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Conditional lexicon in  
lexicallist morphology

The paper is devoted to the concept of the conditional lexicon within the morphological model emerging from the latest investigations in the lexicallist framework<sup>1</sup>. Initially, some arguments in favour of postulating the mechanism of the conditional lexicon are introduced, followed by a discussion on the interrelations between the permanent and conditional dictionaries and a mention of constraints on the latter.

The dichotomy of regular derivatives/products of Word Formation Rules - WFRs/ and idiosyncratic complex forms, reflected in Allen's /1978/ conception of two separate lexicons - permanent and conditional - constitutes the basis of the modified version of dictionary presented below. Allen /1978/ claims that the conditional lexicon contains the output/derivatives/ of WFRs, whereas the permanent one - all the forms that are irregular in any aspect/beside simple lexemes and morphemes/. The model offered here differs from Allen's /1978/ original concept in that it distributes the linguistic material between the two lexicons in a different manner. The permanent lexicon, apart from morphologically indivisible forms, such as sieć "net", plot "fence", pień "trunk", or complex, yet non-derived ones, such as malina "raspberry", rekaw "sleeve"<sup>2</sup>, includes also some perfectly regular derived lexemes, e.g.: domek "house, dim." from dom "house", tomik "volume, dim." from tom "volume". The content of the conditional lexicon remains unchanged. Neither of the lexicons alone reflects the actual usage of complex forms, i.e. performance because the conditional one does not admit idiosyncrasies /it does not list such forms as

malina, for instance/ and the permanent one holds only some products of WFRs. However, the interaction of both lexicons in the constructed model brings about the complete set of words occurring in speech.

The first question arising in connection with the concept of the conditional lexicon is its legitimacy within the lexicalist framework. Some endorsement results from the assumptions of the generative grammar itself; it is not only to analyse, but also to produce and predict - hence the overgenerating power of WFRs, which are said to derive more lexemes than actually appear in performance. Consequently, the need for a repository of potential forms / the conditional lexicon/ may manifest itself.

Linguistic data supply another argument in favour of the conditional lexicon of potential words. There appear numerous forms, which semantically, syntactically and phonologically behave just like members of a given class of derivatives, yet they possess no related lexemes eligible for their bases /i.e. the forms from which they could be derived/. Such lexemes may not exist at all, or else all imaginable bases do not belong to the same category as the bases of regular derivatives. For example, the Polish feminine nouns *szwaczka* "needlewoman", *draczka* "laundress", *koronczarka* "lace-maker, fem." have /in normal use/ no masculine counterparts, although the feminine complex nouns in Polish can be derived uniformly from masculine bases, e.g.: *malarz* "painter" vs *malarka* "id. fem.", *swawolnik* "playful youth" vs *swawolnica* "id. fem.", *nadzorca* "supervisor" vs *nadzorczyń* "id. dim.", etc. That is why we postulate potential lexemes: *?szwacz* "needleman", *?dracz* "laundry-man", *koronczarz* "lace-maker", instead of deriving the feminine nouns from ad hoc picked related words, e.g.: *szyc* "to sew", *prac* "to wash", *koronka* "lace" respectively /in the face of the regular formation - with masculine bases/.

English supplies also numerous forms which require potential bases. Allen /1978:194/ quotes such pairs as: *unsightly* vs *rightly*, /cf. *untimely* vs *timely*/, *embolden* vs *bolden* /cf. *embitter* vs *bitter*/, *deodorize* vs *?odorize* /cf. *disembark* vs *embark*/, *embankment* vs *?embank* /cf. *employment* vs *employ*/, *encapsulate* vs *?capsulate* /cf. *enclose* vs *close*/, etc.

However, there is nothing axiomatic about the need for the conditional lexicon, even though potential forms have been incorporated into the morphological model. Consequently, some more argu-

ments upholding the central concept of the paper seem in order.

First of all the conditional lexicon appears necessary if we accept the variant of morphology with unordered WFRs<sup>4</sup>. WFRs cannot be ordered lest they should fail to produce certain existing derivatives. Ordering of rules serves the same purpose as putting conditions on their application, i. e. selecting the set of forms which can serve as bases and excluding the ones that cannot. For example, we could capture the fact that diminutives are not formed from abstract nouns /*wysokość* "height" - *\*wysokostka* "id. dim." / by ordering the diminutivization rule before the rule /or rather a complex of rules/ deriving abstract nouns. This solution is inadequate because there are diminutives indirectly formed from abstract nouns. Nykiet and Fidelholtz /1981/ argue that masculine nouns with the suffix *-ista* are derived from the substantives terminating in *-izm* /abstract ones/. Thus consider the following examples:

- 1
- idealizm "idealism" - idealista "idealist" - idealisci "id. dim."
- kapitalizm "capitalism" - kapitalista "capitalist" - kapitalisci "id. dim./"
- ekstremizm "extremism" - ekstremista "extremist" - ekstremisci "id. dim./"
- konformizm "conformity" - konformista "conformist" - konformisci "id. dim./"

If the diminutivization and the rules forming abstract nouns were ordered, they would fail to form /ic/. Similarly, there are diminutives which have the deadjectival abstract noun stage in their derivational history:

- 2
- wysoki "high" - wysokość "height" - wysokościowy "concerning height" - wysokościowiec "sky-scraper" - wysokościowiec /id. dim./
- szybki "quick" - szybkość "speed" - szybkościowy "concerning speed" - szybkościowiec "building raised in record time" - szybkościowiec /id. dim./

Were the two rules to be ordered, the complex word in /ic/ and the final ones in /2/ would have to be ungrammatical<sup>5</sup>. That is why

we reject the ordering of WFRs, although it could circumscribe the base of a rule by creating an algorithm of operations in which every rule would automatically admit the products of its predecessors, making any inventory /the conditional lexicon/ superfluous.

In the model without ordering the conditional lexicon proves indispensable. WFRs operate on specified bases<sup>7</sup> whenever there is a proper context for their application, which need not coincide with outputs of particular WFRs. For instance, the diminutivization rule operates on names of instruments /*złiwarka* "reading machine" - *złwiareczka* "id. dim. n./, feminine nouns /*złiwarka* "she-harvest-er" - *złwiareczka* "id. dim. n./, masculine nouns /*przodownik* "leader" - *przodowniczek* "id. dim. n./, place names /*stolarnia* "joiner's shop" - *stolar-zenka* "id. dim. n./; note, however, that the place names with *-isko* cannot be used /*wrzosowisko* "heath" - \**wrzosowiszczko* "id. dim. n./.. Consequently, without the conditional lexicon the base of a rule would have to be specified not as a class of forms possessing certain common features /in this case the base forms must be [-abstract]/ because there would be no repository of all potential derivatives, but as a reference to a variety of WFRs /forming instru-ments, names of places, etc./ or even to affixation rules within WFRs /e.g. the *-isko* derivatives/. Moreover, the class of bases /[-abstract]/ would have to be mentioned in the specification of the base in any case in order to exclude lexemes from the permanent lexicon /non-derived/, which, otherwise, might form diminutive derivatives /*dobro* "right" - \**dobrko* "id. dim. n./, The presence of the conditional lexicon in the model solves the problems since the proper class of forms can be selected from its content<sup>8</sup>.

The second argument in favour of postulating the conditional lexicon is connected with another element of the morphological model - blocking /see Aronoff 1976, cf. also Allen 1978/. In most general terms blocking prevents the formation of such derivatives which possess lexicalized counterparts /i.e. entered in the permanent lexicon, as well as formally and semantically related/. For instance, the nouns *glory*, *fur*, *falacy* block potential derivatives *\*glorio-sity*, *\*furalisty*, *\*falalicy* /Aronoff 1976:44/. This concept reflects a very interesting phenomenon of the morphological reality, but as a matter of fact no precise mechanism securing the operation of blocking has been put forward. It seems that the introduction of the conditional lexicon may help in understanding the mechanism of

blocking. It happens so because blocking can be seen as a result of interrelations between the conditional and permanent lexicons. These interrelations are developed by furnishing both lexicons with structures, instead of presenting them as lists of forms. The conditional lexicon constitutes a network of oppositions of derived canonical meanings,<sup>9</sup> i.e. oppositions reflecting the nature of WF processes operating in a given language. For example, the process of forming feminine names in Polish /e.g. *aktor* "actor" - *aktorka* "actress"/implies the corresponding lexical opposition, the morphological relation reflected by the diminutivization rule entails the existence of diminutive slots /see Note 9/ in the conditional lexicon. WFRs insert their products automatically into suitable slots. For instance, the surface form *węglarka* represents two lexemes which would occupy two separate slots - one filled by the feminization rule /"she-coal merchant"/, the other by the rule deriving names of instruments /"gon-dola car"/.

The permanent lexicon, in its part containing derived forms /as it is a repository of non-derived ones as well/, reflects in every detail the network of the conditional lexicon. There are differences though, in the conditional lexicon every single slot is occupied by at least one form,<sup>10</sup> whereas in the permanent one some slots remain empty. It follows from the assumption that only certain regular derivatives appear in the permanent lexicon. The interaction of structured lexicons with the lexical insertion rules allows us to explain the working of the mechanism of blocking.

Let us imagine that the two nets of the lexicons are put together as to make the permanent lexicon work as a filter with respect to the conditional one. The lexical insertion rules draw forms from both dictionaries, but always through the net of the permanent one. If a given slot in the permanent lexicon is empty, the forms from the conditional dictionary may be inserted into utterances freely, otherwise they are blocked and only the lexicalized word is available. For example, *gospodyni* "landlady", appearing in the permanent lexicon, blocks the potential form *\*gospodarke*, which is derived by means of the feminization rule from the base *gospodarz* "landlord"; *domek* "house, dim. n." blocks *\*domik* "id. dim. n.", whereas in the case of the pair *łomek* "crowbar", dim. n., *łomik* "id. dim. n." the corresponding empty slot in the permanent lexicon produces no obstacle to the insertion. A similar phenomenon is observed in the case of the feminine derivatives formed by means of the suffixes *-ica* and

-Kaj. dostojniczka "she-dignitary" blocks zostojnica "id.", while when the corresponding slots are empty both rival derivatives may appear: zabojnica "she-murderer" vs zabojniczka "id. dim.", weselnica "she-wedding guest" vs weselniczka "id.".

All these data can be accounted for in the constructed model thanks to the mechanism of blocking, whose operation, in turn, is secured by the interaction of two structured lexicons/together with the lexical insertion rules/. Consequently, the phenomenon of blocking provides internal justification for postulating the conditional lexicon.

Such assumptions as the ones discussed above, i.e. the really generative/not analytic/power of WFRs, their unordered application/together with the fact that they do not operate on the permanent lexicon exclusively/ and the necessity of finding a precise grammatical mechanism reflecting the phenomenon of blocking induce us to believe that the conditional lexicon should find a stable place in the generative model of the lexicalist morphology. However, we are only too well aware of the hazard connected with the introduction of such a powerful device as a conditional dictionary of potential forms /and the whole idea of potential, non-existent derivatives in general/. In morphology it is especially difficult to distinguish between what is ungrammatical and what is merely non-appearing; this dilemma follows naturally from the fact that only some derived forms are stored in the permanent lexicon and they seem more "familiar", sound "better" /which indirectly supports our distribution of the material between the lexicons/'1. We claim that basically there is only one way of assessing the grammaticality of a derived form - its congruence with the particular rule producing it, as well as with the whole system of WFRs, which may either be involved in its derivational history, or operate on it. The forms stored in the permanent lexicon are not pertinent to this evaluation - they are merely listed /and do not undergo the assessment of grammaticality/. Consequently, in the model with the conditional lexicon the formulation of WFRs becomes a paramount issue and the agreement of the potential forms with the WFR system constitutes the first and most important constraint on the content of the conditional dictionary. Hence, the impression that one may postulate any potential form which could be useful in deriving a given complex word is illusory. For lack of space we would like to illustrate the above mentioned constraint with just one example which should visualize the effect of consistent application of the agreement principle. In

Polish, there is a WFR deriving deadjectival masculine nouns with the suffix -ec:

- 3
- \*zlosliwy "malicious" - zlosliwec "malicious person"
  - wykolejony "gone astray" - wykolejeniec "gone astray person"
  - zacofoany "old fashioned" - zacofoaniec "old fashioned person"
  - oswietleniowy "lighting, attributive" - oswietleniowiec "lighting engineer"
  - radiowy "radio, attributive" - radiowiec "radio technician"
  - frontowy "front-line, attributive" - frontowiec "front-line soldier"

However, a certain group of complex words characterized by the -ec suffix and the semantic features [+human] [+masculine] lacks the respective adjectives which could serve as their bases:

- 4
- \*zetempowy - zetempowiec "member of ZMP"
  - \*pepesowyy - pepesowiec "member of PPS"
  - \*hitlerowyy - hitlerowiec "Hitlerite"
  - \*stachanowyy - stachanowiec "Stakhanovite", etc.

It might seem that the most adequate way to account for the body of data in /4/ would be to postulate the existence of potential adjectives /such as the ones in 4/, which could serve as bases for the derivation and thus to capture the formal and semantic affinity of the classes of nouns in /3/ and /4/. However, a closer examination of the latter derivatives reveals the fact that it is not the procedure to follow; the forms in /4/ behave unlike those in /3/ with respect to the feminization rule in Polish. The nouns in /3/, derived by means of the rule attaching the -ec suffix to occurring adjectives, do not possess corresponding feminine derivatives '2:

- 5
- \*ziosliwka, \*ziosliwica, \*ziosliwczyni, \*wykolejenka,
  - \*wykolejenka, \*wykolejenczyni, \*zacofoanka, \*zacofoanica,
  - \*zacofoaczyni

On the other hand, the nouns in /4/ form feminine derivatives quite regularly: zetempowka, pepesowka, hitlerowka, stachanowka. Consequently, we will not postulate that both nominal groups /3/ and 4/ should be derived by means of one rule '3; thus there

will be no need to extend the conditional lexicon as to include the adjectives from /4/. In this way the requirement of full agreement between the whole system of WFRs and the forms in the conditional lexicon constrains the potentialities of this dictionary to a great extent, thus preventing it from playing the role of pseudo-panacea for all disorders in the morphological system.

There is no place to discuss in any detail other constraints on the content of the conditional lexicon since the problem requires a separate work. We would only like to signal here the existence of such limitations:

- the conditional lexicon includes only derived forms, so one could not place in it such "items" as \*mal, \*oberz, \*krusz to form malina "raspberry", oberzyna "eggplant", kruszya "alder buck thorn" /cf. Strauss to appear/; that is why its content is eventually circumscribed by the number of available word-bases.

- the Haplological Constraint, operating directly on the output of WFRs excludes some forms which are produced by means of regular morphological processes, but are not potential /for a detailed presentation of the Haplological Constraint see Dressler 1977, Szymanek 1982/.

- the network of WFRs, which forms the structure of the conditional lexicon /oppositions/ allows only certain kinds of derivatives to appear in it /e.g. since there is no rule forming diminutives from argumentatives, no deargumentative diminutives will be admitted into the dictionary/.

- the reiteration of the notion of double /multiple/ motivation seen as a set of equal relations between a derivative and two /or more/ bases precludes us from postulating doublets of identical lexemes with distinct base forms; otherwise, for example malarka "painter, fem." could appear in the dictionary as two unrelated lexemes - one connected with malowac "to paint", the other with malarz "painter".

- the mechanism of blocking operates also in the case of selecting bases for WFRs, excluding some potentially eligible ones.

The above mentioned constraints make the conditional lexicon less powerful and, consequently, more desirable in the lexicalist morphology. We believe that only the construction of a model with the generative /WFRs/ and static /the lexicons/ parts equally developed may bring about a full account of word formation phenomena.

## Notes

1. Primarily from Aronoff /1976/, Allen /1978/, Booij /1977/, Laskowski /1981/, in press/, Szymanek /1981/.
  2. The derived word is produced by WFRs of a given language and, consequently, complex both formally and semantically. It also represents a class whose members remain in identical relations to their bases. Neither malina, nor rekaw fulfills these conditions, whereas domek and tomik do - cf. tom "crowbar" vs zomek, tomik "id. dim.", platan "platan" vs platanek, platanik "id. dim.".
  3. The inclusion of certain regular derivatives in the permanent lexicon is necessary to secure the working of blocking mechanisms /discussed in detail by Aronoff 1976, Malicka to appear, and also below/.
  4. WFRs are defined here as subsuming rules of derivation and affixation. The latter can be ordered among themselves /see Laskowski 1981; Szymanek 1981/.
  5. The forms in /1c/ may be considered to be expressive.
  6. There are means of avoiding this difficulty in ordering by introduction of cycles and epicycles into the model. However, such a solution is strongly criticized by Aronoff /1976/.
  7. The classes of bases are specified in the adopted model by the WFR itself - as the base of a rule together with the input blocking device /the mechanism excluding some forms whose features match the base, but the appropriate derivatives fail to appear - see Szymanek 1981/.
  8. In fact, the base of the diminutivization requires some additional features; base forms cannot possess argumentative meaning, etc. However, the set of bases can be specified as a uniform class /sharing some features/, unlike in the alternative solution. For a discussion concerning constraints on the diminutivization in Polish see Kreja /1969/.
  9. Aronoff /1976/43/:
- "[...] the lexicon is arranged according to stems, and [...] for each stem there is a slot for each canonical meaning where "canonical" means derived by regular rules. Let us further assume that for each stem there cannot be more than one item in each meaning slot".
10. In the case of parallel affixation rules forming rival derivatives, a slot may contain more than one lexeme, e.g.:

kom "clobber" vs komk "id. dim.", komk "id. dim.",  
 11. No such difficulty arises in the case of syntactically formed strings since no repository intervenes.  
 12. It is secured by means of a condition included in the input blocking device of the feminization rule:

X f Y+ec  
 /a base/

13. As a matter of fact we are inclined to think that the forms in /u/ are derived by means of a complex affix /-owlec/.

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Streszczenie

Artykuł jest poświęcony miejscu i roli warunkowego leksykonu w leksykalistycznym modelu morfologii generatywnej. Wykazujemy się z prac Aronoffa /1976/, Allen /1978/, Booija /1977/, Laskowskiego /1981/ i Szymanka /1981/.

Na wstępie przedstawione są argumenty przemawiające za koniecznością wprowadzenia do modelu takiego zbioru deriwatów, jakim jest leksykon warunkowy. Argumenty te opierają się zarówno na podstawach teoretycznych morfologii generatywnej, jak i na badaniach materiałowych.

Następny problem podjęty w artykule stanowią relacje istniejące pomiędzy zmodyfikowanym leksykonem warunkowym a innymi elementami modelu morfologii. Szczególnie istotne jest współdziałanie leksykonu warunkowego z permanentnym, ponieważ pozwala ono na wyłączenie genery zjawiska blokowania - braku w użyciu pewnych potencjalnych leksemów.

Na zakończenie zasygnalizowano możliwość nałożenia ograniczeń na występowanie deriwatów w leksykonie warunkowym.