ON SOME HUNGARIAN MEANS OF EXPRESSION OF PASSIVE CONTENTS.
A CORPUS-BASED STUDY

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Abstract

Hungarian is widely considered as a language without any productive morphological passive, while some linguists insist on the idea of a Hungarian analytical stative passive. This paper examines the use of genuine morphosyntactic word formation means and alternatives which express passive contents, focusing mainly on the clause level. According to the mainstream definition of passive in cognitive linguistics, passive is defined as a reversal of the focal participants (trajector and landmark). After an overview of the most important functions of the usage of passive, the paper discusses Hungarian means of expression for passive content and passive-equivalents known and described in the Hungarian literature.

The theoretical part is followed by the presentation of an empirical survey concerning the means of expression of passive in Hungarian. The first analysis investigates the constructions expressing passive contents in a corpus consisting of scientific texts in an explorative way. Afterwards, the investigation of the diachronic development of the construction Verb + *-va/-ve* + *lenni/van* in several corpora is presented, providing evidence that this construction is more and more productive in the sense of a stative passive. Finally, an analysis of derivations with the inherently middle suffix *-ódik/-ődik* shows that the use of this construction as a means of expression for passive contents is (still) quite restricted.

Keywords: voice, passive, corpus based, adverbial participle constructions, impersonal 3PL constructions

1. Introduction

This paper examines the formal expressions of passive function, the constructional schemas conveying passive meanings and their realizations in Hungarian. The categories of voice (diathesis)[1], which can be distinguished on the basis of the "number of participants, their characteristic types and their orientation, as well as the characteristics of the event structure related to the figures" (Tolcsvai Nagy 2017: 331),[2] form a continuum (see also the work of Shibatani (1985)). The detecting of a "Hungarian passive" is often hindered by the assumption that one function is expressed by one form, and vice versa − which is highly untypical of the categories of natural languages. Accordingly, among the morphological and syntactic means of expression characteristic of certain voices, we often find polysemous derivational suffixes (Szili 1999) and structures (Honti − H. Varga 2013). This paper considers "means of expression" as constructions or construction schemas, which consist of an association of form and function.

In addition to the complex relationships between form and function, the investigation is complicated by the different notions of passive meanings according to different approaches (see amongst

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[1] The terms *voice* and *diathesis* are treated interchangeably in this paper.
[2] Throughout the paper, Hungarian passages from the specialized literature are quoted in the author's English translation.

others Givón 1994, Langacker 2006b; H. Tóth 1996; Szili 1999; H. Varga 2015; Molnár 2018). In my paper, I mainly use functional cognitive approaches to voice and passive voice.

The Hungarian expressions of passive functions have been mostly examined in comparison with various foreign languages (cf. Sturm 1995; Berényi 2001; H. Varga 2015; Modrián-Horváth 2021), predominantly based on the results of the examination of parallel corpora. However, a comprehensive corpus-based study of the phenomenon has not yet taken place in authentic Hungarian texts, and the present work aims to take steps towards filling this gap. Corpus-based analyses are of particular importance when one is applying a theoretical framework, here functional theory, which adopts a usage-based approach to linguistic phenomena.

2. Passive as a form and a function

2.1. Formal and functional definitions of passive diathesis

When looking at definitions of voice, we can find various morphosyntactic and semantic criteria and their combinations. The literature of formal linguistics considers passive primarily as a syntactic transformation, which entails a change in the appearance of theta roles in the surface structure (cf. Chomsky 1981; Perlmutter 1983). In this way, it is not able to account for the importance of passive in discourse, the typological diversity of its appearance and the frequent extensions of the morphosyntactic patterns associated with diathesis change, on which the present paper places particular emphasis. In semantic definitions, the abstract meaning type of verbs (e.g. action verbs, stative verbs) and the semantic role of the main figure of the sentence are relevant. The advantage of the latter approach is that voice is defined as an inherently functional category, but the disadvantage is that it does not make the construction schemas for expressing or changing diathesis obvious. This is probably why the combination of the two aspects is often used in different approaches; for example, in Hungarian Grammar (Lengyel 2000, 83ff.), action verbs are characterized as "active", with a subject of the type "agent", while the defining characteristics of causative and passive verbs, respectively, are their characteristic derivational suffixes (*-at/-et*, *-tat/-tet*, or *-at(ik)/-et(ik)*, *-tat(ik)/-tet(ik)*).

Voices form a continuum according to the observation of both Hungarian and other functional linguists (e.g. Shibatani 1985; Kemmer 1993; Langacker 1987; Tolcsvai Nagy 2017), depending on the prototypicality and distinguishability of the agent and the patient (cf. 2.2). The prototypical passive verb is defined in Osiris Grammar (Tolcsvai Nagy ed. 2017) as follows: About the schematic figures in the semantic structure of the verb, the trajector and landmark, it can be said that

> the primary figure (trajector) is patient, the undergoer of the events expressed by the verb, the process takes place on it, it is overtly present, it requires elaboration in the sentence, the secondary figure (landmark) is a resource, a hidden (implicit) actor that performs the event (Tolcsvai Nagy 2017: 334).

Using the passive verb, the figure affected by the process is placed in the foreground. In the event structure, "in the force dynamic relationship, the implicit secondary figure causes the primary figure to undergo some process" (ibid.). According to Tolcsvai Nagy, *elítéltetik* (*elítél* 'condemn' + suffix *-tetik*, 'is condemned') is a typical passive verb in which the trajector is the undergoer of the judgment, it requires an overt elaboration; the landmark is an implicit, "institutional legal or moral instance" (ibid.).

2.2. Characteristic functions of passive voice

Among the most often mentioned functions of passive, we can find the followings: agent-defocusing (agent suppression), patient promotion, re-perspectivization of the verb, or trajector−landmark reversal, expression of an event perspective, and various discourse functions: reducing transitivity and increasing stativity in the sense of Hopper−Thompson (1980).

2.2.1. Agent defocusing/suppression

According to the literature, one of the most important functions of passive is turning away from the agent (cf. Shibatani 1985). This may be due, for example, to the fact that the identity of the agent is unknown, not important, or anaphorically or cataphorically accessible/predictable, but intentional "concealment" may also occur, even for pragmatic reasons (cf. Givón 1990: 567 ff.; F. Gulyás 2016). Hrenek (2021) points out that also experiencer-defocusing can occur.

The criterion of agent defocusing seems to contradict the fact that the agent may appear (even in an emphatic position) in passive sentences; the existence of other agent-defocusing structures also seems to provide counter-evidence (e.g. impersonal 3PL constructions in Hungarian or English, see Sansò 2006, which most people do not consider as passive, but Givón (1990) is treating it as impersonal passive). Although frequency-based typological studies mostly find that the agent is most often absent from passive sentences, research on type-based and canonical realizations shows that the possibility of agent marking is a feature of canonical passive structures, since it allows passive to be distinguished from other diatheses on the multidimensional voice continuum (cf. Siewierska–Bakker 2013).

2.2.2. Patient "promotion", focusing on non-agent participants

Another highlighted semantic and syntactic feature of passive conversion[3] is focusing on the patient or other non-agent participants. This is often, but far from always, accompanied by the subject role of the patient.

Although it can indeed be observed that passive sentences typically use the patient as a neutral vantage point, it also must be considered that, on the one hand, that there are also subjectless/impersonal passives,[4] and on the other hand, that not only the patient but also participants in other semantic roles may appear in the subject role in passive sentences (e.g. English *John was given an apple*, or German *Johann hat einen Apfel geschenkt bekommen* − 'An apple was given/gifted to John/Johann', where John/Johann is the recipient/beneficient of the action).

2.2.3. Change of verb perspectivization, trajector-landmark reversal

In a sense, the concept of "change of perspective" amounts to a combination of the first two above mentioned properties. According to this concept, the default grammatical functions of participants related to the lexical meaning of the verb express a certain 'primary' perspective, which is rooted in the speaking community, and this can be changed by syntactic operations (e.g. word order, passivation) (cf. Welke 1992, 2005).

Langacker's proposal (1987, 2006b; cf. also Tolcsvai Nagy 2017: 333f.) that passivation can change the trajector−landmark arrangement of the verb (figure−ground reversal) is related to this approach. Here, one criterion may be the requirement of derivation and conversivity, which distinguishes passive structure from word order inversion with information structural motivation and from impersonal structures (for the latter see Siewierska 2010; F. Gulyás 2016). On the other hand, passive verb constructions must be separated from other converse constructions that are not morphologically derived, e.g. Hung. *kap* 'get' (as a converse verb to the verb *ad* 'give'), in which the agent of the process/event expressed in the verb is defocused.[5]

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[3] By "conversion", I mean the predictions related to the change of perspective with opposite meanings, such as, more broadly, the pairs *receive* vs. *give*, *younger* vs. *elder*, *teacher* vs. *pupil*, etc.; I use the term in relation to passive, not in the morphological (word formation) sense.

[4] As an example, the German impersonal passive can be mentioned: *Es wurde getanzt* ('They danced', lit. 'It was being danced').

[5] This distinction serves definitory and methodological purposes; the functional similarity between the two types of constructions is highlighted by Imrényi (2020).

2.2.4. Expression of "event perspective" / "bare happening"

An additional function attributed to passive (and to some extent to impersonal structures, cf. Sansò 2006) or even used to define passive (e.g. Leiss 1992; Ágel 1996), is the expression of event perspective ('Geschehensperspektive'; 'bare happening' or 'general agentless event', cf. Sansò 2006).

According to Leiss (1992) and Ágel (1996), the main function of passive, the event perspective, characterizes the answers given to the question 'What happened?' and its most important feature is also agent decentralization. For example, according to Ágel, a sentence (1a) containing the (analytical) passive verb form Germ. *wurden aufgeschlagen*, can be considered as an event-oriented sentence in German, just like its Hungarian equivalent (1b). The latter is also an event-oriented sentence, although Hungarian uses 3PL, not passive voice, to express it.

> (1a) Die Zelte wurden schnell aufgeschlagen. 'The tents were quickly set up.'
> (1b) Gyorsan felállították a sátrakat. 'They quickly set up the tents.'

Sansò (2006: 241) describes the "event perspective" or the prototype of the "bare happening" on the basis of Myhill (1997): the individualization of the patient is low, it is not focused or not present; the individualization of the agent is low, it is unfocused, the elaboration of the event is low (almost blurred), the event is realistic, mostly past (perfective) and is not given as central information to the previous discourse (its contextual saliency is low).

Testing with the question Hung. *Mi történt?* 'What happened?', on the other hand, occurs also in conjunction with thetic judgments (cf. Maleczki 2002) or "out of the blue" sentences which can be found in sentences with predicate-focus information structure (cf. Lambrecht 1994). Therefore, although sentences with event-focus often go hand in hand with a passive predicate, it is not appropriate to equate the two. This can be seen if we notice that the above two sentences can be reconstrued so that the "tents" are placed in the focus of attention (higher focus/individualization), and yet the German passive or Hungarian 3PL structure is preserved:

> (2a) Die Zelte wurden schnell aufgeschlagen. 'The tents were quickly set up.'
> (2b) A sátrakat gyorsan felállították. 'The tents, they quickly set up.'

2.2.5. Discourse functions

The important functions of passive do not only concern the clause/sentence level, they extend to discourse, too. According to Givón (1994), passive structures are characterized by a high level of **topicality of the patient**, in addition to the decreased topicality of the agent – as opposed to the active voice, where reverse conditions are typical.

Furthermore, it can also be concluded from Givón (1994) that passive structures are typically used to express background events (mostly static ones) and tend to reduce transitivity in the sense of Hopper–Thompson (1980). According to Givón, the three main functional domains of the passive include (in addition to agent-defocusing and patient promotion) the **increasing of stativity** (see Givón 1990: 571f.). As suggested by Givón (ibid.), important tools of it include the use of the verb of existence and the use of "less" finite forms, such as adjectives, participles, or nominal forms.

2.3. Wider interpretation of voice phenomena

According to Langacker (2006b), passive is **an alternative method of construal**, mostly used by languages in which the canonical arrangement of participants is typically agent-oriented ("nominative" languages, as opposed to "ergative" – theme-oriented – languages). Therefore, a **narrower** interpretation of the change of voice contains an alternative choice of subject. Here it should be emphasized that Langacker does not define the subject by case, congruence or agency (although these are supposed to be symptomatic for the English subject). In the concept of subjecthood,

sequentiality also plays an important role due to the temporal dimension of speech, since the subject, as the trajector of the clause/sentence, serves as a reference point for processing the clause (Langacker 2001: 33; 42).

However, Langacker (2006b) also presents a **broader** interpretation of the voice phenomenon: this includes, for example, different stages of agent defocusing. In this case, the subject's elaboration and specificity decrease, as in the example series below, the structure of the subject is becoming less and less specific. Notably, in the opinion of Langacker, the agent is present and elaborated even in the English equivalent of the last sentence (*betörték az ablakot* 'They broke the window') – merely its specificity is much lower than with the expression *szomszéd* 'neighbour', for example.

(3a) Jenő betörte az ablakot. 'Jenő broke the window.'
(3b) Az egyik szomszéd betörte az ablakot. 'One of the neighbours broke the window.'
(3c) Egy ember betörte az ablakot. 'A man broke the window.'
(3d) Valaki betörte az ablakot. 'Someone broke the window.'
(3e) Betörték az ablakot. 'The window has been broken.'

2.4. Expressions and equivalents of passive in Hungarian according to the literature

In the examination of the expressions of passive function, two main lines of investigation can be observed in the Hungarian literature. One focuses on and examines the formal aspects of the supposed passive expressions, mainly from a historical point of view (e.g. H. Tóth 1996; Szili 1999). These studies and treatises state that the formal expressions they describe have several functions in Hungarian. For example, the canonical passive word formation suffix *-(t)atik/-(t)etik* can be found not only in passive, but in many cases in middle voice and reflexive occurrences, too (cf. H. Tóth 1996: 117 ff.), while in the case of the typically middle voice (reflexive) word formation suffix *-ódik/-ődik*, mediopassive and passive functions can also be observed (cf. Szili 1999). Similarly, a functional diversity of the structure *-va/ve van* is observed by Honti – H. Varga (2013: 260).

Another group of passive studies consists in contrastive and/or corpus-based research focusing on the Hungarian formal means of expression of passive function (see Sturm 1995; Berényi 2001; Pilarský ed. 2013; H. Varga 2015; Modrián-Horváth 2021).

The passive constructions that can be assumed in Hungarian are as follows (cf. mainly H. Varga 2015): middle verbs, *-va/-ve* adverbial participle[6] + *van* structures, function verb structures, impersonal structures (above all 3PL), modal impersonal structures (e.g. with the modal verb *kell*), participles and other deverbal adjectives, as well as verbs derived by the (now obsolescent) derivation suffix *-tatik/-tetik*.

2.4.1. Middle verbs

According to H. Varga (2015), verbs ending derived by *-Ódik, -Ul, -sUl, -Od(ik), -sOd(ik), -Ad, -An* and other, non-derived verbs (often with the *-ik* ending) (e.g. *fő*; *törik*) belong to this group. Among the middle verbs expressing passive meaning (as a kind of "replacement" for the obsolescent word formation suffix *-(t)Atik*) the verbs derived by the suffix *-Ódik* are mentioned in particular (cf. also Károly 1967; E. Abaffy 1978; Szili 1999).

Middle verbs, based on their semantic characteristics, are suitable for expressing passive meaning content. The semantic characteristics of prototypical middle verbs can be summarized as follows (based on Tolcsvai Nagy 2017: 332). The participants are: two figures, the primary figure (trajector) serves as a theme or end-point of the state (change) it undergoes; the secondary figure (landmark) is conceptualized as initiator, energy source. Event structure: "the primary figure enters a state, something happens to it, under the influence of the mostly non-overt secondary figure"

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[6] In this case, adverbial participles are deverbal forms with the suffix *-va/-ve*, also called gerund or transgressive.

(ibid. 332). Middle verbs vary among others regarding the closeness of their semantic structure to the active or to the passive verbs.

Middle voice derivation suffixes are suitable candidates for constructing a passive meaning if an intentional agent is found in the meaning of the basic verb and the derived verb gives focal prominence to the patient, as in the case of the verb *megszidódik* ('to be scolded')[7], resulting in a change of perspective. The use of derivatives with middle suffixes in passive meaning is similar to English anticausatives in structures like *The book sells well* or to the German anticausatives with reflexive form like *Das Buch verkauft sich gut*, although, the suffixation being more explicit, the possibility of construing neologisms with it is much broader and more significant in Hungarian.

2.4.2. V-*vA van/lesz* stative structure

The adverbial participle V-*va/-ve* belongs to the non-finite forms. The peculiarity of infinites is that the event expressed in the verbal base is made available by summary scanning (cf. Langacker 1987: 249 for the English language). Adverbs derived from the transitive verb profile the patient (the undergoer) on their own, e.g. *zárva* 'closed'; *nyitva* 'open' (shop); *frissen festve* 'freshly painted' (bench); *Tengerre predesztinálva?* 'to sea?' (SciCorp 1, 41, cf. 3.1); the patient's state is the result of a process. The adverbial participle "usually expresses simultaneity" (Ladányi 2017: 623).

The temporality and sequential scanning of the V-*va/-ve van* structure is ensured by the verb of existence, which consists of a series of homogenous component states (imperfective),[8] so the structure expresses primarily a state created as a result of an action, therefore it can be considered as a typical stative passive in Hungarian. The similar structure of V-*va/-ve lesz* ('will be'/'become' + adverbial participle) is, on the other hand, dynamic in nature, due to the fact that the event structure of the verb *lesz* 'become' is not homogeneous unlike the event structure of *van; lesz* is a perfective verb. During the history of Hungarian, the productivity of the V-*va/-ve van* structure has increased enormously (cf. 3.2.1) and it has also become capable of profiling the states of patients of non-transitive verbs. The distribution of the structures V-*va/-ve van* and *lesz* should not be considered merely as stative vs. dynamic constructions, partly due to the suppletive paradigm of the verb *van* (*lesz* counts as the future form of *van* in this reading), partly because of the difficult distinction between stative and dynamic passive (this is not surprising, since, for example, the initially stative English passive schema (*be* + part. perf.) can profile dynamic events now, while the initially dynamic German Vorgangspassiv is increasingly gaining ground in the stative field as well).

2.4.3. Light verb constructions

According to H. Varga, most of the light verb constructions with the status still disputed are "impersonal structures with a general subject, not in an active meaning, but in a circumscribed passive structure" (H. Varga 2015: 304). The nominal element of light verb constructions has an event structure related to verbs (cf. ibid. 305). — Although I am not aware of any frequency studies on function-verb structures that could support the above finding with regard to active (e.g. *döntést hoz* 'make a decision') and passive (e.g. *eldöntésre kerül* 'is decided') function verb structures, they undoubtedly play an important role in the expression of passive meaning in scientific and press language, as mentioned by H. Varga (cf. also Pilarský 2013).

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[7] The somewhat astonishing neologism *megszidódik* 'scold + middle suffix' comes from a written language usage event. As a result of a shortage of homework incorrectly recorded in an e-journal, the teacher sent the following message to the parents: *elnézésüket kérem, hogy gyermekük az én hibám miatt szidódott meg* 'I apologize for your child being scolded for my mistake'. The teacher managed to defocus the agent by using the middle voice derivation suffix; alternative constructions are likely to be stigmatised (*meg lett szidva* 'has been scolded') or ambiguous (*szidásban részesült* 'received scolding'), while using an active form with agent – *szidták meg Önök* 'you scolded him' – would have been extremely face threatening.

[8] For further questions on verbal aspects, cf. Tolcsvai Nagy (2015: 115 ff. and 2017: 334 ff.).

2.4.4. Impersonal structures

The way the patient is centered in impersonal structures is a schematic representation of the agent, either with a general subject or with plural 3rd person forms, the subject of which is often not clearly identifiable, or in fact there is not a plural conceptualization behind it. Several attempts have been made to demarcate impersonality and passivity, one of the cardinal points of which is the persistence of verb transitivity in impersonal structures.

When presenting Langacker's (2006b) broader interpretation of voice (cf. 2.3), various levels of agent defocusing were mentioned. The different types of impersonal structures (*az ember* 'one'; 3PL with an unidentifiable reference) represent certain points on this scale. The Hungarian 3PL structure is probably more grammaticalized for the expression of agent decentralization than the English *they*-structure. In the case of English 3PL, the subject is marked by an obligatory personal pronoun, while in the case of Hungarian impersonal subjects with 3PL persons, schematicity is higher, in impersonal use, the subject pronoun cannot appear: *Betörték az ablakot* vs. *Ők törték be az ablakot* 'They broke the window / The window has been broken' vs. 'THEY broke the window / The window has been broken by them' – in the latter sentence, the subject referents can be identified in the ground or in the discourse, but not necessarily in the previous sentence. Therefore, Hungarian **impersonal 3PL structures** can rightly be considered as a typical **transitional phenomenon** between morphosyntactic voice change and (broadly construed) agent defocusing.

1PL structures can also be included among the means of expression of agent defocusing. Based on Sturm's (1995) studies, in certain types of text (recipes, instructions for use, patterns of tailoring), Hungarian uses first person plural to express impersonality in contexts where German uses passive structures (cf. Sturm 1995: 199).

2.4.5. Impersonal verbs and structures of a modal nature

H. Varga (2015) calls this group "verbs and other expressions with infinitival subjects or subject clauses". Based on her examples, we can find verbs and nominal predicates with modal (or aspectual or evaluative) meaning ("*kell, illik, sikerül, lehet, van, nincs // szükséges, muszáj, szabad, érdemes, tilos, jó, rossz, hasznos, fölösleges, hiábavaló, hiba*" 'must/have to, behove, succeed, may/can, is, is not // to be necessary, need, may/can, to be worth, to be forbidden, to be good, to be bad, to be useful, to be useless, to be of no avail, to be an error', see H. Varga 2015: 306), which also form impersonal constructions.

The above impersonal structures are suitable for changing perspective, since in infinitive structures, the figures can remain unelaborated, yet they are part of the immediate scope and are processed, so they are part of the event structure. The decisive factor here, then, is which referent is more accessible in the discourse, which will be mostly in the focus of attention.[9] The first of the following two contrived sentences (4) puts the agent of the potential action first, according to the default setting of the verb, while (5) foregrounds the patient:

(4) El kell mennem. 'I have to leave.'

(5) A szakdolgozatot november közepéig le kell adni.
    'The thesis must be submitted by mid-November.'

In sentence (4), the person designation on the infinitive overtly activates (objectifies)[10] the performer of the action (*go*), but in sentence (5), the performer of the action (here: 'submitting') is present in the sentence in a subjective way. In both cases, the executor of the action, who obeys an external compulsion in the case of *kell,* could appear with a dative suffix, not in the unmarked

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[9] If this entity is regarded as a trajector should be treated as an open question for the time being.
[10] The terms *objectification* and *subjectification* I use in the terms of Langacker (2006a), so the term *objectification* means here overt linguistic realization.

subject case (cf. Kugler 2017: 484). The neutral vantage point of the second sentence (cf. Sanders–Spooren 1997) is the 'thesis' that has been made available in an elaborated form, which is why the change of perspective can take place.

2.4.6. Participles and adjectives

In this group, we find "participles" with the word formation suffix *-ható/-hető* ('-able') according to H. Varga (2015), but in my opinion, we could also include other productive word formation methods of an adjectival (participial) character, such as words derived by the word formation suffix *-hatatlan/-hetetlen* ('in-V-able'), the past participle and gerundive derivatives with the suffix *-(a)tlan/-(e)tlen*. These derivational suffixes can be productively used with transitive verbs, with focusing of the patient (cf. Ladányi 2017), some of them have modal meaning. Sturm (1995: 150) also mentions the (rare) passive use of the present participle, e.g. *kiadó lakás, eladó ház, félő, hogy* 'apartment for rent, house for sale, it is fearful / it can be feared / that...'. Kugler and Simon (2018: 39) assume the functioning of this passive *-ó/-ő* also in the aforementioned suffix *-ható/-hető*.

The passive meaning content in this group is linked to adjectives and participles, which do not exclusively occur or (e.g. in the case of the past participle and the derivatives with *-(a)tlan/-(e)tlen*)[11] typically do not occur as predicates, but rather as modifiers and as parts of closed construction units. However, if such nominal structures are taken into account, other constructions are noteworthy as well, e.g. nomen actionis or nomen acti noun derivates that can express a passive perspective (e.g. *vminek az emlegetése, vizsgálata* 'mentioning/examining of something'; cf. 3.1).

2.4.7. "Active verb forms"

H. Varga (2015: 307) makes reference to a parallel corpus analysis (not presented in detail) that investigated the equivalents of Italian passive structures; among the passive equivalents she also mentions 'active (!) verb forms' (sic), however, she does not give a detailed explanation of them. Modrián-Horváth (2021) found that the highest number of non-modal dynamic passive equivalents of German in the German-Hungarian parallel corpus were the 3PL impersonal structures referred to in Section 2.4.4 (see (6)) and transitive structures obtained by the reconstruction of the agent (see (7)). In the latter case, the change of perspective was carried out by information structural tools; H. Varga presumably understood similar cases by the group 'active verb forms'.

(6a) Ezt a vacakot csakugyan elviszik a rendőrségre, azután *lepecsételik*…
'This thing is really going to be taken to the police station, and *then they will stamp it* / it's going to be stamped...'[12]

(6b) Das Ding geht wirklich zur Polizei, *wird* dann *gestempelt*...[13]
'the stuff really goes to the police, then it will be stamped (pass.)'

(7a) és ha nem *szolgáljátok* ki a legelőzékenyebben, nagy balhé lesz a bódéban
'And if *you* don't *serve him* in the most obliging way, there's going to be a big mess in the stall.'

(7b) und wenn der nicht aufs Zuvorkommendste *bedient wird*, gibt es Krach hier in der (Bude)
'and if this man is not served (pass.) in the most obliging way, there will be trouble in this stall'

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[11] According to the literature on grammar, the past participle in the role of a predicate is most "acceptable" if the participle is more a lexicalized adjective; cf. Zimányi (2006).

[12] Sentences (6a) and (7a) are taken from Böll, Heinrich – Dorombay, Károly 1964/2001. *Biliárd fél tízkor*. Budapest: Könyvklub.

[13] Sentences (6b) and (7b) are taken from Böll, Heinrich 1959/2000. *Billard um halb zehn*. Munich: dtv.

Whether the above case also involves a "trajector reversal" in the Hungarian translation should be treated as an open question for the time being; the present paper focuses primarily on types of trajector–landmark reversal that are also marked by morphosyntactic means.[14]

2.4.8. Verbs from the derivation suffix *-(t)atik/-(t)etik*

Verbs derived by the word formation suffix *-(t)atik/-(t)etik are* considered by many to be a prototype of the Hungarian passive verb, see Tolcsvai Nagy's example *elítéltetik* 'to be condemned' (2017: 334) and Ladányi's following statement: "The word formation suffix *-(t)at(ik)/-(t)et(ik)* derives so-called passive verbs" (Ladányi 2017: 610). Both Hungarian Grammar (Keszler 2000: 310) and Osiris Grammar (OGr, Tolcsvai Nagy ed. 2017) classify the derivation suffix as one of the productive derivation suffixes (taking transitive verbs as their base). According to the semantic description of passive structures in OGr, "the action is conceptualized from the perspective of the patient, and the active agent remains in the background [...]. The meaning of the schema is 'the action named in the verbal base takes place on the patient' [...]" (Ladányi 2017: 610). According to Ladányi (ibid.), the theoretically unlimited productivity is nuanced by the fact that the token frequency of verbs created by this schema is low (the most frequent ones, *adatik* 'to be given' and *íratik* 'to be written', occur a few thousand times in the one billion word HNC2; cf. Ladányi 2017: 610, fn. 170.). – Although the present paper analyses another derivation suffix, the derivation suffix *-ódik/-ődik* (see 3.2), it would be interesting to look into the type frequency of verbs derived by *-(t)atik/-(t)etik* in present-day Hungarian, since type frequency is much more strongly correlated with the productivity of the word formation suffix and with the strength of the schema (cf. Ladányi 2017: 539) than the frequency of tokens, which is more of a reliable indicator of conventionalization and lexicalization (cf. ibid. 538f.).

3. Expressions of change of perspective based on corpus analyses

In order to examine expressions of passive meaning in Hungarian, I considered it important to carry out a complex empirical study, in this case a corpus analysis, in accordance with the usage-based approach of functional language theories. The corpus analysis was carried out in two steps. I firstly obtained a comprehensive picture of passive expressions in a smaller scientific corpus in the framework of an exploratory study. As a second step, I examined two structures with passive meaning – the construction *-va/-ve van* and the verbs derived by the word formation suffix *-ódik/-ődik* – in larger electronic corpora.

3.1. Explorative study in a scientific corpus

For a comprehensive manual examination of the Hungarian means of expression of passive conversion, I have compiled a small corpus from the Digital Library containing scientific text excerpts consisting of around 10,000 words (4 texts from 4 different disciplines: human ecology, linguistics, medicine, sports science). The corpus will be referred to as SciCorp.

I chose scientific texts as the basis for the study because this functional style is generally characterized by the desire for impersonal wording, so a large number of expressions with passive function could be expected here in Hungarian as well.

I conducted the corpus analysis manually. I was looking for passages that have a patient-like trajector, as well as an agent present in the semantic structure (mostly subjectivized); according to

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[14] Modrián-Horváth (2021) argues that the subject is not always the "better trajector". In sentences such as *Melegem van* 'I'm hot', *Szükségem van egy új táskára* 'I need a new bag', but even *Jánost páni félelem fogta el* 'John was caught by panicking', the trajector appears in a grammatical form other than the grammatical subject. In the same way, in *Zénót elütötte a vonat* 'Zénó was hit by a train' (Imrényi 2017: 689) it can be assumed that Zénó, not the train, is in the focus of attention, so here we can suppose a trajector-landmark reversal realized only by means of word order and prosody.

the criterion of conversivity, the verbal basis had to have an active meaning. Here I present primarily the analysis of the predicates, but it should be noted that, taking into account the total syntactic organization of sentences in the texts, the proportion of passive hits is much higher (e.g. past participle in the role of a modifier, e.g. *a **legismertebb** gondolkodó*, 'the **most well-known** thinker' or nouns derived by the word formation suffix *-ás/-és*, e.g. *melyek **vizsgálatából** kiderül* 'which is found in the course of **an investigation**').

3.1.1. Expressions of passive

During the analysis, I have separated the following three groups (with gradual transitions), of which I will only deal with group a) in this paper:

a) morphologically marked trajector-landmark reversal compared to the meaning of the verbal base (e.g. adverbial participle, adverbial participle structure, deverbal adjectives, see details below);

b) other cases of agent defocusing, e.g. impersonal 1PL or 3PL, these have been disregarded in the analysis; e.g. *Összesen 31 pár gerincvelői ideget különítünk el* 'A total of 31 pairs of spinal nerves are isolated', literally: 'we isolate a total of 31 pairs of spinal nerves' (SciCorp18.34);

c) only syntactic trajector-landmark reversal, ignored here, e.g.
A myelinhüvelyt a periférián a Schwann-sejtek alakítják ki
(ART myelin.shed.ACC ART periphery.SUPERESS ART Schwann-cell.PL form VERB PREF;
'The myelin shed is formed on the periphery by Schwann cells.' (SciCorp17,4).

Below are examples of morphosyntactic expressions. The last two categories are slightly different from the typical morphosyntactic marking: the impersonal 3PL marking, as explained above (2.2), represents a transition between the mere syntactic marking of trajector-landmark reversal and the real morphosyntactic marking, since 3PL cannot be expressed by a pronoun, its referent cannot be directly identified, so it marks a high level of agent defocusing – however, the agent remains the syntactic subject of the sentence. In the case of light verb constructions, or more broadly, phraseological units,[15] the verbal base construing the event is already in a more distant relationship with the expression as a whole.

- nouns derived by the word formation suffix *-ás/-és*: *A másik előny a túlszaporodás megakadályozása és az érzékeny természeti környezet megóvása.* (SciCorp 5,14) 'The other advantage is to prevent (literally: 'the prevention of') overgrowth and to protect (literally: 'the protection of') a sensitive natural environment.' (SciCorp 5,14)
- adverbial participle: *Tengerre predesztinálva?* 'Predestined to sea?' (SciCorp 1, 41)
- *-va/ve*: *ahol minden részdiszciplína csupán egyetlen fölérendelt tudomány alá van beosztva* 'where each subdisciplinary is assigned to only one parent science' (SciCorp 15,36)
- past participles: *A végkimenet azonban nem garantált* 'However, the outcome is not guaranteed' (SciCorp 6,9)
- *-ható/-hető*: *mert az itt szerzett képességek, technikai készségek jól hasznosíthatók a többi szeren is* 'because the skills and technical skills acquired here can be used well on other drugs' (SciCorp 27,10)
- *-tlan*: *megoldatlan* 'unresolved' (13,7), *-hatatlan/-heteten*: *elképzelhetetlen* 'unimaginable' (SciCorp 27,34)
- gerundive: *veendő* 'to be taken' (SciCorp 13,21)

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[15] Light verb constructions and other bound constructions are treated together as phraseological units in this paper.

- *-ódik/-ődik: a hátsó gyökérrostok egy-egy gerincvelői szelvénynek megfelelően összeszedőd-nek* 'the posterior root fibers are collected (literally: collect + middle suffix) according to a spinal cord section' (SciCorp 19,16)
- impersonal 3PL: *Ennek során a subarachnoidalis térségbe fecskendeznek érzéstelenítőszert* 'Anesthetic is injected into the subarachnoidal region' (literally: 'they inject') (SciCorp 21,22)
- phraseological unit, light verb construction: *Szemantikai modellek alkotására is történtek próbálkozások* 'Attempts were also made (literally: attempts also happened) to create se-mantic models' (SciCorp 13,6)

3.1.2. Distribution of morphosyntactic devices expressing passive meaning in the scientific corpus

Table 1. Distribution of morphosyntactic devices expressing passive meaning in the scientific corpus

	Type	Token
-Ás	21	25
-hAtÓ	28	47
-(hAtA)tlAn	3	4
-vA (van)	3	3
-(Vt)t (past part.)	3	3
-AndÓ	1	1
-Ódik	4	4
3. Pl.	6	6
phras.	5	5

The distribution of morphosyntactic devices expressing passive meaning in the scientific corpus is illustrated in Figure 1.
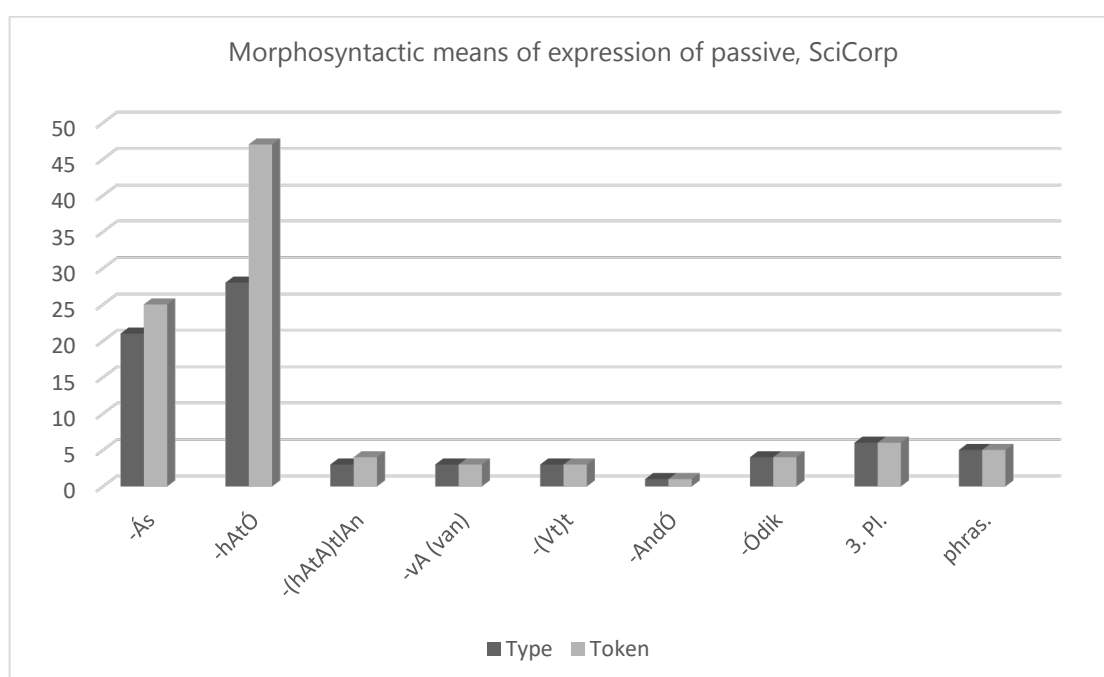

Figure 1. Distribution of morphosyntactic devices expressing passive meaning in SciCorp

As can be seen from the table and the graph, the most frequent means of expression for passive contents at sentence level was suffixation with *-ható/-hető*, which is the predicative use of a modal deverbal adjective. The number of associated types is 28, which is the number of the different deverbal adjectives derived by the suffix *-ható/-hető* in the corpus, while the overall number of the derived tokens (i.e., deverbal adjectives derived by *-ható/-hető* in a predicative role) was 47. The relatively lower type–token ratio suggests that certain adjectival predicates commonly recur (e.g. *található* 'can be found', *hasznosítható* 'can be utilised').

Surprisingly, the second most frequent means of expression was a construction that was not included in the literature review: the predicative use of nouns derived by the word formation suffix *-ás/-és*, represented by 21 types and 25 tokens.

This is followed by the constructions traditionally listed as passive alternatives: the impersonal structure 3PL (6 types, 6 tokens, i.e., a highly productivity structure), the phraseological units (with 5 types and 5 tokens), verbs derived by the suffix *-ódik/-ődik* (4 types, 4 tokens, which also indicates high productivity), deverbal adjectives with the suffix *-talan/-telen* (3 types, 4 tokens), the adverbial participle structure and the past participle structure (with 3 types and tokens each). Finally, the least frequent pattern is the modal gerundive predicate, occurring only once.

3.2. Corpus analysis of certain constructions[16] with passive meaning

In the following I examine two constructions with passive meaning in a corpus-based analysis of the constructions: the adverbial participle structure *-va/-ve van* as well as constructions containing verbs derived by the suffix *-ódik/-ődik*.

Due to the difficulties of distinguishing between the patterns *-va/-ve van* and *-va/-ve lesz,* and due to the low amount of data in some of the corpora, I included the verbal stems *le-* and *nincs* ('is not') in the character-based search in the Old Hungarian Corpus (OHC); the search engine of Historical Private Corpus (HPC) included the stem *le-* already in the lemmatization. When searching for large amounts of data in the electronic corpus, I combined the lexeme *van* with adverbial participle forms.[17] The search for the lexeme *van* in HNC included the stem *nincs*, so I also included this stem in the investigations.

3.2.1. Analysis of V-*va/-ve* + *van* structures

I examined the V-*va/-ve* +*van* structure diachronically in the OHC, HPC, HHC and HNC corpora. The use of different corpora presented several theoretical and practical difficulties. The databases named above are partly corpora defined on the basis of language history, yet there are overlaps between OHC and HPC (both contain old- and middle-Hungarian texts, albeit in different proportions) and between HHC and HNC. HHC contains texts until 2010, while HNC is intended to be a "general-purpose representative corpus of today's Hungarian written standard language" (http://corpus.nytud.hu/mnsz/) and contains a plethora of 20th-century texts. As the evolution of the epochs of language history is also the result of continuous changes, these overlaps can be accepted for methodological purposes in order to obtain a global picture of the linguistic changes examined.

The corpora differ in their structure, too. While in OHC we find codices, letters, bible translations, and in HPC protocols and private letters, these can be considered as so-called special corpora, HHC and HNC are collected with the claim for being reference corpora. These type differences can cause a shift in the corpus representation of certain verbs and constructions, for example, the structure *meg van írva* 'is written' is extremely frequent in OHC, whereas *fogva van* 'to be caught' is particularly common in HPC.

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[16] In the paper, I distinguish between "structure" and "construction". While "structure" refers to the formal side, the term "construction" is a pair of form meanings, as determined by Goldberg 1995.

[17] For character-based search (OHC, HHC), I examined all V-*va/-ve* + *van* constructions, in HPC I combined the search terms within a sentence, while in HNC 2 I filtered the verb and the adverbial participle in a distance of 2 words.

Practical problems arise, on the one hand, from the different sizes of corpora, which makes it difficult to compare data. An even more serious problem is that HHC is not morphologically annotated, subsequently only character-based searches could be carried out in it, which again led to difficulties in the search for the structure V-*va/-ve* + *van*. When searching in OHC, I preferred character-based search because in Old Hungarian, there were several types of adverbial participles.

In the following presentation of the results, I first indicate in a table the absolute frequency (for HHC and HNC the estimated frequency). The number of hits, i.e., the type and token frequency of the structure in V-*va/-ve* found in the above corpora, is summarised in Table 2 for the various types of verbal bases.[18]

Table 2. Type and token frequency of the structure -*va/-ve van* found in the above corpora

		OM	HPC[19]	HHC	HNC
act-pass	type	19	186	247	146
	token	99	368	493	175
pass-pass	type	2	6	11	0
	token	2	7	24	0
refl-med	type	3	67	29	12
	token	5	90	39	24
act	type	1	5	3	1
	token	1	7	4	1

The abbreviations in the table refer to the following structures:

- act-pass: number of types and of tokens of a passive-meaning construction derived from a transitive verb, e.g. *akadályozva van* 'is hindered'; type number always means the number of verbal bases (lexemes), and the number of tokens is the total number of occurrences of the given construction in the sample.

- pass-pass: a construction -*va/-ve van* derived from a morphologically passive base (here: a derivative with the suffix -*(t)at(ik)/-(t)et(ik)*);

- refl-med: construction derived from a reflexive or middle voice verbal base, e.g., *el van foglalva* 'is occupied' can be seen as derived from the base *elfoglalja magát* 'occupy oneself', *meg van győződve* 'is assured' can be traced back to the word *meggyőződik* 'to assure oneself'

- act: construction derived from an intransitive verb, e.g. *el van utazva* (literally:) 'is travelled (gone) away' from the verb *elutazik* 'travel (go) away'.

Relative or calculated frequency per million words is shown in Table 3; this table only allows for approximate orientation due to the above problems.

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[18] Verbal bases serve as starting points for the morphosyntactic schemas (they can be morphologically simple or complex). Regardless of spelling convention and grade of grammaticalization and lexicalization respectively, I handle each verb separately as a lexeme, i.e., the *leír* 'describe' and *megír* 'write' count as two different verbs. – Different writings due to different spelling conventions are not considered as separate forms *fogva/foghva/fogua*, *tive/téve* etc., nor dialect forms such as *öszvö/öszve*. Rarely occurring stem variants, e.g. *felejt/feled* 'forget', are counted as separate stems.

[19] Due to searching difficulties in HPC, only the form -*va* has been evaluated.

Table 3. Estimated frequency of structure V-*va/(-ve) van* in corpora – overview

	OHC	HPC	HHC (only the form -*va*)	HNC
total number of results	1491	542	9912	67306
sample size	1491	542	1000	250
number of relevant results	107	472	560	200
corpus size (million words)	3,2	0,85	30	187,6
relative / calculated frequency / million word	33,4375	555,2941	185,024	287,0192

In OHC and HPC, I divided the total of token numbers by the size of the corpus (/million words). Here, HPC shows an extremely high frequency of use of the structure, which can perhaps be explained by the corpus's proximity to conceptual orality.[20] In HHC and HNC, the estimated frequency was calculated from all hits (HHC: 9,912, HNC: 67,306 hits) using a correction factor (560/1000 hits in the HHC, 200/250 hits for the HNC).

Regarding the relative and calculated frequency of the structure V-*va/-ve van*, we can see a continuous upward tendency in each corpus studied. The exception to this is the extremely high frequency in the HPC, which far exceeds even the corpus of the present day (HNC). If all the calculations were correct, this outlier ratio is probably due to the conceptual orality of the HPC: the other three corpora examined contain conceptually and medially written texts, which may be the reason why the appearance of the structure with V-*va/ve* is limited. This may also indicate that the use of the structure in conceptual and medial orality may be much more common than in written language.

In the first appearances (OHC), by far the most occurrences are passive-meaning constructions (*meg vagyon írva* 'is written') derived from transitive active bases – this construction meaning seems to be the primary meaning of the structure. This construction appears with increasing frequency in later corpora and, in particular, with an increasing type–token ratio, and is the most dynamically expanding schema if the constructions of low-frequency intransitive active bases are ignored. On the basis of these criteria, the **construction V-*va/-ve*, derived from transitive verbs and having a passive meaning, can be classified as a strong schema** (cf. Ladányi 2017).

In older texts, another structure V-*va/-ve van* with passive meaning, derived from morphologically passive verbs (in this case with the suffix -*(t)atik/-(t)etik*) is also documented, e.g. *egybeszerkesztetve van* 'is assembled'. This type already appears in OHC, its productivity decreases until the texts of HHC, and then – parallel to the sharp decline in the use of the suffix -*(t)atik/-(t)etik* (cf. Ladányi 2017: 610), it disappears completely.[21]

The structure V-*va/-ve van* appears from middle-reflexive verbs (e.g. *el van hervadva* 'to be withered'), and even occurs with some active intransitive verbs (e.g. *elvonúlva van* 'to be secluded/retired'). The frequency of the use of reflexive-middle bases temporarily peaks in the texts of HPC and HHC, and then it declines proportionally in HNC.

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[20] For the concept of conceptually written and oral texts cf. Koch–Österreicher (1994).

[21] For the sake of visual awareness, a ratio of 0 is added to the corpus HNC, although the division 0 types / 0 tokens should actually be undefined.
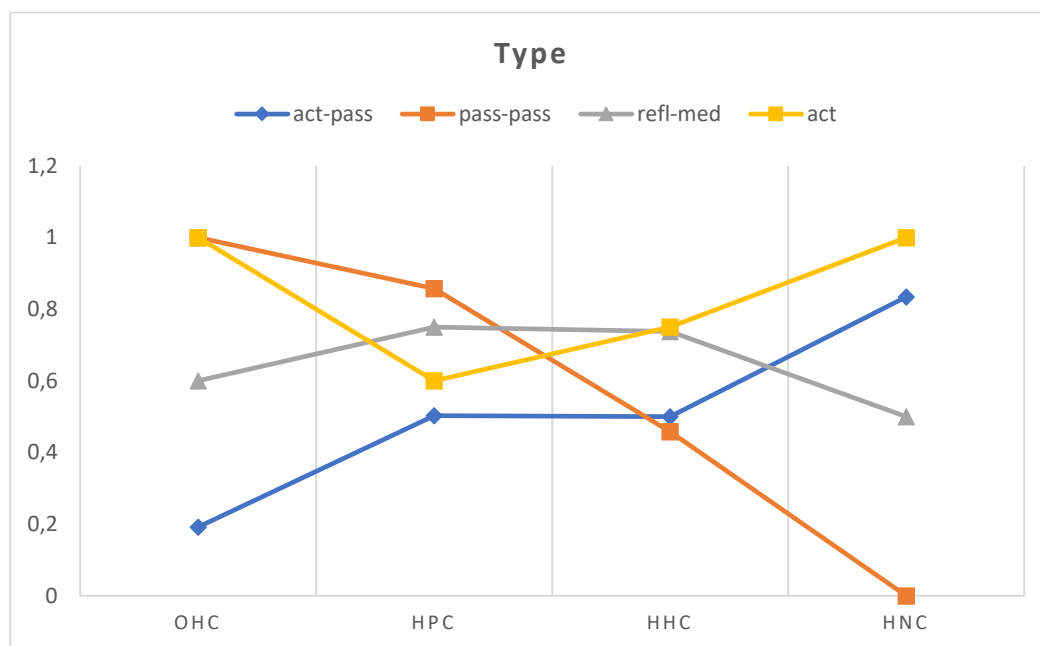
Figure 2. Diachronic change in the type-token ratio of each construction

Figure 2 illustrates the diachronic change in the type–token ratio of each construction. From the type–token ratio, with due care, we can draw conclusions about the productivity of each type of construction: the higher the type—token ratio, the higher the productivity of the structure. This does not apply, of course, to extremely rare types of construction. Thus, the 1.00 values for constructions with passive or intransitive bases shown in the figure can be ignored due to the low amount of data, which I left in the figure only for the sake of completeness.

The most striking tendency is the **clear increase in the ratio of the passive-meaning construction derived from transitive verbs:** while this value in OHC was only 0.19, in the HNC it is already 0.83, i.e., it is close to one. In view of this, a strong increase in the productivity of this type of construction can be observed, and the extension of the construction over centuries can be observed.

The other interesting trend is the temporary increase and then the decrease in the type–token ratio of the construction derived from reflexive or middle bases. The incidence of this type of construction, despite a sharp decrease in proportion, stabilizes at a lower level. Its type-token ratio (0.5) is due to the high frequency of some tokens (e.g. *meg van győződve* 'to be convinced').

Constructions from passive bases (*-tatik/-tetik*) have few exemplars in the early stages, which leads to a high type-token ratio. Later we can see some extension of this construction, and then its complete decline.

3.2.2. Suffixation by *-ódik/-ődik*: from middle voice suffix to passive suffix?

The other structure subjected to closer examination is the structure derived by the suffix *-ódik/-ődik*. It is typically a **middle voice** suffix, but according to the findings of the literature it also appears in the function of a passive suffix ("suitable for [...] filling the gap resulting from the fading of the passive verb forms", Szili 1999; cf. 2.4.1). Ladányi (2017) gives an account for two meanings of the derivation suffix and the product-oriented schema based on it: a middle and a passive one. The latter can be described as follows: 'the process takes place as a result of the activity described in the base' (Ladányi 2017: 610).

As already explained in Section 2.4.1, verbs derived by the suffix *-ódik/-ődik* (as well as other middle verbs) can be used to express passive contents because the boundary between the semantic structure of middle and passive verbs is fuzzy (cf. Tolcsvai Nagy 2017; Croft 1994). Passive

reading is facilitated by the use of the suffix when the basis contains a trajector of an emphatically agentive nature; this figure becomes a secondary figure in the verb derived by *-ódik/-ődik* and is mostly implicitly present. (According to Szili 1999, the agent cannot be expressed by a nominal with the suffix *-tól/-től* or with the postposition *által*; the lack of realisability with non-periphrastic means indicates that we do not have to do with a canonical passive, cf. Siewierska–Bakker 2013.)

HNC2 is an order of magnitude larger, morphosyntactically annotated corpus containing more than one billion words; in the Hungarian subcorpus of this, I examined verbs derived by the suffix *-ódik/-ődik*. The search resulted in 516,302 (regarding the suffix *-ódik*) and 627,473 (regarding the suffix *-ődik*) results.

For a further, manual analysis, I requested a random sample of 2*250 elements from the concordance to determine whether their meaning was passive or middle. Here again, I was looking for results where the semantic structure of the verbal base definitely contained an agent. As a result of the study, I found only a small number of constructions (7 in total) with more passive meaning, although the classification of the hits was far from always clear, since, as has been stated several times above, the transitions between passive and middle voice are gradual. Three examples of the rare passive hits are listed below:[22]

> (8) Kérdésem egyszerű: milyen nyelven *íródtak* és köttettek meg az M1-es és M5-ös autópályák koncessziós szerződései?
> 'My question is simple: in what language have the concession contracts for the M1 and M5 motorways *been written* and concluded?'

The verb *íródik* 'to be written' is one of the passive word-formation products of high token frequency; this may be motivated by the fact that the author of written works is often anaphorically (or possibly cataphorically) accessible – which is why the re-setting of the agent is avoided – or is partly unknown or irrelevant like in the present context. The passive reading is disambiguated and supported by the archaic form *köttettek meg* 'were bound' which is derived by the obsolescent suffix *-tatik/-tetik*.

> (9) A másik ilyen problematikus dolog, amit Perlaki Jenő és a mi képviselőink közül is néhányan említettek, hogy a preambulumban mintegy korrupcióellenes törvény *tüntetődik fel* ez a törvényjavaslat.
> 'The other problem that Jenő Perlaki and some of our representatives mentioned is that in the preamble this bill *is presented* as an anticorruption law.'
>
> (10) következésképpen a jövőben munkahelyek *teremtődnek*
> 'consequently, in the future, jobs are going to be *created*'

In the examples (9) and (10) we can again find a near-passive reading, due to the semantics of the verbs *feltüntet* 'indicate' and *teremt* 'create'. According to the related semantic frame, the activities expressed by these verbs do not occur without intentionality. To present something as something else implies an intentional misrepresentation, while to create something presupposes an intention to accomplish something, so the processing of an intentional agent necessarily takes place despite the lack of overt linguistic realization (subjectification).

4. Summary and conclusion

The main question of this paper was which constructional schemas are used to express passive contents in Hungarian and how their productivity turns out to be. The term passive was primarily

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[22] All data (inclusive spelling) are presented in the same form as in the HNC.

defined as a reversal of the focal participants, the trajector and the landmark, but the requirements of derivation and conversivity also served as criteria.

In an exploratory examination of the constructions in scientific texts, the schema using the word formation suffix (of theoretically unlimited productivity) *-tatik/-tetik* did not occur at all among the means of expression, but the predicative use of deverbal nouns derived by the suffix *-ás/-és* which cannot be found in the literature as a means of passive expression was relatively common. A high proportion of adjectives derived by the suffix *-ható/-hető* occurred as predicates, although the type–token ratio was much lower than that of predicates containing nouns with *-ás/-és*, which indicates frequent repetition of conventionalized forms rather than a genuinely productive schema of passive word formation.

The V-*va/-ve* + *van* pattern is one of the most important constructions expressing passive content in Hungarian, although it does not only express passive contents, but is also connected to other stative meanings. I tried to map the development of the structure in various constructions (with passive, reflexive-middle, transitive active and intransitive active bases) within the framework of a diachronic study. The clearest historical trend is the rise of a stative passive structure derived from transitive verbs in Modern Hungarian, characterized by a gradual increase in the type–token ratio of these structures. In the randomized data of the HNC corpus, an extremely high type–token ratio (about 83%) can be observed, which indicates the high productivity of the stative passive meaning V-*va/-ve van* in present-day Hungarian. At the same time, the estimated frequency of the structure V-*va/-ve van* also showed a continuous upward tendency (except for the outlier result of the HPC, which is probably due to the conceptual orality of the texts). It can therefore be concluded that there is a strong, productive (stative) passive constructional schema in Hungarian, the structure V-*va/-ve van*, with transitive verbs as bases. The passive construction with verb bases derived by *-tatik/-tetik* disappears as the suffix becomes obsolescent. The constructions derived from reflexive-middle base verbs reached a resting point after a temporary recovery at a lower type–token ratio, but while this ratio was associated with a more even distribution of token frequency in the corpora of previous language stages, in HNC it is due to the outlier frequency of some verbs (like *meggyőződik* 'to convince oneself'), which indicates a decrease in productivity.

Another study, which was more qualitative in nature, focused on verbs derived by the suffix *-ódik/-ődik*. The investigation showed that usage of the structure with a distinctly passive meaning (i.e., the semantic structure of which strongly includes an agent as a secondary figure, e.g. *megszidódik* 'scolded' or *elhalasztódik* 'postponed') occurs with an extremely low frequency in the corpus. Therefore, the vast majority of the verbs derived by *-ódik/-ődik* have a middle voice reading, the passive-meaning construction has proved to be a weak passive formation schema with a low type frequency for the time being, so it is not possible to talk about the role of the derivation suffix as taking over the function or replace the passive derivation suffix *-tatik/-tetik*.

The functional cognitive interpretation of voices is of paramount importance for the results of the study in several points. Based on the cognitive interpretation of middle and passive voice, it can be observed that they contain adjoined semantic domains, since it is a question of grade whether the force acting on the patient is a hidden resource or an active agent (especially in metaphorical uses). Thus, construction schemas can be extended easily. This allows, on the one hand, the extension of the schema V-*va/-ve van* with transitive-passive meaning to a schema with reflexive or middle bases, thus motivating the wider use of the structure. On the other hand, it enables middle verbs and the middle voice word formation suffix *-ódik/-ődik* to express passive meanings.

The present studies carried out only a small part of the research on Hungarian constructions expressing passive meanings. It would be necessary and instructive, on the one hand, to carry out extensive explorative investigations in other text types, and, on the other hand, to explore the type and token frequency of other constructional schemas, including verbs derived by the suffix *-(t)atik/-(t)etik* and adjectives derived by *-ható/-hető*, as well as to examine Hungarian impersonal 3PL constructions in more detail.

Acknowledgements

Sources

HNC: Hungarian National Archives http://corpus.nytud.hu/mnsz.
HNC 2: Hungarian National Archives2 v2.0.5
    http://clara.nytud.hu/mnsz2-dev/bonito/run.cgi/first_form
HHC: Hungarian Historical Archives
    http://clara.nytud.hu/mtsz/run.cgi/first_form?corpname=mtsz;lemma=;lpos=
OHC: Old Hungarian Corpus http://omagyarkorpusz.nytud.hu/
HPC: Historical Private Corpus http://HPC.nytud.hu/
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