnyt* 'collapse, slide down', *kol'nyt* 'prick, sting, stick (fast or once)', *otshymet* 'stop keeping noise', *zakritshat* 'start screaming'. These meanings involve components such as

suddenness, uniqueness, and inchoation that are not readily combinable with the irresultative and durative nature of the imperfective aspect. (Cf. Maslov (1964) and Soboleva (1979) for details. Maslov also provides examples from Bulgarian.)

Paradigm defectivity in verbs is thus mostly due to natural semantic consequences of the incompatibility of the meanings of verbal roots and inflectional categories.

### **2.5. Adverbs**

Almost by definition, the category of adverbs is outside inflection. Therefore one would not a priori expect adverbs to have anything to do with defectivity. However, e.g. in Finnish there are hundreds of partially inflected adverbs. There are fifteen morphological cases and two numbers in Finnish. Most of the defective adverbs are inflected only in the plural of either the three internal local cases inessive, elative and illative, or the plural of the three external local cases adessive, ablative, allative (cf. G. Karlsson 1957). Concrete examples are *eksyks-i-ssä*, *eksyks-i-stä*, *eksyks-i-in*

'lost', and *here-i-llä*, *here-i-ltä*,  
*here-i-lle* 'awake'. Sentences such as  
 these are possible:

(5) Hän on *eksyks-i-ssä*.

She-NOMINATIVE-SINGULAR is-3RD.PERS-PRE-  
 SENT-INDICATIVE lost-PLURAL-INESSIVE. (local,  
 non-directional)

'She is lost.'

(6) Hän joutu-i *eksyks-i-in*.

She-NOMINATIVE-SINGULAR get-PAST  
 lost-PLURAL-ILLATIVE. (directional,  
 end-state)

'She got lost.'

(7) *Eksyks-i-stä* häne-t löyde-tt-i-in.

Lost-PLURAL-ELATIVE she-ACCUSATIVE-SIN-  
 GULAR found-PASSIVE-PAST-PERSON. (dir-  
 ectional, start-state)

'Having been lost, she was found.'

There is no ordinary base form for many  
 of these defective adverb paradigms, such  
 as a hypothetical \**nukus* NOMINATIVE-SINGULAR.  
 Nor are there any other inflected forms.  
 The plural ending *-i-* still is mor-  
 phologically and even semantically  
 transparent.

## 2.6. Phonological blocking

A borderline instance of defectivity is the one due to phonological blocking. E.g., in Swedish the ordinary genitive ending is *-s*. However, *-s* cannot be suffixed to stems ending in sibilants. Nouns such as *hus* 'house', *svans* 'tail', *Max* thus have no indefinite genitive singular forms like *\*hus-s*, *\*Max-s* (but they do have definite genitive singulars such as *bil-en-s*, *Max-en-s*).

### 3. Frequency profiles of paradigms

There are indubitable instances of **absolute defectivity** where some forms are totally impossible and nonexistent, e.g. singular forms of certain Lat. pluralia tantum place names, past tense forms of Eng. modal auxiliaries, imperfective forms of Rus. perfectiva tantum, and grammatical case forms (nominative, genitive, partitive) of Fin. adverbs like *nukuks-i-ssa*. The gaps of such paradigms are due to strict grammar restrictions, rules in the proper sense.

But quite a few of the gaps in paradigms presumed to be defective depend more on semantic and pragmatic restrictions. Several examples of this propensity have

been given above, e.g. a Sw. absolute adjective like *atomär* 'atomic' is not likely to be compared but the form *atomärare* is "grammatical" and could be used in some special context.

This raises the more general question of whether there is some (weak) kind of defectivity in almost any word paradigm in the sense that some forms are central and frequently used, **core forms**, while others are rare or nonexistent, i.e. **peripheral**. This hypothesis presupposes investigation of the token frequencies of individual word-forms.

First consider the following frequency data on the token frequencies of the forms of some Eng. nouns. The figures emanate from two well-known machine-readable tagged corpora, the Brown University Corpus of American English, and the London-Oslo-Bergen (LOB) Corpus of British English. Both corpora contain roughly 1 million word-form tokens.

	<i>Brown</i>		<i>LOB</i>	
	N	%	N	%
WORD: <i>boy</i>				
NOM.SG.	194	59	239	61
GEN.SG.	8	2	16	4

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NOM.PL.	121	37	136	35
GEN.PL	5	2	3	1
SUM:	328	100	394	101

WORD: *car*

NOM.SG.	272	81	271	70
GEN.SG.	1	0	7	2
NOM.PL.	62	19	112	29
GEN.PL.	0	0	0	0
SUM:	335	100	390	99

WORD: *child*

NOM.SG.	245	34	210	34
GEN.SG.	25	3	32	5
NOM.PL.	420	58	350	57
GEN.PL.	38	5	21	3
SUM:	728	100	613	99

WORD: *earth*

NOM.SG.	111	93	117	91
GEN.SG.	5	4	11	8
NOM.PL.	4	3	0	0
GEN.PL.	0	0	0	0
SUM:	120	100	128	99

WORD: *gold*

NOM.SG.	80	100	36	100
GEN.SG.	0	0	0	0

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NOM.PL.	0	0	0	0
GEN.PL.	0	0	0	0
SUM:	80	100	36	100

WORD: *tree*

NOM.SG.	69	41	56	37
GEN.SG.	1	1	0	0
NOM.PL.	99	59	95	63
GEN.PL.	0	0	0	0
SUM:	169	101	151	100

The central form of *tree* and *child* is the nominative plural, due to the respective referents which tend to occur in pairs or greater populations. Cars are normally talked of in the singular, boys more often in the plural, but not as often as are hands and trees. *Earth* is predominantly singular. The paradigm of *gold* is 100% clustered around the nominative singular (but cf. 2.2). The genitive, especially in the plural, tends to presuppose that the referent be animate (human). The basic function of the genitive, that of expressing possession, is normally predicated only of animates (especially humans).

Forms of individual paradigms are thus used in ways that are governed by seman-

tic-pragmatic factors. The forms of semantically different paradigms have different characteristic **frequency profiles** (F. Karlsson 1985, 1986), token frequency distribution of the forms. Some forms are used often, others might be virtually nonexistent. Defectivity turns out to be a gradient phenomenon. The figures derived from the Brown and LOB corpora paradigmwise display the same systematic tendencies. In view of the additional fact that Brown and LOB were carefully compiled in order to be statistically representative, it is safe to conclude that the frequency profiles are not random atomistic data but reflections of important properties of language use. The data are relevant for theories of the mental lexicon (e.g., what are the lexical entries), and theories of language processing such as child language acquisition (e.g., what are the first word-forms likely to be acquired, what morphological properties of the language system do they instantiate, etc.).

The frequency profile differences of semantically different paradigms are even more tangible in a language such as Finnish

with many morphological cases (F. Karlsson 1986). The following data were derived from a computerized corpus of written Finnish containing 26 issues (610.000 word-forms) of *Suomen Kuvalehti*, a popular weekly magazine. The table shows the token frequencies of the case/number forms of five nouns and one pronoun belonging to different semantic subclasses. *Martti* is a man's name, *Helsinki* a place name, *vesi* 'water' is a noncount noun, *alue* 'region' denotes place, and *kesä* 'summer' time

WORD:	<i>Martti</i>		<i>hän</i>		<i>Helsinki</i>		<i>vesi</i>		<i>alue</i>		<i>kesä</i>	
	N	%	N	%	N	%	N	%	N	%	N	%
NOM.SG.	129	94	2583	59	443	43	31	23	36	14	15	10
NOM.PL.	0	0	0	0	0	0	6	14	13	16	4	57
GEN.SG.	8	6	1034	24	372	36	39	29	59	23	42	26
GEN.PL.	0	0	0	0	0	0	9	21	14	18	0	0
ACC.SG.	0	0	179	4	0	0	0	0	0	0	0	0
ACC.PL.	0	0	0	0	0	0	0	0	0	0	0	0
PART.SG.	0	0	181	4	7	1	37	29	20	9	3	2
PART.PL.	0	0	0	0	0	0	3	7	9	11	0	0
INE.SG.	0	0	15	0	131	13	5	4	0	0	0	0
INE.PL.	0	0	0	0	0	0	2	9	0	0	0	0
ELA.SG.	0	0	63	1	19	2	5	4	4	2	7	4
ELA.PL.	0	0	0	0	0	0	1	2	3	4	0	0
ILL.SG.	0	0	19	0	43	4	11	8	2	1	3	2

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ILL.PL.	0	0	0	0	0	0	4	9	4	5	0	0
ADE.SG.	1	1	141	3	2	0	3	2	90	37	56	35
ADE.PL.	0	0	0	0	0	0	9	20	24	32	0	0
ABL.SG.	0	0	26	1	0	0	0	0	10	4	0	0
ABL.PL.	0	0	0	0	0	0	0	7	4	5	0	0
ALL.SG.	0	0	133	3	3	0	1	1	21	9	0	0
ALL.PL.	0	0	0	0	0	0	5	11	7	9	0	0
ESS.SG.	0	0	0	0	0	0	0	0	2	1	35	21
ESS.PL.	0	0	0	0	0	0	0	0	0	0	3	43
TRA.SG	0	0	0	0	0	0	0	0	1	0	2	1
TRA.PL	0	0	0	0	0	0	0	0	0	0	0	0

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SUM	138	4374	1020	171	323	170
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Proper names and personal pronouns denote human agents. Such words are subject-prominent in terms of syntactic behaviour, and theme-prominent in terms of functional sentence perspective. It is to be expected that the nominative, the subject case par excellence, dominates their paradigms. The incidence of nominatives is 94 % for *Martti*, and 59 % for *hän* (here and henceforth we consider the singular only). The second major case of proper names and personal pronouns is the genitive, 6 % and 24 %, respectively, which has many syntactic and semantic functions. The dominant function of the gen-

itive in this context is possession. This is also the meaning expressed by the external local cases (adessive, ablative, allative) that constitute the third major use of these words (3 + 1 + 3 = 7 % for *hän*). The notable incidence of possessive case uses is also semantically predictable. Possession is typically predicated of humans.

A comparison with the other example paradigms reveals that the genitive recurs with a share of roughly one fourth. The really typical properties of pronouns and proper names are thus a high rate of nominatives and external local cases. *Helsinki* is a city name and has locality as one important meaning component. As it denotes the capital of Finland, it is treated as pragmatically given in most discourses. This predisposes it for subjecthood and thematic position, i.e. nominative case (43 %). *Helsinki* also denotes a human conglomerate. This makes understandable the high frequency of (mainly) possessive genitives (36 %). The third major use of this word is in local expressions. The internal local cases (inessive, elative, illative) a 19 % share.

A common property of pronouns and proper names is the low predilection (0 %, 4 %, 1 %) to take partitive case. The reason is clear. Partitives typically occur with mass words. Therefore, apart from syntactically triggered partitives, proper nouns and pronouns qualify for partitive use only in the plural.

*Vesi* 'water' is a mass word. This is reflected in its paradigm by the prominent 29 % share of singular partitives. Also the internal local cases, 16 %, are prominent. The adessive and allative are frequent in the plural (20 %, 11 %) compared to their rareness in the sg. (2 %, 1 %), due to some common idioms.

*Alue* 'region' has an indeterminate local meaning and no obvious connections to the subject- or theme-enforcing features treated above. Indeterminate locality is expressed by the external local cases which dominate this paradigm (some 50 %). The incidence of nominatives is only 14 % which reflects the remoteness of agency, thematicness, etc.

*Kesä* 'summer' is partly temporal in meaning, the dominant cases for this being essive and adessive, and these cases do rule

this paradigm (21 %, 35 %). The nom. sg. has a frequency of only 10 %.

Meaning components thus often predispose what forms of a word are likely to be used and how "defective" its paradigm is likely to be. Syntactic and thematic factors also affect word-form use. The dominant forms are the **focal points** of the paradigm. The opposites of focal points are gaps, the extreme instances of which are due to grammatical restrictions (absolute defectivity).

#### **4. Concluding remarks**

We have anchored the notion defectivity especially in inflectional paradigms. These are often taken to be strictly or "mechanically" rule-governed in the sense that all cells are in principle populated. It is well known that derivation (as one of the central means of word-formation) is less rule-governed than inflection. Many gaps are therefore to be expected also in the "derivational paradigms" of words. As Plank (1981, Chapter 3) shows, these gaps too are often due to constraints concerning semantic compatibility and pragmatic relevance, e.g. the absence in

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English of words derived using the privative prefix *un-* such as \**unbeat*, \**unswim*, \**unwalk*. Another derivationally relevant factor is **blocking** (also cf. Wurzel 1988). Some derivatives are ungrammatical (or unneeded!) simply because there already exists an underived basic word expressing the same meaning, e.g. there is no (need for an) Eng. nomen agentis \**steal-er* to the verb *steal* because of the existence of the noun *thief*.

Inflectional gaps are visible also in the course of **diachronic processes**. E.g., when paradigms are being restructured due to the effects of phonological and/or morphological changes, there might occur stages when no single form of several alternatives qualifies for populating a certain inflectional cell (cf. Kiparsky 1974:271). E.g., the subsystems of strong verbs in Germanic languages are in a long-term process of being regularized. Presently Eng. *stride* has variation in its past participle (*stridden* vs. *strided*) occasionally accompanied, on the part of language users, by hesitance and even reluctance to use any form.

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