Productivity as a sign of category change:
The case of Hungarian verbal prefixes

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The main purpose of this paper is to define some criteria for differentiating between a subclass of Hungarian verbal prefixes which consists of morphotactically still analyzable (in a sense morphologically complex) verbal prefixes and their source of grammaticalization: case-marked determinerless NPs. In the paper it will be shown that, concerning the status of debatable elements, an increasing degree of morphological productivity is a substantial sign of grammaticalization that has been completed. It is also argued that productivity has its basis in semantics. The paper is organized as follows: In the Introduction the problems to be dealt with are presented. Section 2 gives an analysis of one Hungarian verbal prefix as an illustration. In Section 3, synchronic facts given in the previous Sections are put into a historical perspective, and a productivity criterion hypothesis is outlined. Section 4 tries to check the productivity criterion hypothesis analyzing some preverbal elements in Hungarian, and finally, Section 5 contains the conclusions.

1. Introduction

1.1. Difficulties in defining the category of verbal prefixes

Defining the category of verbal prefixes in Hungarian involves difficulties. One of the reasons is that in their syntactic behaviour verbal prefixes are very similar to other preverbal elements. In a recent article (Komlósy, 1992) the author also emphasises these similarities, e.g. the pre- or postverbal position of the above mentioned elements depending on focus. (For a discussion of this see also Kálmán, 1985a, 1985b, Farkas & Sadock, 1989, and Pléh, Ackerman & Komlósy, 1989). Some examples:

(1)   a.   be-megy
                in-go
                '(s)he goes in'   →
        b.   nem   megy   be
                not   go   in
                '(s)he does not go in'
(2)   a.   fel-vág valami-t
                up-cut   something-ACC
                '(s)he cuts up something'   →
        b.   nem   vág   fel   valami-t
                not   cut   up   something-ACC
                '(s)he does not cut up anything'
(3)   a.   mozi-ba megy
                cinema-in   go
                '(s)he goes to the cinema'   →
        b.   nem   megy   mozi-ba
                not   go   cinema-in
                '(s)he does not go to the cinema'
(4)   a.   fá-t   vág
                wood-ACC   chop
                '(s)he chops wood'   →
        b.   nem   vág   fá-t
                not   chop   wood-ACC
                 '(s)he does not chop wood'

where *be* 'in' and *fel* 'up' are verbal prefixes and parts of morphological formations (prefixed verbs), while the nouns *mozi-ba* 'to the cinema' and *fá-t* 'wood-ACC' are case-marked determinerless NPs. This similarity shows the dual nature of the verbal prefix + verb combinations: syntactically they are separate entities but morphologically underlie further processes (e.g. derivation) as a single unit. That is the reason why (in addition to the traditional term 'verbal prefix') nowadays they are also called prefixal preverbs.[1]

   Most Hungarian verbal prefixes, especially the so called primary ones — e.g. *be* 'into', *ki* 'out', *le* 'down', *fel* 'up', *meg* PERF, *el* 'away', *át* 'across', *rá* 'onto', etc. — do not have morphological structures synchronically.[2] However, there are some

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[1]   As in Ackerman 1990, 1995. Cf.: "[they] do not display a synchronic syntactic relation to the   verbal stem and their composition with the verbal stem is reminiscent of derivation via affixation in   languages with inseparable prefixes such as Russian ..." (Ackerman, 1990:1)

[2]   See J. Soltész, 1959.

relatively recent verbal prefixes which morphotactically are analyzable: they seem to have a complex structure of noun + case marker:

(5)   hát-ra
        back-onto
        'backwards'
(6)   hely-re
        place-onto
        'into a place'
(7)   vég-ig
        end-to
        'to an end, till'

It is especially difficult to differentiate between this (morphotactically still analyzable, and in a sense morphologically complex) type of verbal prefixes and their source of grammaticalization: case-marked determinerless NPs. There are cases when it seems very problematic to decide whether an element with this morphological structure is already a verbal prefix or still a noun with an inflectional ending.

The issue of whether an element is a member of the verbal prefix category or not has often been decided intuitively. That is why so many different lists enumerating them exist.[3] The main purpose of this paper is to define some criteria for differentiating at least between the above mentioned subclass of verbal prefixes and their source of grammaticalization: nouns with inflectional ending. The hypothesis I would like to argue for is that the notion of morphological productivity can be used as an important category membership criterion for the debatable elements. Of course, productivity — which is affected by many factors — should not be a criterion in itself; but in our case it is the most characteristic feature of the category-changing process.

I will not use here a quantitative notion of productivity. I am interested in the qualitative factors, and especially the forces of semantics, that determine under which circumstances an element can become productive.[4]

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[3] For the summary of the most important lists, see Jakab (1982: 60-61); for another illustration of them, Komlósy (1992: 495-497). In general, in these lists no explanations are provided. The sole exception is Jakab (1982), who, trying to define the verbal prefix category, uses two criteria. One of them is the number of verbs the element goes with and its frequency of use, and the other one is whether it has a directional meaning or not. According to the author, whether an element does or does not change the meaning of the verb does not play a role in determining the status of the preverbal element. This definition seems to be problematic. (I will return to it later.)

[4] As for the semantic basis of morphological productivity, van Marle (1988) is quite right in supposing that changes in meaning have their consequences in productivity. I would like to show a process

2. An illustration: the Hungarian verbal prefix **agyon**

It seems useful to begin with the analysis of an indisputable element which is included in every list as a verbal prefix, but structurally seems to be similar to the debatable elements. I have chosen the verbal prefix *agyon* 'to death, to excess' for this purpose. In his discussion of the verb *agyon-üt* (to death-hit) 'kill' Hadrovics (1969:35) observes that *agyon* is already a prefix "because it is able to play a role in combination with many other verbs and has distanced itself considerably from its original meaning".

2. 1. Relevant facts about **agyon**

First I would like to show the relevant facts about this verbal prefix and its co-occurrence possibilities with various verbs.

Historically, the verbal prefix *agyon* was a morphologically complex formation — a noun with an inflectional ending:

(8)   agy-on
                brain/head-on
                'on the head'

From a synchronic point of view, the verbal prefix *agyon* is morphosemantically opaque, i.e. not a complex formation any more. In the synchronic system of Hungarian it has two characteristically different but related meanings: *agyon* is (as verbal prefixes in general are) polysemous:[5]

(9)   agyon1 = 'to death'
                agyon2 = 'to excess'

and it can be attached to verbs to the highest degree of productivity in its second meaning.

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which   in principle is very similar to what he wrote about in his article, but which goes in the opposite
             direction. The special feature I deal with here is that, in addition to the meaning changes concerning
             lexical meanings, a grammaticalization process also takes place.

[5]   For discussions concerning the polysemous profile of Hungarian verbal prefixes/preverbs see Szili
      1985 and Ackerman 1995; in other languages: e.g. Rudzka-Ostyn 1985 — Polish and Dutch, Janda
      1988 — Russian, Lieber and Baayen 1993 — Dutch.

2. 2. Attachment of **agyon** to verbs

  If we take into consideration verb groups according to the categorization of situations, it can be stated that the verbal prefix *agyon* is generally attached to verbs indicating dynamic, durative, and telic (imperfective) situations.[6] It cannot be attached to static, non-durative or inchoative verbs, as in (10), (11), and (12), respectively:

(10)　a.　　él 'live' (static)　　　　　→
　　　 b.　　*agyon-él
(11)　a.　　(meg)fog 'catch' (non-durative)　 →
　　　 b.　　*agyon-fog
(12)　a.　　kezd 'start' (inchoative) →
　　　 b.　　*agyon-kezd

  To verbs indicating atelic situations *agyon* can only be attached together with the appropriate form of reflexive pronoun *magá-t* (oneself-ACC 'her- or himself') with the situation changing to telic, and the verb becoming transitive, e.g.:[7]

(13)　a.　　dolgoz-ik
　　　　　　work-3SG(intr.)
　　　　　　'(s)he works'　　　　　→
　　　 b.　　agyon-dolgoz-za　　　　magá-t
　　　　　　excessively-work-3SG(tr.)　oneself-ACC
　　　　　　'(s)he overworks (herself) himself'

  The verbal prefix *agyon* can typically be attached to transitive verbs and sometimes also to intransitive verbs that are used together with directional adverbials. In this latter case the prefix changes the argument structure of the verb: functionally it takes the place of the adverbial, whereas the verb becomes transitive, e.g.:

(14) a. a　　　　　　　fej-é-be　　　　　　　lő　　　valaki-nek
　　　　 determiner　　head-POSS3SG-into　　　shoot　somebody-DAT
　　　　 '(s)he shoots into somebody's head' →

6　 See Kiefer 1983:150-160.

7　 In addition to the 3SG form we have a full paradigm here: *magam(-at)* myself(-ACC) 'myself', *magad(at)* yourself(-ACC) 'yourself', *magá-t* her- or himself-acc. 'her- or himself', *magunk-at* ourselves-ACC 'ourselves', *magatok-at* yourselves-acc 'yourselves', *maguk-at* themselves-ACC 'themselves'.

 b. agyon-lő   valaki-t
    to death-shoot   somebody-ACC
    '(s)he shoots somebody down'

This is in accordance with the fact that in a telic situation the goal of the action is indicated by a direct object, a directional adverbial or a verbal prefix.[8] (As mentioned before, *agyon* can also be attached to some intransitive verbs indicating atelic situations, but only together with a reflexive pronoun. There are some exceptions where *agyon* also goes with intransitive reflexive verbs — instead of intransitive verbs with reflexive pronouns — such as *szárad* 'it dries' $\rightarrow$ *agyon-szárad* 'it dries excessively', *fagy* 'it freezes' $\rightarrow$ *agyon-fagy* 'it freezes excessively', *ázik* 'it soakes' $\rightarrow$ *agyon-ázik* 'it soakes excessively'.)

 For each meaning the semantic groups of verbs *agyon* goes with can be defined.

 In its first meaning *agyon* can be attached to verbs indicating strong physical effects, where *agyonVx* (Vx stands for any verb of the given group) means 'kill something or somebody using physical force', as e.g. in (15), (16), and also in (14) rewritten as (17):

(15) a.   ver   valaki-t
             beat   somebody-ACC
             '(s)he beats somebody' $\rightarrow$
      b.   agyon-ver   valaki-t
             to death-beat   somebody-ACC
             '(s)he beats somebody to death'
(16) a.   a   szív-é-be   szúr   valaki-nek
             det.   heart-POSS3SG-into stab   somebody-DAT
             '(s)he stabs at somebody's heart'
      b.   agyon-szúr   valaki-t
             to death-stab   somebody-ACC
             '(s)he stabs somebody to death'
(17) a.   a   fej-é-be   lő   valaki-nek
             det.   head-POSS3SG-into   shoot somebody-DAT
             '(s)he shoots into somebody's head' $\rightarrow$
      b.   agyon-lő   valaki-t
             to death-shoot somebody-ACC
             '(s)he shoots somebody down'

 Most verbs of this semantic group do not have complex morphological structures so it is questionable whether this group is open (i.e. whether it can increase the

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[8]   See Kiefer 1983: 165-168

number of its members) or not — to put it differently: whether *agyon* is productive in its first meaning or not. One argument in favor of its (though slight) productivity can be the fact that in this group there exists one subgroup of denominal verbs formed from nouns indicating the tool of killing, e.g.:[9]

(18) a. (meg-)köv-ez   valaki-t
          (perf. pref.)-stone-SUFF$_{N \to V}$ somebody-ACC
          '(s)he throws stones at somebody'

      b. agyon-köv-ez   valaki-t
          to death-stone-SUFF$_{N \to V}$ somebody-ACC
          '(s)he stones somebody to death '

(19) a. (meg-)bot-oz   valaki-t
          (perf. pref.-)stick-SUFF$_{N \to V}$ somebody-ACC
          '(s)he beats somebody with a stick'

      b. agyon-bot-oz   valaki-t
          to death-stick-SUFF$_{N \to V}$ somebody-ACC
          '(s)he beats somebody to death with a stick'

(20) a. (meg-)kés-el   valaki-t
          (perf. pref.-)-knife-SUFF$_{N \to V}$ somebody-ACC
          '(s)he stabs somebody'

      b. agyon-kés-el   valaki-t
          to death-knife-SUFF$_{N \to V}$ somebody-ACC
          '(s)he kills somebody using a knife'

The number of such tools (accepted by the speakers as suitable means for killing) is very small and restricted, and the derived verbs are usually lexicalized. However, new potential verbs can still be formed from special or even extreme tool names, e.g. in (21) and (22):

(21)   ?agyon-puskatus-oz   valaki-t
          to death-gun stock-SUFF$_{N \to V}$ somebody-ACC
          '(s)he kills somebody using a (gun)stock',

(22)   ?agyon-lézer-ez   valaki-t
          to death-laser-SUFF$_{N \to V}$ somebody-ACC
          '(s)he kills somebody using a laser gun'

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[9]   SUFF indicates the two Hungarian N → V type category-changing derivational affixes, *-z* and *-l* here.

so the subgroup is, in principle, open — though this morphological pattern shows
only very slight productivity. The whole verb group cannot be said to be closed,
anyway, because it can obtain new members not only by morphological means (i.e.
by noun → verb derivation), but also via semantic and pragmatic processes: verbs
with other meanings can fit into this group in their metaphorical senses or due to
inferences following from the context.

   Semantically the most unified and at the same time the most restricted subgroup of
physical force type verbs consists of verbs of hitting; *agyonVx* formed from these
verbs means 'to kill something/somebody by hitting', as e.g. in (15) rewritten here as
(23):

(23)   a.   ver   valaki-t
                 beat   somebody-ACC
                 '(s)he beats somebody'   →
         b.   agyon-ver   valaki-t
                 to death-beat   somebody-ACC
                 '(s)he beats somebody to death'

(Verbs with similar meanings are *üt* 'to beat', *csap* 'to strike', *sújt* 'to hit' etc.) The
meaning of *agyon* 'to death' with verbs of hitting is not different from that of the
other members of the group, because the place of hitting is not necessarily the
victim's head as it historically was.

   In its second meaning *agyon* can be attached to verbs indicating several types of
activities where *agyonVx* means 'to do something to excess, beyond measure', e.g.:

(24)   agyon-dolgoz-tat   valaki-t
                 to excess-work-causative somebody-ACC
                 '(s)he overworks somebody'
(25)   agyon-gyógyszer-ez   valaki-t
                 to excess-medicine-SUFF$_{N \to V}$ somebody-ACC
                 '(s)he gives somebody too much medicine'
(26)   agyon-gyógyszer-ez-i   magá-t
                 to excess-medicine-SUFF$_{N \to V}$ -3SG(tr.)   oneself-ACC
                 '(s)he takes too much medicine'
(27)   agyon-csók-ol   valaki-t
                 to excess-kiss-SUFF$_{N \to V}$ somebody-ACC
                 '(s)he smothers somebody with kisses'

These verbs (discussed as types 1-4 later on) are transitive and — in case the verbal
meaning makes it possible (i.e. does not exclude the agent from being the direct

object of the verb) — can also be used with a reflexive pronoun as an object, as in (26). (Type 5 has special characteristics which will be discussed separately.)

In its second meaning ('to excess') *agyon* can only be attached to verbs whose semantic or pragmatic contents are connected with some (not necessarily immediate or physical) effects on the state of the non-resultative object (i.e. causing some change in the state of an already existing object), e.g. in (28) and (29) vs. (30) and (31):

(28)   a.   szín-ez-i   a   rajz-ot
               colour- SUFF$_{N \to V}$-3SG(tr.) determiner   drawing-ACC

               '(s)he colours the drawing' $\to$

       b.   agyon-szín-ez-i   a   rajz-ot
               to excess-colour- SUFF$_{N \to V}$-3SG(tr.) determiner   drawing-ACC

               '(s)he colours the drawing to excess'

(29)   a.   parfüm-öz-i   magá-t
               perfume- SUFF$_{N \to V}$-3SG(tr.)   oneself-ACC

               '(s)he puts perfume on (herself) himself' $\to$

       b.   agyon-parfüm-öz-i   magá-t
                to excess-perfume- SUFF$_{N \to V}$-3SG(tr.)   oneself-ACC

               '(s)he puts too much perfume on (herself) himself'

(30)   a.   ír-ja   a   lecké-t
                write   determiner   homework-ACC

               '(s)he writes the homework' $\to$

       b.   *agyon-ír-ja a lecké-t

(31)   a.   tanul-ja   a   vers-et
               learn--3SG(tr.)   determiner   poem-ACC

               '(s)he learns the poem' $\to$

       b.   *agyon-tanul-ja a vers-et

In (30) a. the verb has a resultative object, while in (31) a. the activity does not change the state of a non-resultative object — that is the reason why prefixed verbs in (30) b. and (31) b. do not exist.

Morphologically complex verbs are especially characteristic of this verbal group. *Agyon* can be attached productively to the following morphologically complex verb types in its second meaning:

Type 1: deadjectival verbs with morphological structure in (32):

(32) $[\text{Stem}_{\text{Adj}} + \text{-}ít_{\text{SUFF, Adj}\rightarrow\text{V}}]_{\text{V}}$

with meaning 'to make/cause something Adj', as e.g.:

(33)   a.   puh-ít (Adj: puha 'soft')   valami-t
                soft-cause   something-ACC
                '(s)he softens something' $\rightarrow$
         b.   agyon-puh-ít   valami-t
                to excess-soft-cause   something-ACC
                '(s)he softens something to excess'
(34)   a.   görb-ít (Adj: görbe 'curved')   valami-t
                curved-cause   something-ACC
                '(s)he curves something' $\rightarrow$
         b.   agyon-görb-ít   valami-t
                to excess-curved-cause   something-ACC
                '(s)he curves something to excess'

Type 2: denominal verbs with morphological structure in (35):

(35) $[\text{N} + \text{-}z/\text{-}l_{\text{SUFF, N}\rightarrow\text{V}}]_{\text{V}}$

with the general meaning 'to supply with N', as e.g.:

(36)   a.   (meg-)csók-ol   valaki-t
                (perf. pref.-)kiss-SUFF$_{\text{N}\rightarrow\text{V}}$ somebody-ACC
                '(s)he kisses somebody' $\rightarrow$
         b.   agyon-csók-ol   valaki-t
                to excess-kiss-SUFF$_{\text{N}\rightarrow\text{V}}$ somebody-ACC
                '(s)he smothers somebody with kisses'
(37)   a.   gőz-öl   valami-t
                steam-SUFF$_{\text{N}\rightarrow\text{V}}$ something-ACC
                '(s)he steams something' $\rightarrow$
         b.   agyon-gőz-öl   valami-t
                to excess-steam-SUFF$_{\text{N}\rightarrow\text{V}}$ something-ACC
                '(s)he steams something excessively'

(38) a. (meg)bors-oz   valami-t
          (perf. pref)-pepper-SUFF$_{N\to V}$ something-ACC

          '(s)he puts pepper into something' $\to$
      b. agyon-bors-oz   valami-t
          to excess-pepper- SUFF$_{N\to V}$ something-ACC

          '(s)he puts too much pepper into something'
(39) a. gyógyszer-ez   valaki-t
          medicine-SUFF$_{N\to V}$ somebody-ACC

          '(s)he gives somebody medicine' $\to$
      b. agyon-gyógyszer-ez   valaki-t
          to excess-medicine-SUFF$_{N\to V}$ somebody-ACC

          '(s)he gives somebody too much medicine'
(40) a. krém-ez-i   az   arc-á-t
          cream-suff-3SG(tr.)   determiner   face-POSS3SG-ACC

          '(s)he smears (her) his face with cream' $\to$
      b. agyon-krém-ez-i   az   arcá-t
          to excess-cream-SUFF$_{N\to V}$ -3SG(tr.) determiner face-POSS3SG-ACC

          '(s)he puts too much cream on (her) his face'

It is not a chance phenomenon that the verbal prefix *agyon* can be attached to verbs of these morphological structure to the highest degree. As mentioned before, in its second meaning ('to excess') *agyon* mainly goes with transitive verbs signalling activities changing the state of an already existing object. The deadjectival suffix *-ít* [*-ít*$_{SUFF, Adj\to V}$] has the word-formation meaning 'making something Adj' and the denominal suffixes *-z* and *-l* [*-z/-l*$_{SUFF, N\to V}$] have the word-formation meaning 'supplying with N' — so they enlarge exactly the lexical group of verbs (with meaning 'changing the state of an object') which constitutes the basis of the *agyon* prefixation.

Deverbal frequentative/durative and causative verbs also often serve as bases for *agyon* prefixation. However, not all verbs of these classes can automatically take the prefix, see (42) and (43) vs. (44) and (45) concerning frequentative/durative verbs and (49) and (50) vs. (52) and (54) concerning causative verbs.

Type 3: deverbal frequentative/durative verbs with morphological structure in (41):

(41)   [V + *-gAt*$_{SUFF, V\to V}$] $_V$

meaning 'to do something repeatedly or long', e.g.:

(42) a.   ölel-get   valaki-t

          embrace-freq.   somebody-ACC
          '(s)he embraces somebody repeatedly'   →
   b.   agyon-ölel-get   valaki-t
          to excess-embrace-freq.   somebody-ACC
          '(s)he embraces somebody too much times'

(43) a. csók-ol-gat   valaki-t
          kiss- SUFF $_{N→V}$-freq.   somebody-ACC

          '(s)he kisses somebody repeatedly'

      b. agyon-csók-ol-gat   valaki-t →
          to excess-kiss- SUFF $_{N→V}$-freq.   somebody-ACC

          '(s)he kisses somebody too many times'

(44)   *agyon-ír-ogat-ja a lecké-t
(45)   *agyon-tanul-gat-ja a vers-et

The constraints are exactly the same as mentioned above. However, in some cases, when (owing to some costraints) the basis verb cannot take part in *agyon* prefixation, the derived form (not being concerned by the limitations) can serve as a basis for derivation, see (46) vs. (47):

(46) a.   (meg)fog   valami-t
             touch/catch   something-ACC
             '(s)he touches/catches something'   →
      b.   *agyon-fog valamit
(47) a.   fog-dos   valami-t,   valaki-t
             touch-freq.   something-ACC, somebody-ACC
             '(s)he paws something, somebody ' →
      b.   agyon-fog-dos   valami-t,   valaki-t
             to excess-touch-freq.   something-ACC, somebody-ACC
             '(s)he paws something, somebody all over'

Here the activity verb *(meg)fog* 'to touch/catch' does not have an effect on the object whereas *fog-dos* 'to paw', in a sense, does.

  Type 4: deverbal causative verbs with morphological structure in (48):

(48)   [V + *-tAt/-At*$_{SUFF, V→V}$]$_V$

as e.g.:

(49) a.   dolgoz-tat   valaki-t
                work-cause   somebody-ACC

		'(s)he works somebody'		→
	b.	agyon-dolgoz-tat	valaki-t	
		to excess-work-cause	somebody-ACC	
		'(s)he overworks somebody'		
(50)	a.	áz-tat	valami-t	
		soak-cause	something-ACC	
		'(s)he steeps something'		→
	b.	agyon-áz-tat	valami-t	
		to excess-soak-cause	something-ACC	
		'(s)he oversteeps something'		

The constraints here are exactly the same as the ones on the basis verbs (see (12) rewritten here as (51), and (29) rewritten here as (53)):

(51)	a.	kezd	valami-t		
		start	something-ACC		
		'(s)he starts something'		→	
	b.	*agyon-kezd valami-t			
(52)	a.	kezd-et	valaki-vel	valami-t	
		start-cause	somebody-by	something-ACC	
		'(s)he make somebody start something'			
	b.	*agyon-kezd-et	valaki-vel valami-t		
(53)	a.	ír-ja	a	lecké-t	
		write	determiner	homework-ACC	
		'(s)he writes the homework'		→	
	b.	*agyon-ír-ja a lecké-t			
(54)	a.	ír-at-ja	valaki-vel	a	lecké-t
		write-cause-3SG	somebody-by	det.	homework-ACC
		'(s)he makes somebody write the homework'	→		
	b.	*agyon-ír-at-ja a leckét			

Generally, it can be claimed that if the prefix *agyon* can be attached to a non-causative verb, it also goes with its causative form derived from it. It does not even depend on whether the verb concerned is morphologically simple or complex:

(55)	a.	ver	valaki-t
		beat	somebody-ACC
		'(s)he beats somebody'	
	b.	agyon-ver	valaki-t
		to death-beat	somebody-ACC
		'(s)he beats somebody to death'	

      c.   agyon-ver-et   valaki-t
             to death-beat-cause   somebody-ACC
             '(s)he has somebody beaten to death'

(56)   a.   sző-ít-i   a   haj-á-t
             blond-SUFF$_{Adj \rightarrow V}$-3SG   determiner   hair-POSS3SG-ACC
             '(s)he bleaches (her) his hair'

      b.   agyon-sző-ít-i   a   haj-á-t
             to excess-blond- SUFF$_{Adj \rightarrow V}$-3SG   det.   hair-POSS3SG-ACC
             '(s)he bleaches (her) his hair to excess'

      c.   agyon-sző-ít-tet-i   a   haj-á-t
             to excess-blond- SUFF$_{Adj \rightarrow V}$-cause-3SG   det. hair-POSS3SG-ACC
             '(s)he has (her) his hair bleached to excess'

This statement cannot be inverted. However, due to the fact that the causative suffix makes verbs transitive, this suffix may also increase the chances of the prefix *agyon* for its attachment to verbs. We do not have non-causative prefixed verbs formed from verbs, e.g. in (57-59):

(57)   a.   esz-ik   [valami-t]
             eat-3SG(intr.)   [something-ACC]
             '(s)he eats [something]' $\rightarrow$

      b.   *agyon-esz-ik [valami-t]

(58)   a.   isz-ik   [valami-t]
             drink-3SG(intr.)   [something-ACC]
             '(s)he drinks [something]' $\rightarrow$

      b.   *agyon-isz-ik [valami-t]

(59)   a.   dolgoz-ik
             work-3SG(intr.)
             '(s)he works' $\rightarrow$

      b.   *agyon-dolgoz-ik

while their causative versions derived from them can be prefixed:

(60)   a.   esz-ik   [valami-t]
             eat-3SG(intr.)   [something-ACC]
              '(s)he eats [something]' $\rightarrow$

      b.   e-tet   valaki-t   [valami-vel]
             eat-cause   somebody-ACC   [something-with]
             '(s)he feeds somebody (on) something' $\rightarrow$

	c.	agyon-et-et	valaki-t	[valami-vel]
		to excess-eat-cause	somebody-ACC	[something-with]
		'(s)he gives somebody too much food'		

(61)   a.   isz-ik   [valami-t]
              drink-3SG   [something-ACC]
              '(s)he drinks [something]'   →
       b.   i-tat   valaki-t   [valami-vel]
              drink-cause   somebody-ACC   [something-with]
              '(s)he gives somebody something to drink' →
       c.   agyon-i-tat   valaki-t   [valami-vel]
              to excess-drink-cause   somebody-ACC   [something-with]
              '(s)he gives somebody too much drink'

(62)   a.   dolgoz-ik
              work-3SG(intr.)
              '(s)he works'   →
       b.   dolgoz-tat   valaki-t
              work-cause   somebody-ACC
              '(s)he works somebody' →
       c.   agyon-dolgoz-tat valaki-t
              to excess-work-cause   somebody-ACC
              '(s)he overworks somebody'

Type 5: A special kind of *agyon* prefixation is when the prefix is attached to intransitive, atelic verbs. It can only happen if the prefixed verb is used together with the reflexive pronoun as a "fake object" (i.e. the verb formally becomes transitive). Originally not being transitive, these verbs cannot take the verbal prefix without the appropriate form of the reflexive pronoun. It also means that intransitive basis verbs, on the contrary, cannot be used with it:

(63)   a.   sétál
              walk
              '(s)he walks'   →
       b.   *sétál-ja magá-t →
       c.   agyon-sétál-ja   magá-t
              to excess-walk-3SG(tr.)   oneself-ACC
              '(s)he walks too much'

(64)   a.   kártyá-z-ik
              card-SUFF$_{N→V}$-3SG(intr.)
              '(s)he plays cards'   →
       b.   *kártyá-z-za magá-t   →

    c.   agyon-kártyá-z-za   magá-t
        to excess-card-SUFF$_{N \rightarrow V}$-3SG(tr.)   oneself-ACC
        '(s)he plays cards too long'

The basis verbs are not constrained semantically here, because the reflexive pronoun expresses that — in a sense and in some degree — every activity can have some effect on the agent, whereas the verbal prefix *agyon* also indicates that the effects follow from excessively performed activities (too long, too frequently, too intensively). This is the reason why the type *agyon-sétál-ja,* etc. *magá-t* '(s)he walks, etc. too much' has also the pragmatic meaning '(s)he exausts (herself) himself by walking, etc. too much'. So while we do not have prefixed verbs derived from transitive verbs in (65) and (66) (owing to some constraints discussed earlier), we have prefixed verbs in (67) and (68) derived from intransitive bases:

(65)   a.   ír-ja   a   lecké-t
                write   determiner   homework-ACC
                '(s)he writes the homework' $\rightarrow$
    b.   *agyon-ír-ja a lecké-t
(66)   a.   tanul-ja   a   vers-et
                learn--3SG(tr.)   determiner   poem-ACC
                '(s)he learns the poem' $\rightarrow$
    b   *agyon-tanul-ja a vers-et
(67)   a.   ír
                write
                '(s)he writes' $\rightarrow$
    b.   agyon-ír-ja   magá-t
                to excess-write-3SG(tr.)   oneself-ACC
                '(s)he writes too much'
(68)   a.   tanul
                learn
                '(s)he learns' $\rightarrow$
    b.   agyon-tanul-ja   magá-t
                to excess-learn-3SG(tr.)   oneself-ACC
                '(s)he learns too much'

Semantically the group of verbs with *agyon* in its second meaning contains a subgroup indicating negative (but not necessarily physical) effects; *agyonVx* means 'almost kill or ruin somebody by an excessive activity' here, as in (69):

(69)   kínoz   valaki-t
               torture   somebody-ACC

'(s)he tortures somebody excessively, almost to death'

(Similar verbs are *gyötör* 'to torture', *hajszol* 'to work', *terhel* 'to burden', etc.). The meaning of *agyon* with the members of this verbal subgroup is in between *agyon*1 and *agyon*2: 'excessively, almost to death'.

 In connection with type 5 verbs we have mentioned that there is a pragmatic meaning involved in prefixed verbs formed from them: 'to exaust oneself by doing something excessively'. The same is true of transitive verbs other than verbs indicating negative effects. Here the involved (pragmatic) meaning is that the action carried out excessively can ruin, damage or spoil somebody or something; or just can be unpleasant, annoying or tiring, etc. to somebody, as e.g. in (70) and in (39) b. rewritten here as (71):

(70)   agyon-hord-ja   a   ruhá-t
         to-excess-wear-3SG(tr.)   determiner   dress-ACC
         '(s)he wears a dress too often' (pragmatic meaning: (s)he damages the dress by it)

(71)   agyon-gyógyszer-ez   valaki-t
         to excess-medicine-SUFF$_{N \to V}$ somebody-ACC
         '(s)he gives somebody too much medicine' (pragmatic meaning: possible negative effects)

 It means that in addition to the two characteristically different meanings of *agyon* given in (9) rewritten here as (72):

(72)   agyon1 = 'to death'
         agyon2 = 'to excess'

there are other slightly different uses and meanings of *agyon* which form a continuum:

(73)   agyon1a = 'to death, by hitting'
         agyon1b = 'to death, by Vxing'
         agyon2a = 'excessively, almost to death'
         agyon2b = 'excessively'
                 (possible consequences for somebody or something: damage, unpleasantness, etc.)
         agyon2c = 'excessively'
                 (possible consequences for oneself: tiredness, unpleasantness, etc.)

This graduality in the meanings of *agyon* is also reflected in its attachment to verbs, especially concerning the lexical meanings of verb groups, i.e. verbs that *agyon* goes with can be scaled as follows: verbs of hitting with *agyon*1a; verbs of physical force (other than hitting) with *agyon*1b; transitive verbs with negative effects with *agyon*2a; transitive verbs in general with *agyon*2b; intransitively used or intransitive verbs with *agyon*2c. That means that a verb *agyon* can be attached to has to indicate an action which (if carried out excessively) (a) can cause somebody's death; (b) can cause harm to somebody or something; or (c) can be unpleasant, annoying or tiring, etc. to somebody or to the agent.[10]

In type 5 the extremely high productivity of the prefix *agyon* can be explained in two ways. The first explanation is that the use of verbs with the reflexive pronoun can change all kinds of atelic situations to telic ones — and due to this, the domain of the prefix *agyon* enermously increases. The other explanation is connected with the meaning change and the grammaticalization process of *agyon*, a topic we are going to deal with in the next Section.

3. Changes in meaning, category and productivity: the hypothetical grammaticalization process of **agyon**

While in grammaticalization research there are discussions about the nature of semantic changes (semantic bleaching vs. semantic enrichment; the role of metaphor and metonymy vs. inference and context in the process of grammaticalization, see e.g. Bybee & Perkins & Pagliuca, 1994 vs. Heine & Claudi & Hünnemeyer, 1991 or Rubba, 1994), there is full agreement that grammaticalization forms a continuum in which polysemy and the layering of (grammatical) meanings are of great importance (see Hopper, 1991, Heine & Claudi & Hünnemeyer, 1991:20, 107-108, Bybee & Perkins & Pagliuca, 1994: 21-22). According to Bybee & Perkins & Pagliuca (1994:18), on the basis of the synchronic chain of different uses (connected meanings) of a grammaticalized element — that reflects the stages of grammaticalization — the whole process of grammaticalization can be reconstruated along the so called "possible grammaticization path".

Supposing that synchronic facts and relations are reflections of diachronic changes, and putting our synchronic knowledge of *agyon* into a historical perspective, we can

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[10] We cannot stipulate that a given basis verb should always indicate an action which causes death, harm   or inconvenience to somebody or to the agent in itself. It is very important that the given action must be   carried out excessively and death, harm or inconvenience is just the final result of the action.

outline a hypothetical process of its becoming a verbal prefix.[11] My suggestion is that on these theoretical grounds a method can be elaborated for deciding on the category membership of the debatable elements. First I will deal with the connections of changes in meaning, category and productivity concerning *agyon,* and then with the evaluation of some preverbal elements.

3.1. *Agyon* in a historical perspective

Our knowledge about the different uses of *agyon* and the detailed picture of its meanings in 2.2. can serve as a basis for understanding its (hypothetical) grammaticalization process we are trying to outline now.

Stage (1): As seen before, in its original meaning ('on the head') *agyon* could express the place or direction of the action. With the verbs of hitting it indicated the concrete place of the action, and was part of a syntactic construction as an adverbial element:[12]

(74)　　　*agy-on　　　　üt　　　valaki-t
　　　　　　brain/head-on　　　　hit　　　somebody-acc
　　　　　　'(s)he hits somebody on the head'

At this stage, the use of *agyon* must have been quite restricted; due to its concrete meaning its combinatorial possibilities in syntax were quite small: from the syntactical point of view *agyon* was not productive at all.

Stage (2): In the synchronic system of Hungarian, the first meaning of *agyon* 'to death' is a reflection of the next stage which is the result of a change in meaning of the construction as a whole. It is a pragmatic change (inference) following from the context: the consequence of the action (hit → kill) becomes part of the meaning of the construction:

(75)　　　*agy-on vág 'hit on the head **and** kill somebody/something by it' →
　　　　　　agyon-vág 'kill by hitting'

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[11]　The connection of synchronic and diachronic facts is discussed in Bybee et al., see also Zsilka 1981, Horváth & Ladányi (eds.) 1993; concerning verbal prefixes see Hadrovics 1969, D. Mátai 1989, 1991, 1992, Ladányi 1995, in press.

[12]　Cf. *agyba-főbe ver* 'beat up totally', where both *agy* and *fő* mean 'head', while *-ba/-be* 'into' is a directional inflectional ending.

As a consequence of the change in meaning of the construction as a whole, the meaning of *agyon* changes likewise:

(76)   *agyon 'on the head'   →   agyon 'to death'

  Stage (3): The change in meaning of *agyon* gives some new co-occurrence possibilities to the element . The restriction that it should be attached only to verbs of hitting does not apply any more, because *agyon* in its new, more generalized meaning does not give the concrete place or direction of the action ('on the head'), but rather the result of it ('to death'). At this stage, *agyon* may co-occur with verbs indicating physical force which can cause death: but not necessarily by hitting or by inflicting a wound on somebody's head. Consequently, the meaning of the construction as a whole changes, or more exactly, becomes more general again:

(77)   agyonVx = 'kill somebody/something by hitting'   →
           agyonVx = 'kill by Vxing'

The generalization of the meaning and the increase in the co-occurrence possibilities advances in parallel with the isolation of *agyon:*[13]

(78)   agy-on   (brain/head-on) 'on the head'   →
           agyon 'to death'

At the same time, *agyonVx* type verbs — in connection with the new expanded meaning including 'kill' — also gain perfective meanings. This is the stage for *agyon* when the process of becoming a grammatical element (a verbal prefix) and part of a morphological construction really starts.
  Stage (4): Presumably the exaggerated use of some *agyonVx* type verbs enables a further change in the meaning of the construction:

(79)   agyonVx = 'kill by Vx-ing'   →
                agyonVx = 'almost kill by excessive Vx-ing'

In this special use, *agyon* can receive another new meaning:

(80)   agyon 'to death'   →   agyon 'excessively, almost to death'

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13   See D. Mátai 1989, 1991, 1992.

As a consequence of this change, the co-occurrence possibilities of *agyon* can increase once again. Now the verbs it can be attached to go far beyond the verbs of hitting and indicating physical force. At this stage *agyon* can be attached to verbs indicating negative effects.

Stage (5): While with verbs indicating 'physical force' the result of the action ('to death') was predominantly stressed, with verbs indicating negative effects — presumably as a consequence of an exaggerated use — the way the action is carried out begins to be more emphasized ('excessively'). This stress shifting results in the change of meaning of the verbal prefix and its co-occurrence possibilities once again:

(81)   agyon 'excessively, almost to death'   →   agyon 'excessively'

At this stage, having lost the meaning element 'to death', *agyon* can also be attached to transitive verbs with inanimate objects. At the same time, it keeps some traces of its earlier meaning as a pragmatic meaning ('negative effects: harm, damage, etc.').

At stage (5) *agyon* gains not only a new lexical, but also a new grammatical meaning: 'excessively' is a type of aktionsart which gives the element maximal co-occurrence possibilities: at the next stage, **Stage (6)** *agyon* can also go with intransitively used or intransitive verbs. This is the point when the process of becoming a verbal prefix and part of a morphological construction has been completed.

The maximal generalization of the meaning of *agyon* makes its co-occurrence possibilities almost unlimited: it can be attached to every verb indicating an action that — carried out excessively — can be unpleasant, annoying or tiring, etc. to the patient or to the agent.[14] At stages (5-6) the meanings of *agyonVx* type verbs still are connected — at least pragmatically — with the meaning of the first group 'kill'. The connection is a bit indirect (in an exaggerated and metaphorical sense you can "kill" or at least "bring somebody to ruin" by carrying out an action which can be unpleasant, annoying, tiring, etc. to him).[15]

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[14]   At this stage, the pragmatic factor plays an important role: it depends on which actions are unpleasant, disgusting, etc. for the speaker. Somebody can say about a woman concerning her make-up, e.g.: *agyonrúzsozza magát* 'she rouges herself too much', even if her make up is not really excessive, however, the speaker thinks it is.

[15]   In Lieber and Baayen (1993:57) the authors point out a similar fact about Dutch verbs in verbal prefix   *ver-* that "often carry with them a markedly pejorative or negative component of meaning". They   interpret this "as the possibility of filling in one of the argument positions in the LCS [Lexical Conceptual Structure] of *ver-*, specifically the goal argument, with a metaphorical negative Thing or Place argument..."

In (82) there is a summary of the semantic changes in the grammaticalization process of *agyon*:

(82)	agyonVx	agyon
Stage (1)	'to hit on the head'	'on the head'
Stage (2)	'to kill something/somebody by hitting'	'to death'
Stage (3)	'to kill something/somebody by Vxing	'to death'
Stage (4)	'to Vx almost to death'	'excessively, almost to death'
Stage (5)	'to Vx excessively' → 'damage, exhaust, annoy, etc. somebody'	'excessively' (with pragmatic meaning: causing damage, etc.)
Stage (6)	'to Vx excessively' → 'exhaust, tire, etc. oneself'	'excessively' (with pragmatic meaning: causing unpleasantness, etc.)

Meanings 'to death' and 'excessively' (with some variations) belong to the synchronic language system, whereas the original meaning of *agyon* ('on the head' — stage (1)) does not constitute its part any more.

3.2. General discussion

We tried to show that the grammaticalization process is complex; the changes are simultaneous and interdependent in meaning (changes in lexical meaning; lexical → grammatical meaning), in construction (syntactic construction → morphological construction), in category (adverbial → verbal prefix), and in productivity (narrow → broader → maximal co-occurrence possibilities). The most important factors in the above-mentioned process are the change in meaning of the construction as a whole, and that of the preverbal element as part of it. That is why I cannot accept Jakab's (1982) conception that changes in meaning of the given formations do not play any role in the status of the preverbal element. Semantic changes are the basis of the entire grammaticalization process, but they are connected very intimately with category change and changes in the productivity of the preverbal element.

In Hungarian an element can be categorized as a verbal prefix (and at the same time productively be attached to several types of verbs) only if the change in the meaning of the construction as a whole and that of the preverbal element as part of it have taken place. The meaning of the element has to change so that there is also a

conceptual shift from lexical to grammatical meaning. The whole process is accompanied by a substantial increase in the productivity of the element. That is why productivity in this case can be an important sign of category change.

4. Status of some (debatable) preverbal elements

In Hungarian there are several morphologically complex preverbal elements which may have a claim to be listed as verbal prefixes. To decide on their status, first of all, we have to take into consideration the formal/constructional characteristics of verbal prefixes in language, namely that (a) they can occur in a preverbal position without a determiner, whereas occupying the immediately preverbal focus slot (for details see Kálmán 1985a, 1985b); and that (b) they do not include determiners even in their postverbal positions.[16]

Morphologically complex formations not meeting these criteria, cannot even be considered as debatable elements. For example, if an element in a preverbal position can contain a determiner, as in (83) b., or if a determiner emerges with it in a postverbal position as in (84) b., the element cannot be called a verbal prefix.

(83)   a.   föld-ön   csúszik
                ground-on   slide
                '(s)he slides on the ground'
        b.   a   föld-ön   csúszik
                determiner   ground-on   slide
                '(s)he slides on the ground'
(84)   a.   föld-re   hajlik
                ground-onto   trail
                '(s)he trails along the ground'
        b.   nem   hajlik   a   földre
                not   trail   determiner   ground-onto
                '(s)he does not trail along the ground'

There are morphologically complex formations which meet these criteria but are not included in any lists of Hungarian verbal prefixes. Three of them are: *ég-nek* (sky-DAT) 'up to the sky' , *fej-be* (head-into) 'on the head' and *ész-re* (mind-onto) 'into the mind'.

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[16] When Beöthy & Altmann (1980) define the number of Hungarian verbal prefixes as about 100, they may think about preverbal elements fulfilling the above-mentioned two conditions. However, the existence of these two conditions is not enough to define an element as a member of the verbal prefix category.

Preverbal elements that are used only in constructions with concrete meanings such as *égnek* 'up to the sky', e.g.:

(85)   ég-nek   áll
        sky-DAT   stand
        'it stands up [to the sky]'

cannot be 'real' verbal prefixes because they either lack changes in the meaning of the construction, or do not have any grammatical meanings. They can only be attached to a very restricted number of verbs (in the case of *égnek* 2 altogether!), and cannot become productive.

As to *fejbe* 'on the head' in (86):

(86)   fej-be   ver   valaki-t
        head-into   beat   somebody-ACC
        '(s)he hits somebody on the head'

there is a small group of verbs — generally in the sense of hitting — which can co-occur with this element:

(87)   csap,   üt,   ver,   sújt,   etc.
        'strike', 'hit', 'beat', 'hit'   →
        fej-be   csap/üt/ver/sújt etc.   valaki-t
        head-into   strike/hit/beat/hit somebody-ACC
        '(s)he hits somebody on the head'

and some other verbs indicating actions causing wounds to somebody's head, such as

(88)   fej-be   lő   valaki-t
        head-into   shoot   somebody-ACC
        '(s)he put a bullet through somebody's head'

The meaning of the whole construction as the sum of its parts and the meaning of the preverbal element is very concrete again: it indicates the direction/place of the hitting or wounding: *fej-be* (head-into) 'on the head'. In some cases, the whole construction is used in a metaphorical sense, e.g.:

(89)   fej-be   vág-ja   a   hír
        head-into   strike-3SG(tr.) determiner   news
        '(s)he is staggered by the news'.

For *fejbe*, this type of construction might be in the process of becoming a verbal prefix, but we do not have any other conditions fulfilled yet — neither the isolation of the preverbal element, nor the change in its meaning, not to mention the increase in productive co-occurrence patterns.

For similar reasons, we cannot categorize *észre* 'into the mind' as a verbal prefix. There is only one dictionary entry for *észre*:

(90)   ész-re   vesz   valami-t
         mind-onto   take   something-ACC
         '(s)he perceives, becomes aware of something'

(but there are other examples in everyday use as *észre-tér* 'to come to oneself'). The construction has its meaning as an integral whole, where *észre* has no separate meaning different from its concrete one. Even if the change of the meaning of the construction and the isolation of *észre* have already more or less taken place, the preverbal element has not yet obtained a special meaning which could enable its attachment to some new group(s) of verbs.

Tönkre '(getting) totally ruined' is also a debatable element: from eight lists of Hungarian verbal prefixes only two include it as a verbal prefix (one of them is the Hungarian Concise Dictionary). The reason for this could be that *tönkre* — at least historically — is a morphologically complex formation:

(91)   tönk-re
         tree stump-onto
         'into a tree stump'

and it might seem to be questionable whether the isolation process (*tönkre ≠ tönk + -re*) has already finished or not.

Tönkre in its original directional meaning (*tönk-re* 'onto a tree stump') was a part of a syntactic construction with verbs such as *jut* 'to get' and *megy* 'to go', e.g.

(92)   *tönk-re   megy
         tree stump-onto   go
         'it runs into a tree stump'

In the synchronic system of Hungarian we can find the reflection of the next stage, which is the result of a change in the meaning of the construction as a whole: the consequence of the action becomes the part of the meaning of the construction (pragmatic inference):

(93)   *tönk-re megy 'to run into a tree stump' **and** get totally damaged

$\rightarrow$ tönkre-megy 'to get totally damaged '

Parallel with the meaning change of the construction as a whole, *tönkre* gains a new meaning, too:

(94)   tönkre '(getting) totally ruined'

It looses its directional meaning and morphological complexity, and, being isolated (*tönkre ≠ tönk + -re*) becomes a verbal prefix with many more co-occurrence possibilities than ever before, while the original syntactic construction changes into morphological. The whole process is quite similar to the one we have seen in connection with *agyon*.

  In spite of the fact that *tönkre* is listed as a verbal prefix in the Hungarian Concise Dictionary, it contains very few prefixed verbs (six altogether, namely: *tönkre-jut* 'to fail/be ruined', *tönkre-megy* 'to get spoiled/ruined/damaged', *tönkre-tesz* 'to ruin', *tönkre-silányít* 'to ruin/spoil/cripple', *tönkre-ver* 'to destroy/defeat (totally), and *tönkre-zúz* 'to crush/shatter'). At the same time, *tönkre* seems to be very productive in several different uses in the spoken language (also with the reflexive pronoun *magát*):

(95)   tönkre-fagy,   tönkre-ázik,   tönkre-kopik,   etc.
          pref.-freeze,   pref.-get wet   pref.-get worn out
          'it gets damaged or totally ruined by freezing, getting wet, getting worn out'
(96)   tönkre-rág,   tönkre-hord,   tönkre-farag, etc. valami-t
          pref.-gnaw   pref.-wear   pref.-carve   something-ACC
          '(s)he gnaws, wears, carves something too long or too frequently, causing (total) damage'
(97)   tönkre-dolgoz-za,   tönkre-tanul-ja, etc.   magát
          pref.-work-3SG(tr.)   pref.-learn-3SG(tr.)   oneself-ACC
          '(s)he works, learns too much — and undermining (her) his health by doing that'

This is the reason why we can consider it to be a verbal prefix.[17]

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[17]   More details about *tönkre* (its meanings and grammaticalization process) see Ladányi, 1995 and Ladányi, in press.

5. Conclusions

Through the analysis of a relatively young Hungarian verbal prefix, I have concluded that one can determine the status of the debatable part of the 'preverb + verb' formations by their productivity. The idea is based on the presupposition that some characteristic changes take place when an adverbial element with an original lexical meaning becomes a verbal prefix.

This is a complex process affecting the semantic properties, the grammatical status, and the co-occurrence possibilities of the given element. The final point is that the element becomes a morphological formation with a new (lexical and/or grammatical) meaning. As a consequence, its co-occurrence possibilities with verbs dramatically change: the rules for forming verbs with the given element become productive. Productivity is a very characteristic feature not only of the process of an element becoming a verbal prefix, but also of the grammaticalization (or morphologization) process in general. (However, the process of grammaticalization cannot be called morphologization in this case because the grammaticalization process does not result in a real affix. Morphologization at its final stage (referred to as "univerbation") involves the creation of a bound morpheme — see Hopper & Traugott 1993.)

On the basis of the study of the 'preverb + verb' constructions in this paper, it seems to me that in Hungarian beyond the formal criteria mentioned earlier (the possibility of occurring in a preverbal position without a determiner; the lack of determiner even in a postverbal position) for the categorization of the debatable elements as verbal prefixes the following criteria can be used: (a) they have to be polysemous; (b) they have to have a grammatical meaning, too (aktionsart and/or aspect); (c) they have to have several (or at least more than one) co-occurrence patterns; (d) in their more abstract and/or grammatical meanings they have to be productive.[18]

In the debatable cases productivity is a characteristic mark of the fact that the process of becoming a verbal prefix has already taken place. It also indicates the existence of all the other conditions (a-c), and therefore it can really be a substantial sign of the category change.

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[18] It goes without saying that my criteria are still hypothetical and have to be tested on a wider range of material.

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