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Morphological change as systemically motivated bricolage: Hungarian impulsative constructions

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Abstract
While many languages have voluntary desiderative constructions expressing the intention of an agent argument to engage in an activity or action, a few languages have dedicated impulsative constructions expressing an urge or feeling to engage in an activity or action. Hungarian has developed an impulsative construction by reanalyzing a series of individual verbal affixes associated with the morphosyntactic properties potential, conditional and agreement, for example *sír-hat-n-ék* 'I could cry', into a composite nominalizing affix which means 'an urge to Verb' as in the derived noun *sír-hatnék* 'an urge to cry'. On the basis of historical corpora we argue that this construction emerges from the interaction of several large and otherwise independent systemic changes in Hungarian grammar as well as by commonly attested cross-linguistic conversational implicatures concerning modal markers.

Keywords Hungarian · Morphological change · Affix telescoping · Reanalysis

1 Introduction

Over several centuries Hungarian has innovated an increasingly productive category changing morphological marker which when suffixed to a verb creates a noun mean-

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ing ‘to feel like or have an urge to engage in the activity denoted by the verb’. What we, following Cathcart (2011), will call the **impulsative** construction is exemplified by the following:[1]

(1) a. *küzd-ött-em az i-**hatnék**-kal*
fight-PST-1SG the drink-URGE-INS
‘I was fighting against an urge to drink’

The impulsative suffix historically derives from three distinct verbal affixes: the potential suffix *-hAt-*, the conditional suffix *-n-*, and the subject agreement marker *-ék*. These verbal inflectional markers have been repurposed into a single nominal derivational marker though they are still synchronically active and transparent in their original meanings. This is typified in the contrast between the verb *sír-hat-n-ék* ‘I could cry’ and the noun *sír-hatnék* ‘an urge to cry’.

While the development of an impulsative construction is not unique to Hungarian, it is also not a commonly attested typological construction. Consequently, in Sect. 2 we briefly review a sample of the few cases attested in the literature appearing under the labels impulsatives, dispositional reflexives, involuntary state feel-like constructions. We will see that while the majority of languages adapt existing syntactic constructions for this purpose, fewer languages have developed dedicated markers to serve the impulsative function like Hungarian has. In Sect. 3 we explore the diachronic development of the impulsative construction. We argue that it arises as an emergent product facilitated by several large and otherwise independent systemic changes in Hungarian grammar as well as by common cross-linguistic conversational implicatures concerning modal markers. Having motivated the development of the construction we turn in Sect. 4 to understanding the nature of this development from the perspective of current approaches to morphological change. We summarize our findings in Sect. 5.

2 Impulsative constructions

Many languages have voluntary desiderative constructions which express an agent’s preference to volitionally engage in an action or event. This is frequently encoded by an independent verb meaning ‘want’ and a verbal complement, as exemplified in (2) by Finnish, or with a verbal affix on the main verb, as in (3) from Tohono O’odham (Uto-Aztecan):[2]

(2) ***Halua-n** juo-da.*
want-1SG drink-INF
‘I want to drink.’ (Finnish)

(3) *’A:ñi ’añ s-**ko:s-im**.*
I AUX.1SG S-sleep-DESID
‘I want to sleep.’ (Tohono O’odham; Zepeda, 1987, 353)

[1] We will gloss the marker as URGE.

[2] We follow Zepeda (1987, 353) in not glossing the prefix *s-* which simultaneously co-occurs with the desiderative suffix *-im*.

Several languages have a special construction used to denote involuntary desires associated with less agentive agents[3] and generally characterized as an "urge or impulse to do something" or "to feel like doing something". We will refer to these as impulsative constructions (Leiwo, 1977; Zepeda, 1987; Cathcart, 2011). In the few languages where they have been attested, impulsatives are typically expressed by the redeployment of grammatical means ordinarily used in association with more familiar attenuated agentive constructions such as reflexives, impersonals, and causatives.[4]

Finnish has a productive verbal causative marker that among other effects transitivizes intransitive predicates as in (4a). Most relevantly, Finnish redeploys this marker in so-called impersonal causatives, as in (4b): these are impulsatives in which the attenuated agent is marked in the partitive case and the verb displays invariant third person singular agreement with an unexpressed cause.

(4) a. *Musta-pippuri aivastu-**tt-aa** **minu-a**.*
black-pepper sneeze-CAUS-3SG I-PART
'Black pepper makes me sneeze.' (Finnish)

b. ***Minu-a** aivastu-**tt-aa**.*
I-PART sneeze-CAUS-3SG
'I feel like sneezing.'

On the analysis of Zepeda (1987), Tohono O'odham combines the desiderative marking exemplified in (3) and (5a) with the causative marker (5b) to create the impulsative construction found in (5c).

(5) a. *s-him-**im***
s-walk-DESID
'to desire to walk, go, leave' (Tohono O'odham; Zepeda, 1987, 355)

b. *him-**c***
walk-CAUS
'caused to walk, go, leave' (Zepeda, 1987, 354)

c. *s-him-**im-c***
s-walk-DESID-CAUS
'something made him desire to leave, go' (Zepeda, 1987, 355)

In both of these languages a construal of external force impinging on an agent is attributable to the causative marker used impersonally. In several other languages, the lesser agentivity of the subject is attributable to its co-occurrence with a reflexive

[3]The hypothesis that grammatical constructions can minimally differ in terms of degrees of agentivity of their arguments is explored in Dowty (1991), Ackerman and Moore (1999), Ackerman and Moore (2001), Primus (1999). In this line of research the paradigmatic constrast between full agent and attenuated agent status is generally invoked to claim that the latter is associated with a property ordinarily characteristic of patients, such as being affected by an action or event rather than willfully effecting it. Our appeal to this distinction is purely heuristic in the present article.

[4]Constructions of this type are explicitly identified as a "rare grammatical category" in Narrog and Heine (2021, 207), though they refer to them simply as volitive/desiderative, not recognizing the involuntary force of these constructions, as discussed below.

or other impersonal form of a verb. Such constructions have received both syntactic and semantic analytic attention under the rubric of **involuntary state/feel-like construction** as found within several languages in the Balkan Sprachbund (Rivero, 2004; Marušič & Žaucer, 2006, 2014; Dragomirescu & Nicolae, 2020). It is exemplified below from Albanian in (6), where the attenuated agent appears in the dative case accompanied by a non-active verb form in 3rd singular agreeing with its logical object, and Bulgarian in (7), displaying a similar distribution of case-marking and verbal agreement, but with a reflexive verb form:

(6) ***Anës*** ***i*** *lexo-**het*** *një libër*
Ann-DAT 3SG.DAT read-3SG.NONACT.PRES a book
'Ann feels like reading a book.' (Albanian; Rivero, 2004, 238)

(7) ***Na Ivan mu*** ***se*** *čet-jaxa* *knig-i*
to John he-DAT REFL read-IPFV.3PL book-PL
'John feels like reading books.' (Bulgarian; Rivero, 2004, 239)

The construction exhibits a more restricted distribution in the East Slavic language Russian as analyzed under the rubric **dispositional reflexive** (Smirnova, 2015; Kim & Siloni, 2020). In Russian there are actually two ways to express impulsative semantics. The first is conveyed constructionally without an overt predicate of desire, but like in Albanian is expressed by a reflexive verbal form.[5]

(8) ***Mne*** *ne* *spit-**sja***
I.DAT NEG sleep.IPFV.3SG.PRES-REFL
'I do not feel like sleeping.' (Smirnova, 2015, 110)

The second consists of a contrast between a simple form of the voluntary desiderative verb *xočet'* 'to want' and its reflexive impulsative variant *xočetsja'* 'to feel like', with an infinitival complement indicating the verbal activity.

(9) a. ***mne*** *ne* *xočet-**sja*** *spa-t'*
I.DAT NEG want.IPFV.3SG.PRES-REFL cry-INF
'I don't feel like sleeping.' (Russian; Smirnova, 2015, 110)

It should be observed that in both types of impulsatives, the attenuated agent is in the dative case and accompanied by a reflexive verbal form. This conforms to the semantic effects concerning degrees of agentivity associated with paradigmatic verb alternations in Ackerman and Moore (2001). This will also obtain in the discussion of similar Mari alternations in Sect. 3.2.

The basic semantic contrast between *xotet'* and *xotet'sja* is extensively discussed by Mordashova (2025) building upon the lexical semantic insights of Apresyan (2004) and corpus study of Bonch-Osmolovskaya (2015). She summarizes:

[5]There is a considerable literature attempting to determine the source of the impulsative meaning when there is no overt independent marker as in Russian. Many such efforts attribute the semantics to a covert predicate or some other covert element associated with the syntax of these constructions. Though we will not discuss this further, the variability in the cross-linguistic expression of impulsatives is consonant with the construction-theoretic assumption that its semantics is associated with the configuration of elements characteristic of the construction without the need to identify a single structural source.

> Для глагола *хотеть* […] важнейшим фактором оказывается готовность субъекта инициировать подготовительный сценарий для реализации желаемого (ср. предложение *Я хочу жениться*, которое предполагает готовность субъекта включиться во множество подготовительных действий, предшествующих женитьбе). В случае же с глаголом *хотеться* воля субъекта не является определяющей для реализации желаемой ситуации: существуют внешние и / или не контролируемые субъектом обстоятельства, которые определяют наступление этой ситуации (ср. предложение *Мне хочется плакать*, предполагающее наличие не зависящих от субъекта внешних факторов).
> For the verb *xotet'* […] the crucial factor turns out to be the subject's readiness to initiate a preparatory scenario for realizing the desired state of affairs (cf. the sentence *Ja xoču ženit'sya* ["I want to get married"], which presupposes the subject's willingness to engage in a whole series of preparatory actions preceding marriage). In the case of the verb *xotet'sya*, by contrast, the subject's will is not decisive for the realization of the desired situation: there exist external and/or uncontrolled circumstances that determine the occurrence of this situation (cf. the sentence *Mne xočetsya plakat'* ["I feel like crying"], which presupposes the presence of external factors beyond the subject's control). (Mordashova, 2025, 141)

The existence of a dedicated verb form such as the reflexive variant of the Russian agentive desiderative verb 'to want' in (8) is less well attested in the literature than is the reconfiguration of independent elements to convey the impulsive semantics. However, several Quechuan languages also possess dedicated markers for this purpose, which are themselves used in conjunction with attenuated agentive constructions (Cathcart, 2011). In this latter connection consider the following relevant constructions. Cusco Quechua has basic agentive constructions in which verbs agree for person/number with their nominative subject, as in (10a). In contrast, it has a class of experiencer constructions in which the experiencer is marked with the accusative case and the accompanying verb exhibits object agreement with the person/number values of the experiencer and invariant third person singular subject agreement, as in (10b). The impulsive construction displays this pattern of object agreement with the attenuated agent, but additionally hosts a dedicated impulsive marker *naya*, as (10c).

(10) a. ***Noqa*** *tusu-ra-**ni**.*
I-NOM dance-PST-1SG
'I danced.' (Cusco Quechua; Cathcart, 2011, 16)

b. ***Noqa**-ta chiri-**wa**-n.*
I-ACC cold-1SG.OBJ-3SG.SUBJ
'I am cold.' (Cathcart, 2011, 16)

c. ***Noqa**-ta tusu-**naya**-**wa**-n.*
I-ACC dance-DESID-1SG.OBJ-3SG.SUBJ
'I feel like dancing.' (Cathcart, 2011, 16)

Turning to Hungarian, it has both the common type of voluntary desiderative exemplified in (11a) and has developed the less common impulsative construction in (11b):

(11) a. *in-ni* ***akar-ok***
drink-INF want-1SG.INDEF
'I want to drink.'

b. *sír-**hatnék**-om* *támad-t*
cry-URGE-1SG.POSS arise-3SG.PST
'I got an urge to cry.' (lit. 'my urge to cry arose')

In the variant illustrated in (11b), the lexical verb is nominalized with the suffix *-hAtnék*[6] meaning 'an urge to Verb'. Like the lesser attested dedicated markers in Cusco Quechua and Russian variants, the relevant semantics is conveyed by an overt, dedicated affix in Hungarian. On the other hand, as will be discussed below, the semantic source of impulsative meaning does not derive from reuses of the causatives or reflexives or impersonals, but arises from inferences associated with the modal affixes that combine into the *-hAtnék* affix. Another significant difference between the Hungarian variants and other attested variants is that the resulting Hungarian form is fully nominal and can occur with case endings (12a), possessive suffixes – as we have seen before in (11b) –, and it can serve as the base for further derivation (12b), among others.[7]

(12) a. *pukkadoz-ik* *a* *nevet-hetnék-től*
burst-3SG.PRES the laugh-URGE-ABL
'She is bursting from the urge to laugh.' [1976; HGC]

b. *mász-hatnék-os* *kölyök-mackó*
climb-URGE-ADJ kid-bear
'a bear cub having an urge to climb' [1953; HGC]

As previously mentioned, the desiderative suffix historically derives from three distinct verbal affixes: the potential suffix *hAt*, the conditional suffix *n*, and the subject agreement marker *ék*. As we will see, these verbal inflectional markers have been repurposed into a single nominal derivational marker. Both the contemporary vitality of this construction and its evidently transparent structure raise a basic diachronic question: How did this construction develop from the combination of several verbal inflectional markers with compositional meaning into a single nominal marker with the impulsative meaning?

3 The diachronic development of the *-hAtnék* construction

As indicated in Fig. 1, depicting the dynamic context for the development of the *-hAtnék* affix, we hypothesize that there were two large systemic changes in the

[6]The suffix has two allomorphs *-hatnék*∼*-hetnék* distributed following the rules of vowel harmony. Upper case vowels in subsequent discussion reflect vowel harmonic allophony.

[7]HGC stands for the Hungarian Gigaword Corpus (Oravecz et al., 2014), the primary source of our Present-day Hungarian examples.

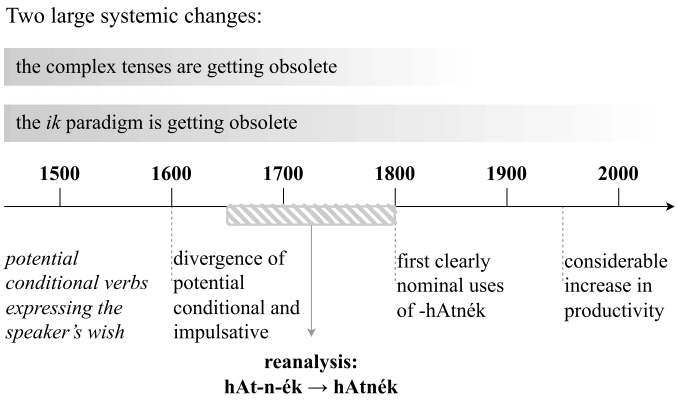

Fig. 1 Overview of the historical development of the -hAtnék construction

Hungarian grammar system that were contemporaneous with and facilitated the development of the composite impulsative nominal marker: the gradual obsolescence periphrastic complex tenses and the verbal conjugation *-ik* paradigm creating the dynamic conditions for the development of the impulsative marker.

In the following subsections we explore the relevant interactions between these contributing components of the construction. We argue that there is a diachronic repurposing of independent markers into a combined marker representing a new function: none of the marker's constitutive pieces were associated with functions that straightforwardly and predictably yield an impulsative meaning. This interacted with several analogical influences presented by nominal possessive constructions and the possessive marking pervasive on non-finite verb forms. Since we construct our explanation on the basis of historical texts, we begin by discussing our resources and methods. This is followed by a systematic exposition of the ingredients that incrementally converge in the emergence of this construction.

3.1 Resources

The corpus data used in this study spans all periods of the Hungarian language from which written records have survived, as outlined in Table 1. We extracted all occurrences of potential conditional and impulsative suffixes from these four corpora. We searched stringwise in every corpus to avoid missing relevant hits. That is, we started a case-insensitive search for tokens containing *hatnék/hetnék* in normalized texts, and we supplemented this with *hatnéc/hetnéc/hatnec/hetnec* in texts available only in their original orthography. We normalized the latter word forms manually, and we extracted every other linguistic feature automatically, based on the normalized forms. The most relevant features are:

- The lemma, e.g., *dicsekedhetnék* 'an urge to brag' from *dicsekedhetnékből* 'out of an urge to brag'.
- The part-of-speech of the *-hAtnék* form.
- The root lemma, that is, the form without the *-hAtnék* suffix and all subsequent suffixes. E.g., *sír* 'to cry' from *sírhatnékságáig* 'until his/her urge to cry'.

Table 1 Overview of the historical periods and the corpora representing them. The corpus size is given in tokens (punctuation included), rounded to the nearest hundredth

PERIOD	CORPUS	ABBREV.	SIZE
Old Hungarian (896–1526)	Old Hungarian Corpus (Simon, 2014)	OHC	4,815,200
Middle Hungarian (1526–1772)	Old and Middle Hungarian corpus of informal language (Novák et al., 2018)	MHC	1,500,000
Modern Hungarian (1772–)	Hungarian Historical Corpus (Csengery, 2006)	HHC	30,000,000
	Hungarian Gigaword Corpus (Oravecz et al., 2014)	HGC	1,039,700,000

- The part-of-speech of the root lemma (mostly a verb).
- The paradigm type of the root lemma according to László Elekfi's *Dictionary of Hungarian Inflections* (1994).
- The heads of *-hAtnék* nouns and adjectives. We extracted these from the Hungarian Gigaword Corpus using the dependency labels, then we eliminated false positives manually. For all other corpora, we added the heads manually.
- Derivational suffixes following *-hAtnék* in non-verbal uses.
- Whether the *-hAtnék* form has an impulsative sense (wish/urge) or it is a potential conditional. The heuristics we applied to decide on the sense are described in Sect. 4.3.

For each hit, we extracted metadata describing the source document (year if known, genre, title). The resulting TSV-format dataset – along with a detailed description of its structure – is available at https://osf.io/pdsar.

The broad time expanse represented by these corpora makes it possible to trace the development of the *-hAtnék* construction over time, although the nature of genres, particularly in the early historical record raises several challenges. The impulsative construction is colloquial and initially restricted to non-standard dialects. As a result, it is underrepresented in historical corpora, which predominantly consist of formal, religious, and/or literary texts. This leads to data sparsity issues, particularly for the Old and Middle Hungarian periods. In order to address this issue we turned to additional resources beyond the corpus data. Contemporaneous dictionaries and grammar reference books provide insight into how the authors of that era perceived the *-hAtnék* construction from both a descriptive and prescriptive perspective. The scant previous research on this topic, particularly Tompa (1959) and Cushing (1963), provided some good insights for understanding how the reanalysis of *-hAtnék* from a sequence of verbal markers into a single nominal marker might have happened.

3.2 Potential conditional verbs expressing the speaker's wish

As previously observed, two core affixes in the composite *-hAtnék* affix are the potential suffix *-hAt* and the conditional suffix *-n*, either of which can be used independently:

(13) a. *Mennyi-be kerül-**het** egy tölgyfa ajtó?*
how.much-SUB cost-POT.3SG an oak door
'How much might an oak door cost?' [1982; HGC]

b. *Ha valaki meg-talál-**ná**, ad-ja vissza!*
if someone PV-find-COND.3SG.DEF give-SUBJ.DEF back
'If someone would find it, give it back to me!' [2013; HGC]

The potential suffix *-hAt* has its origin in a Uralic verb **katt₃-*, meaning 'to penetrate, to move' (Rédei, 1988; D. Bartha, 1991, 1992, 130). By Proto-Hungarian, it had a use as a modal auxiliary verb that combined with an infinitive, which further developed into a suffix deriving verbs expressing potential ability. The development of this modal suffix reflects the common grammaticalization path from syntactically independent lexical item to auxiliary status and then to an affix participating in the verbal inflectional paradigm. The Hungarian conditional marker *-n* is a reflex of the reconstructed Proto-Uralic conditional mood marker **-ne-*.

The first steps of *hAtnék*'s development are difficult to document, but they likely involved semantic gradience and pragmatic inferences concerning different construals of the combined modal markers *-hAt* and *-n*. It is conventional to observe that "modal expressions have in [and] of themselves a rather skeletal meaning and it is only in combination with the background context that they take on a particular shade of meaning" (von Fintel, 2006, 22).

There are certain meanings that commonly arise in the development of polysemous modal markers. For present purposes, two of these seem relevant: **bouletic** or **boulomaic** modality refers to whatever is possible or necessary concerning an interlocutor's desires, while **circumstantial** modality refers to whatever is possible or necessary concerning specific conditions. Consider the following alternative construals from von Fintel (2006, 21).

(14) a. You have to go to bed in 10 minutes. (boulomaic)

b. I have to sneeze. (circumstantial)

He hypothesizes that (14a), if uttered by a stern father, can be interpreted as expressing his wish or desire for the addressee to perform the specified action, while (14b) can convey the necessity of performing the designated action if e.g., the addressee's nose is in a state to require it.

Comporting with these independent observations concerning the polysemies of modals, Kiefer (1981) describes the use of the potential conditional mood in present day Hungarian as 'boulomaic possibility':

(15) a. *Péter-t választ-hat-ná-nk elnök-nek.*
Péter-ACC elect-POT-COND-1PL president-DAT
'We could elect Peter president.'

b. *Anna meg-tanul-hat-na angolul.*
Anna PV-learn-POT-COND.3SG English
'Ann could learn English.'

According to Kiefer, with the right prosody these sentences can be understood as reflecting the speaker's desire that Péter be elected or Anna learn to speak English, respectively. When combined with the particle *bár* 'if only', the boulomaic reading is the only possible option, as observed in Kiefer (1981, 170):

(16) *Bár meg-tanul-hat-na Péter angolul!*
if.only PV-learn-POT-COND.3SG Péter English
'I wish Péter could learn English.'

This boulomaic possibility function of the potential conditional dates back at least to Old Hungarian, as exemplified by the following:

(17) a. *ó , ha meg-hal-hat-né-k , én te-vel-ed egyetembe magam-at*
oh , if PV-die-POT-COND-1SG , I with.2SG together myself-ACC
el-temet-tet-né-m
away-bury-CAUS-COND-1SG
'Oh, if I could die, I would have myself buried together with you.' [1508; OHC][8]

b. *vajha pedig uralkod-hat-ná-tok , hogy mi is veletek egy-be*
if.only but reign-POT-COND-2PL , that we also with.2PL one-ILL.SG
uralkod-hat-ná-nk
reign-POT-COND-1PL
'If only you could reign, so that we could also reign together with you.' [1590; OHC]

Cross-linguistically, Narrog (2005, 685) distinguishes between two independent dimensions associated with modality: volitive/non-volitive and speaker oriented/event oriented: the Hungarian uses, in accordance with this, evince non-volitive, speaker-oriented dimensions of meaning. These particular early uses of the potential conditional form of verbs conveyed by the combination of the potential *-hAt* and the conditional *-n* appear to have denoted basic semi-volitional bodily functions such as those for eating, drinking, crying and urinating. Given ordinary conditions in a speech context, if someone asserts that they are able to eat, drink, cry or urinate, this does not generally contribute anything that is not conventionally attributable to conversational participants on the basis of their knowledge of the meanings of the individual words and the ordinary abilities of humans. In other words, the assertion *I can urinate*, if felicitously uttered, conveys little that is not already known given knowledge of the individual words and familiarity with human abilities. Following on pragmatic discourse inferences derivable from Grice (1975) and Horn (1984), Goldberg and Ackerman (2001) argue that conversational contributions are ordinarily expected to provide information beyond what is trivially calculable on the basis of the meanings of words contained in an utterance. Accordingly, a reasonable implicature in most situations associated with an utterance such as *I can urinate*, would be that a speaker is not merely describing a common biological capability known to all participants, but is expressing something more, for example, an urge to carry out that function.

[8]Throughout the paper, we provide standardized spelling of Old and Middle Hungarian corpus data.

The observation that Hungarian conditionals are associated with boulomaic modality indicating a desire or wish attributable to the speaker finds a parallel in the (distantly) related Uralic language Mari, spoken in the Mari El Republic of Russia. In Mari, the Proto-Uralic conditional *-*ne*- has developed into a voluntary desiderative suffix denoting 'want, intend', reflecting a grammatical reification of the boulomaic modality attributable to the marker when it functioned as a conditional marker (Timár, 2018; Mordashova, 2022; Saarinen et al., 2022). This occurs in both the Hill and Meadow varieties of Mari, though there are differences between these variants that are not relevant for our purposes:

(18) *Tədə mârə-ne-žə*
3SG-NOM sing-DESID-POSS.3SG
'He wants to sing.' (Hill Mari; Mordashova, 2022, 70)

(19) *Taćе ola-ške kajə-ne-m*
today town-ILL go-DESID-POSS.1SG
'Today I want to go to town.' (Meadow Mari; Timár, 2018, 261)

There is an aspect of this construction that bears further comment. We see the boulomaic uses of the conditional marker as motivating the redeployment of that marker as a dedicated voluntary desiderative marker separately from the similar developments in Hungarian. This seems to provide independent evidence within Uralic for a path toward desiderative constructions through construals of boulomaic modality associated with the conditional marker.

While this construction corresponds to the voluntary desiderative type identified in Sect. 2, Mari is reported to have an impulsative periphrastic construction corresponding to the implusative. The construction consists of a passive participle inflected with a possessive suffix indexing the subject followed by an invariant 3SG form of the verb 'arrive'. The impulsative is exemplified below Mordashova (2025, 137):

(20) *tədə-n mârə-mə(-žə) šo-eš*
3SG-GEN sing-NMLZ-POSS.3SG arrive-NPST.3G
'He feels like singing.' (Hill Mari; Mordashova, 2025, 70)

As in the Hungarian impulsative, a nominalized verbal form is inflected with a possessive marker indexing the person/number of the attenuated agent and this form co-occurs with a third person finite verb. In sum, Mari displays a paradigmatic contrast between a synthetic voluntrary desiderative and a periphrastic impulsative. We see that in Mari an inference associated with the conditional marker concerning 'wishes' or 'desires' eventuates in a construction associated with voluntary desire and that this contrasts semantically (and structurally) with an impulsative construction.

In sum, Hungarian appears to participate in a cross-linguistic tendency for markers of modality to be associated with e.g., boulomaic construals relative to particular conversational contexts. The combined modal suffixes for potential and conditional, accordingly, became associated with an inference concerning semi-volitional circumstantially constrained needs to engage in activities. In essence, there is a semantic shift from a boulemaic construal associated with the volitional desire of an agentive subject to a perceived internal necessity associated with a less agentive subject.

3.3 The decline of the *-ik* paradigm

By the end of the 1500's, the boulomaic usage of the potential conditional with bodily urges was sufficiently conventionalized that several such verbs appear in Albert Szenczi Molnár's 1604 *Dictionario Ungarico-Latinum*. These include *alhatnam [alhatnám]*[9] 'dormiturio [I want to sleep]', *ehetnem [ehetném]* 'esurio [I want to eat]', *huddozhatnam [hugyozhatnám]* 'micturio [I want to urinate]', *vaczorálhatnam [vacsorálhatnám]* 'coenaturio [I want to dine]', and *vakaródhatnam [vakaródhatnám]* 'scalpturio [I want to scratch]'. In 1610, Szenczi Molnár comments in his *Novae Grammaticae Ungaricae*:

> Ad frequentativa pertinet desiderativa in *hatnéc*, et *hetnéc*, ut *alhatnéc*, dormiturit: *ihatnéc*, bibiturit: *ehetnéc*, esurit: *vizelhetnéc* micturit.
> To the frequentives belong desideratives in *hatnéc* and *hetnéc*, such as *alhatnéc* '(she/he) wants to sleep', *ihatnéc* '(she/he) wants to drink', *ehetnéc* '(she/he) wants to eat', *vizelhetnéc* '(she/he) wants to urinate'.

Note an important difference: judging by the glosses, the forms *ehetném* and *alhatnám* are 1SG and express a boulomaic speaker-oriented meaning. The forms *alhatnéc* and *ehetnéc*, on the other hand, are 3SG. A speaker-oriented interpretation under which someone expresses a desire that someone else eat, sleep, drink, or urinate seems implausible here. It is more likely that these verbs expressed the desire of the subject and not the speaker.

Most of the bodily-function verbs that were cited as taking impulsative *-hAtnék* at this point were so-called '*ik* verbs', named for the irregular third person singular present suffix *-ik* that distinguishes this conjugation class from two other classes in Hungarian (intransitive, transitive definite). The *-ik* paradigm likely originates from some sort of mediopassive or reflexive marker (Schultz, 2010; Csató, 2014) and there are still contemporary pairs like *tör* 'break (tr.)' ∼ *törik* 'break (intr.)'. However, by the Old Hungarian period the *-ik* paradigm was reduced to an irregular variant of intransitive verb inflection.

At the time that the *-hAtnék* construction was emerging, the conditional verb suffixes for *-ik*-verbs differed from their regular intransitive counterparts in the 1SG and 3SG forms:

(21)

	Potential Conditional		
	intrans	intrans (*ik*)	trans (def)
1sg	**-hAtnék**	**-hAtnÁm**	-hAtnÁm
2sg	-hAtnÁl	-hAtnÁl	-hAtnÁd
3sg	**-hAtnA**	**-hAtnék**	-hAtnÁ

Szenczi Molnár's previously mentioned verb *alhatnám* is the 1SG and *alhatnék* is the 3SG potential conditional form of *alszik* 'sleep'. However, his reference to *vizelhetnék*

[9] The standard spelling of these words is given in brackets.

'he needs to urinate' is not the expected form. *Vizel* 'urinate' is not an *ik* verb and the expected 3SG potential conditional form would be *vizelhetne*. The use of *ik* verb inflection seems to have been at least an option for the impulsative sense of all verbs, whether or not they themselves were classified as *ik* verbs.

By the 1800s, the *ik* verb paradigms had receded even further and the *ik* forms of the conditional had been fully replaced by the regular intransitive endings in almost all uses. The one exception to this was the impulsative (Barna, 1875; Joannovics, 1877; Takács, 1887; Simonyi, 1906):

> Van azonban egy nevezetes kifejezésmód, melyben állandóan megmarad a régi ikes alak a mai nyelvben is: ez az **óhajtást** kifejező *ehetném, ehetnél, ehetnék*. [...] Azok az igék, amelyeket legsürűbben használtak így, véletlenül mind ikesek voltak: *ehetném, ihatnám, alhatnám* stb. [...] Innen van, hogy ikes alakjuk még a **többi igére is átmegy**, ha egyet-egyet ugyanolyan óhajtó értelemmel alkalmazunk;
> However, there is a notable mode of expression in which the old *ik* form invariably remains in the present language as well: this is *ehetném, ehetnél, ehetnék* expressing **desire**. [...] The verbs that were most frequently used this way happened to all be *ik* verbs: *ehetném, ihatnám, alhatnám*, etc. [...]. Hence, their *ik* form **extends even to other verbs** when used with that same desiring sense; [...] (Simonyi, 1906, 50)

Simonyi illustrates this observation with the following example:

(22) *Bezzeg* ***táncol-hat-na*** *most Margit, mert van jó zene*
sure dance-POT-COND.3SG now Margit because be.PRS.3SG good music
és sok ifjú ember, de ő éppen ma nem ***táncol-hatnék***.
and many young man but she just today not dance-URGE.3SG
'Margit certainly could dance now, since there is good music and many young men, but today she would not feel like dancing.' (Simonyi, 1906, 51)

In this passage Simonyi contrasts the potential conditional *táncolhatna* 'she could dance' with its expected 3SG *-na*, against the impulsative *táncolhatnék* 'she has an urge to dance' and its 3SG *-hatnék*. We see a similar contrast between 1SG potential conditional *-hatnék* and the 1SG impulsative *-hatnám* in (23):

(23) a. *Nem* ***al-hat-nék*** *el újra már.*
not sleep-POT-COND.1SG PV again now
'I couldn't fall asleep again now.' [1997; HGC]

b. *Vigyázz az ökör-re, mert* ***al-hatnám****!*
watch.IMP.2SG the ox-SUBL because sleep-URGE.1SG
'Watch out for the ox, because I want to sleep!' [1717; MHC]

By this point, if not already during Szenczi Molnár's time, the impulsative and the potential conditional had clearly diverged into distinct forms:

(24)

	Potential Conditional		Impulsative	
	intrans	trans (def)	intrans	trans (def)
1sg	**-hAtnék**	-hAtnÁm	**-hAtnÁm**	-hAtnÁm
2sg	-hAtnÁl	-hAtnÁd	-hAtnÁl	-hAtnÁd
3sg	**-hAtnA**	-hAtnÁ	**-hAtnék**	-hAtnÁ

We have argued here that the impulsative arose from the potential conditional form of the verb. The potential conditional, however, was (and is) not obsolete. In fact, it is still substantially more frequent than the impulsative. However, obsolescence did evidently play a crucial role: the loss of the conditional *-ik* paradigm left morphological material that could be repurposed as the impulsative paradigm.

This leads to two related (and unanswerable) questions: was the impulsative a distinct verb form separate from the potential conditional? And, if not, would it have become one if not for the loss of the conditional *ik*-paradigms? As mentioned previously, modals are generally highly ambiguous: Kiefer (1981) distinguishes at least eight different uses/meanings for the Hungarian potential *-hAt*. It is not implausible that the impulsative was, at one time, simply use number nine, restricted to idiomatic expressions using a handful of verbs. Absent any other changes, that use might have survived to the present day.

Alternatively, it is possible that the impulsative established itself as a distinct verb form much earlier, distinguishable from the potential conditional in some way that has not been preserved in the textual record. In this scenario, the use of the former *-ik* conditionals presents evidence to us for the impulsative's independence, but is only incidental and played no role in the development of that independence.

Having seen how the distintegration of the *-ik* conjugation appears to have been an independent systemic factor in the development of *-hAtnék* marker, we turn now to another independent factor that contributed to its development, namely, the disappearance of periphrastic tense expressions.

3.4 The decline of complex tenses

Old Hungarian had more tenses than modern Hungarian has. There were three simple tenses, simple present, simple past, and present perfect, expressed synthetically and two complex tenses, past continuous and past perfect, expressed periphrastically (É. Kiss, 2017, 62):

(25)

Simple Present	*mond-om*	'I say'
Simple Past	*mond-á-m*	'I said'
Present Perfect	*mond-t-am*	'I have said'
Past Continuous	*mond-om val-a*	'I was saying / I used to say / I was about to say'
Past Perfect	*mond-t-am val-a*	'I had said'

The past continuous and past perfect were formed by combining the person/number inflected forms of the simple present and present perfect (respectively) with the invariant form *vala*, an obsolete form of *volt*, the 3SG past form of the copula *van* 'to

be'. While the simple conditional and potential conditional moods were expressed synthetically, the conditional perfect and potential conditional perfect displayed periphrastic exponence:

(26)

Simple Conditional	*monda-**ná**-m*	'I would say'
Potential Conditional	*mond-hat-**ná**-m*	'I could say'
Conditional Perfect	*mond-t-am vol-**na***	'I would have said'
Potential Conditional Perfect	*mond-hat-t-am vol-**na***	'I could have said'

As illustrated in (26), the perfect forms consist of the indicative form of the present perfect and the present perfect of the potential conditional plus *volna*, the 3SG present conditional form of *van*. In these latter constructions, the conditional suffix *-na* appears on the auxiliary rather than the main verb, as in the simple and potential conditional. However, this is not the case for past impulsatives which are formed using the Past Continuous pattern: a simple present form followed by *vala* or its more modern variant *volt* (Cushing, 1963, 139):

(27)

a. ***Sír-hatnék*** ***vala*** *most Bence az ifjabbik*
cry-URGE.3SG be.3SG.PST now Bence the younger
'The younger Bence now had a desire to weep.' [1879; Cushing, 1963, 139]

b. *A macska nagyon* ***e-hetnék*** ***volt***
the cat very eat-URGE.3SG be.3SG.PST
'The cat had a great desire to eat.' [1872; Cushing, 1963, 139]

c. *Ez ember* ***szök-hetnék*** ***volt*** *belőle*
this person escape-URGE.3SG be.3SG.PST from.it
'This person had the urge to escape from it.' [1857; Klemm, 1928, 67]

d. *Aleddin* ***felel-hetnék*** ***volt****,* *de úgy meg-akad-t* *a*
Aleddin answer-URGE.3SG be.3SG.PST but so PV-stuck-PST.3SG the
nyelv-e, *hogy csak kevés szó-t* *ejt-het-ett*
tongue-3SG.POSS that only few word-ACC utter-POT-PST.3SG
'Aleddin wanted to answer, but his tongue got so stuck that he could only utter a few words.' [1828; HHC]

In these constructions the conditional marker *-n-* seems fully integrated into the impulsative marker and is no longer construed as a simple conditional marker that could appear on the 3SG form of the copula.

The periphrastically expressed compound tenses in (25) were largely obsolete by the end of the 18th century, with aspectual distinctions such as perfectivity marked by an expanding system of preverbs (É. Kiss, 2017). However, the periphrastically expressed conditional perfect in (26) survives into Modern Hungarian. The gradual disappearance of periphrastically expressed tense obscured the origin of the use of the *vala*/*volt* as in (27). This is evidenced by the fact that Czuczor and Fogarasi (1862–1871), a 19th century dictionary, simply listed forms like *alhatnék vala* or *alhatnék volt* 'he had an urge to sleep', *ihatnám volt* 'I had an urge to drink', *hugyozhatnám volt* 'I had an urge to urinate' as an irregular past tense (further evidence that the impulsative and the potential conditional are distinct morphological forms).

The two large systemic changes discussed in 3.3 and 3.4 provided the essential ingredients for the reanalysis of the individual verbal markers in the composite impulsative nominal.

3.5 Reanalysis

Given that the impulsative retained "irregular" periphrastic exponence in the past tense, Cushing (1963) proposes that the complex past impulsative underwent a reanalysis whereby the non-finite verb + auxiliary was reinterpreted as a possessed noun form + copula on analogy with the Hungarian nominal possessive construction:

(28) *ehetném vala* 'I had an urge to eat' ⇒ 'there existed my urge to eat'

While Cushing does not elaborate on the details of that analogy, the periphrastic past tense of the impulsative, as in (27), does indeed resemble the nominal possessive 'have' construction, though the resemblence now is more complete than it was in the initial transitional states (more on which below).

The nominal possessive construction consists of a possessor, which when overt is in the dative case, a possessed nominal inflected for the person/number of the possessor, and the copula *van* in the present tense or *vala*/*volt* in the past tense. The construction is illustrated with the following examples:

(29) a. ***Nekem*** *két cin-katoná-**m*** ***van,*** *egyik-et itt*
1SG.DAT two lead-soldier-1SG.POSS be.PRS.3SG, one-ACC here
küld-öm *neki,*
send-1SG.DEF.PRS 3SG.DAT
'I've got two lead toy soldiers, here I send him one of those.' [1858; HHC]

b. *hol a király-**nak** ezüst bánya-**ja*** ***vala,***
where the king-DAT silver mine-3SG.POSS be.3SG.IPFV
'where the king had a silver mine.' [1808; HHC]

c. *hogy férj-e* ***nékem*** *barát-**om*** ***volt,***
that husband-3SG.POSS 1SG.DAT friend-1SG.POSS be.3SG.PST
'that her husband was a friend of mine.' [1815; HHC]

d. *A reform-**nak** sok barát-a-**i*** ***volt-ak,***
the reform-DAT many friend-3SG.POSS-PL be-3PL.PST
'The reform was welcomed by many,' [1845; HHC]

The possessed noun is the subject of *van* (hence the 3rd person agreement on the verb) and the possessor is an oblique complement, usually in topic position. Accordingly, a more literal translation of the first example might be 'There are two lead toy soldiers to me.' When the possessor is pronominal, it can be omitted with the person/number marker on the possessed noun functioning pronominally.

A closer look at the details, though, suggests that the parallels between the examples in (27) and (29) are instructively restricted, suggesting a transition to nominal status for the verbal lexeme. For example, the verb forms in (27) exhibit agreement

with the nominative subject as exemplified in the repeated (30) below where the 3SG verb form *ehetnék* agrees with the nominative subject *macska* 'cat': the analogue to 'cat' in the true possessive construction would be marked in the dative case.

(30) a. *A macska nagyon e-hetnék volt.*
the cat very eat-URGE.3SG be.3SG.PST
'The cat had a great desire to eat.' [1872; Cushing, 1963, 139]

The agreement observed in the impulsative in (30) participates in a different paradigm than the possessive agreement marker:

(31)

	Impulsative	Possessive
1sg	-hAtnÁm	-Am
2sg	-hAtnÁl	-Ad
3sg	-hAtnék	-jA

Relevantly concerning transition of verb into a noun and the verbal construction into a nominal possessive construction, Simonyi (1878) notes that inflected verbs ending in *-Am* – namely, the first person singular present form of transitive or *ik* verbs and first person singular impulsatives – were often used as nouns in colloquial Hungarian without explicit nominalizing morphology. He cites examples like *találom felelet* 'lucky guess (lit: I-find-it answer)' and *eszem-iszom ember* 'glutton (lit: I-eat-I-drink person)'.[10] This combines with the obsolescence of the analytic past tense and the fact that the first person pronoun (whether the nominative subject of an impulsative or the dative complement of a 'have' construction) is likely to be omitted.

The result is hybrid 'have' constructions like (32) which use a first person impulsative verb form in combination with present tense *van*:

(32) *szinte sír-hatnám van*
almost cry-URGE.1SG be.PRS.3SG
'I almost feel like crying.' [1874; Simonyi, 1878, 438]

These constructions seem to have been colloquial or restricted to non-standard dialects and so are not well represented in the corpus data. Contemporaneous descriptions suggest that there was quite a bit of variation in their use, particularly in the forms used with non-first person subjects. Vass (1909, 21) describes speakers in Nagykőrös as using the *alszik* 'sleep' forms *alhatnám, alhatnád, alhatnékja*, i.e., verbal agreement in 1st person and both verbal and nominal agreement in the 3rd person. The 2nd person form is a puzzle: it would be the expected 2nd person verbal agreement if the verb had a definite direct object. Or, it could be the 2nd person possessed form of a hypothetical noun *alhatná* (which would have the 1st person possessed form *alhatnám*). Verbal and nominal agreement is not used together in the 1st person impulsatives of most verbs (so **alhatnékom*), but both are sometimes used on motion verbs: either *mehetném* or *mehetnékem* 'my urge to go', and similarly for *jöhetném* 'my urge to come', *járhatnám* 'my urge to walk', *táncolhatnám* 'my urge to dance'.

[10] As Simonyi (1878, 437) writes: "... úgy hogy e mondatokban az ige mintegy határozónak, tehát névszónak van már véve" [so in these sentences, the verb is already taken as a sort of adverb, that is, a noun.]

Klemm (1928, 67) cites speakers in the Marcel region using *iszik* 'drink' forms *ihatnám, ihatnál, ihatnája*: 1st and 2nd person show verbal agreement, but as in the case of *alhatnád* above, the 1st person form could also be the 1st person possessed form of a hypothetical noun *ihatná*, which is what the 3rd person form is apparently based on. István Tömörkény reports the Szeged dialect forms:

(33) a. *dógoz-hatnék-om támad-t*
work-URGE.3SG-POSS.1SG arise-PST.3SG
'I got an urge to work.' (Simonyi, 1903, 291)

b. *ö-hetnék-öm van*
eat-URGE.3SG-POSS.1SG be.PRS.3SG
'I feel like eating.' (Simonyi, 1903, 291)

c. *alud-hatnék-om vó-na.*
sleep-URGE.3SG-POSS.1SG be-COND.3SG
'I would feel like sleeping.' (Simonyi, 1903, 291)[11]

These combine the 3rd person impulsative *hAtnék* with the 1st person possessive *-om/-em/-öm*.

For some speakers, the use of the 1st person (verbal) impulsative form is still possible in impulsative nominals in present day Hungarian:

(34) a. *Joáf komá-m és Kerekes Ambrus somolyog-tak is*
Joáf godfather-1SG.POSS and Kerekes Ambrus smile-3PL.PST too
felé-m de furdal-ta is ők-et a ***tud-hatnám***
towards-1SG but gnaw-3SG.PST too they-ACC the know-URGE.1SG
hogy eb-ből mi lesz
that this-ELA what become
'My godfather Joáf and Ambrus Kerekes smiled at me too, but the desire to know what would come of this was gnawing at them.' [1974; HGC]

b. *Pedig igen* ***me-hetném volt*** *mag-am is*
though very.much go-URGE.1SG be.PST.3SG self-1SG too
'Even though I myself had the urge to go' [c. 1950; HGC]

c. *Fel-viha-nt egy tulipán* ***nyíl-hatnám van***
up-neigh-PST.3SG one tulip open-URGE.1SG be.PRS.3SG
ad-j-on bor-t
give-IMP-3SG wine-ACC
'A tulip neighed up: "I feel like opening, give me wine!" ' [2002; HGC]

d. *„* ***Rí-hatnám van*** *" az egész brancs-tól*
cry-URGE.1SG be.PRS.3SG the whole crew-ABL
' "I feel like crying" from the whole crew!' [2013; HGC]

Much more common, however, is the 'double-marking' strategy seen in (33). The old 3rd person verbal impulsative form appears as an invariant base for a possessive suffix in all three persons:

[11] Note that in this example *-n-* appears as part of *-hAtnék* and also in the conditional form of the copula.

(35) a. ***E-hetnék-je*** ***vagyon*** *a' rívó gyermek-nek.*
eat-URGE-3SG.POSS be.3SG the crying child-DAT
'The crying child has an urge to eat.' [1806; Klemm, 1928, 67]

b. *Már nagy* ***me-hetnék-em*** ***vala*** *Pest-re, melly-et*
already big go-URGE-1SG.POSS be.PST.3SG Pest-SUB which-ACC
elég hálátlan vol-t-am meg-un-ni.
enough ungrateful be-PST-1SG PV-bore-INF
'I already had a big desire to go to Pest, which I was ungrateful enough to get bored of.' [1845; HHC]

c. *Hogy ha az igaz magyar-nak olly nagy* ***mond-hatnék-ja*** ***van!***
that if the true Hungarian-DAT so big say-URGE-3SG.POSS be.3SG
'If the true Hungarian has such a strong urge to speak out!' [1848; HHC]

d. *A vacsora már a nélkül is el van költ-ve,*
the dinner already that without too away be.3SG spend-PTCP
gondol-á, aztán neki csepp ***e-hetnék-e*** *sem*
think-PST.3SG then he.DAT drop eat-URGE-3SG.POSS neither
volt*.*
be.PST.3SG
'The dinner is already spent even without that, he thought, then he had not even a drop of desire to eat.' [1856; HHC]

In these examples, the impulsative *-hAtnék* form is invariant. Person and number is marked via possessive suffixes. The analogy that led to treating the verb with *-hAtnék* as a nominal in the possessive construction with the copula, permitted the new type of nominal to expand its distribution to the same contexts as other nominals. For example, it began to co-occur with verbs other than the copula:

(36) *Ekkor meg rettentő* ***nevet-hetnék-je*** ***támad-t*** *annak, a*
then and terrible laugh-URGE-3SG.POSS arise-PST.3SG that.DAT who
ki hallgat-ta, s komikus-nak, kaczagtató-nak talál-ta
REL listen-PST.3SG and comical-DAT hilarious-DAT find-PST.3SG
fájdalmas arcz-á-t.
painful face-3SG.POSS-ACC
'Then a huge desire to laugh arose for that, who listened, and found his painful face comical, hilarious.' [1887; HHC]

This is naturally expanded by the use of impulsatives in fully nominal contexts, either with or without possessive markers:

(37) a. *Erő-t vet-tem* ***a sír-hatnék-om-on***
strength-ACC take-1SG.PST the cry-URGE-1SG.POSS-SUP
'I gathered strength over my urge to cry.' [1922; HHC]

b. *bezzeg nem ágaskod-ott ben-ne* ***a mehetnék***
indeed not rise-3SG.PST in-3SG the go-URGE
'There was certainly no urge to leave rising within him.' [1931; HHC]

To summarize, here is a schematic version of the proposal. We start with two superficially parallel constructions:

(38) a. Past impulsative (27): (NP.NOM) V-*hAtn*-V.INFL *volt*
b. Past 'have' construction (29): (NP.DAT) N-P.INFL *volt*

With the disappearance of the analytic past tense, the combination of V-*hAtn*.INFL + *volt* lost its interpretation as a single periphrastic verb. Instances of the pattern in (38a) were reinterpreted as instances of (38b) with V-*hAtn(ék)* reanalyzed as a noun. This reanalysis was facilitated by the fact that in the 1st person singular, the subject/possessor is usually omitted and the verbal and nominal agreement inflection are similar. Further evidence for this reanalysis is that we later find impulsatives occurring in present tense 'have' constructions with *van*, as in (35), which had no analogue in periphrastic present tense forms of verbs:

(39) c. Present 'have' construction (35): (NP.DAT) N-P.INFL *van*

In other words, we hypothesize that the loss of past tense periphrastic verbal expression was the analogical basis for the reanalysis of the *-hAtnék* verb forms as appearing in a nominal possessive construction and that once this analogy was in place the impulsative construction could appear in all of the tenses expressed by the copula in ordinary nominal possessive constructions.

3.6 Increasing productivity

The range of verbs used in impulsative construction expanded slightly between the 1500's and the early twentieth century. Initially, the construction was only used with verbs denoting basic bodily urges, such as *eszik* 'to eat' and *iszik* 'to drink'. Over time, the range of verbs participating in this construction kept expanding, though its use remained somewhat restricted to expressions of physical necessity.

To the forms already seen, Kassai (1833–1836) adds *bakzódhatnék* and *fajozhatnék*, both meaning 'an urge to mate/fuck', *finghatnék* 'an urge to fart' and *nőszhetnek (nőzhetnék)* 'an urge to womanize'. One century later, the usage of these constructions was still largely limited. Vass (1909, 21) writes of speakers in Nagykőrös:

> Ez utóbbi sajátságos deverbális alakok csak nagyon kevés, a köznapi életben leginkább használatos igékből vannak képezve. A leggyakoribb igék: *öhet, âhat, ihat, fekhet, möhet, gyühet, járhat, sétához, táncolhat, ugrához, répűhet*.
> These latter peculiar deverbal forms are derived from only a very few verbs that are most commonly used in everyday life. The most common verbs are: *eat, sleep, drink, lie down, go, come, walk, stroll, dance, jump, fly.*

Our historical corpus data shows the same pattern, with these verbs and a few close synonyms forming the basis of impulsative nominalizations up until about 1930. After 1930, we start to see examples of more creative uses in jocular, dialectal, or poetic contexts:

(40) a. *Sze' nem tud-hat-t-am, hogy egyszer-i-be az*
well not know-POT-PST-1SG.DEF that sudden-ADJ-SUBL that
lett a törvény eb-be a nagy-fene gyár-ba,
become.PST.3SG the law this-SUBL the big-damn factory-SUBL

hogy ha ***kíváncsiskod-hatnék-ja*** *vagyon az úr-nak, csak akkor*
that if be.curious-URGE-POSS.3SG be.3SG the sir-DAT only then
beszél-het a más ember!
speak-POT.3SG the other person

'Well, how was I supposed to know that all of a sudden it became the rule in this godforsaken factory that if his lordship happens to be in a curious mood, only then is anyone else allowed to open their mouth!' [1939; HHC]

b. *Hát az eb-ből való ébredés természet-szerű-en az*
well the this-ABL being awakening nature-like-ADV the
ön-vád-ak, a ***javul-hatnék****, a test-i-lelk-i*
self-accusation-PL the improve-URGE the body-ADJ-spiritual-ADJ
undor-ok állapot-a.
disgust-PL state-POSS.3SG

'Well, awakening from this is naturally the state of self-accusations, of the urge to improve, of physical and spiritual revulsions.' [1943; HHC]

c. *Végső fok-on az-t a rettentő* ***öl-hetnék-et****, amely-et*
final degree-SUB that-ACC the terrible kill-URGE-ACC which-ACC
nem ve-le, hanem egy ilyen szobor-ral lehet-ne
not 3SG-INS but one such statue-INS be.possible-COND.3SG
érzékel-tet-ni
perceive-CAUS-INF

'Ultimately, that terrible urge to kill, which could be conveyed not with him/her, but with such a statue.' [1947; HHC]

After this point, the number and diversity of verbs in this construction grow dramatically.[12] Many of these verbs fit into the basic themes of bodily functions, motion, communication, and emotion, with the addition of verbs of violence.[13] Many uses, however, do not fit into any clear categories:

(41) a. *ki-nek meg még azontúl is volt* ***szellőz-hetnék-je****, a*
who-DAT and still beyond also be-PST.3SG air-URGE-3SG the
Rákóczi út-at mér-t-e, vagy a Kossuth szobor
Rákóczi road-ACC measure-PST-3SG.DEF, or the Kossuth statue
alá ül-t ki a pad-ok-ra
under sit-PST.3SG out the bench-PL-SUB

'Who still had the urge to get some air beyond that, walked the Rákóczi road, or sat out on the benches under the Kossuth statue.' [1956; HHC]

[12]This occurs with a few well-known authors – for example, Gyula Illyés and Győző Határ –, but also occurs broadly across the corpus. Whether the increased use of this construction by contemporary writers is cause or effect of increased productivity is interesting for theories of constructional change.

[13]For complete list of verbs, see https://osf.io/pdsar.

b. *Érdemes egy-pár szó-t szán-nom ar-ra a furcsa*
worth one-pair word-ACC devote-INF.1SG that-SUB the strange
ifjú-i alakoskodás-ra, szinte ***le-züll-hetnék-re****, ami*
youth-ADJ pretense-SUB almost down(PV)-sink-URGE-SUB, which
e körül a hang-fokozat-ok körül történ-t.
this around the sound-gradation-PL around happen-PST.3SG
'It is worth devoting a couple of words to that strange youthful pretense, almost an urge to degenerate, which happened around these sound gradations.' [1968; HGC]

c. *Szophoklészt, igaz, a hirtelen rá-jö-tt* ***pazarol-hatnék***
Sophocles-ACC true the sudden PV-come-PTCP squander-URGE
miatt gyámság alá akar-t-ák helyez-tet-ni
because.of guardianship under want-PST-3PL.DEF place-CAUS-INF
'Sophocles, it's true, they wanted to place under guardianship because of the sudden urge to squander that came over him.' [1969; HHC]

d. *A világ-meg-változtat-ás filozofémá-ja eleve*
the world-PV-change-CAUS-NMLZ philosopheme-POSS.3SG from.start
ki-semmi-z-i mag-á-t a filozófia
OUT-nothing-VBLZ-3SG.DEF self-POSS.3SG-ACC the philosophy
rang-já-ból, akár marxista, akár fasiszta alap-on jön
rank-POSS.3SG-ELA whether Marxist whether fascist base-SUP come
rá a ***világ-át-gyúr-hatnék***
3SG.SUB the world-PV-knead-URGE
'The philosopheme of world-changing from the start eliminates itself from the rank of philosophy, whether it approaches the world-reshaping urge on a Marxist or fascist basis.' [1996; HGC]

e. *Csak a* ***pántliká-z-hatnék****: csak az a gyengé-m*
only the ribbon-VBLZ-URGE: only that the weakness-POSS.1SG
'Only the urge to add ribbons: that is my only weakness.' [2003; HGC]

f. *Ma megint rá-m-jö-tt a* ***tuningol-hatnék*** *[. . .] de most*
today again PV-1SG-come-PST.3SG the tune-URGE but now
nem a GPU-t hanem a memóriá-t próbál-gat-t-am nagyon
not the GPU-ACC but the memory-ACC try-ITER-PST-1SG very
húz-ni
pull-INF
'Today again I got that urge to do some tuning [. . .] but this time I wasn't trying to push the GPU really hard but the memory.' [2013; HGC]

We also find an expansion of the verb types having impulsative nouns as their complements. Originally, these were basic verbs of existence such as *van* 'to be', *megvan* 'to be', *marad* 'remain' and *hiányzik* 'be absent'. Later on, a broader range of verbs is attested which express that the *-hAtnék* noun emerges or intensifies, or in the contrary, it ceases or lessens. Verbs describing how the *-hAtnék* noun is perceived physically or emotionally are also prevalent.

In Present-day Hungarian, impulsive nominalization is fully productive, allowing uses such as the attested examples in (42):[14]

(42) a. *de akkor még ön-ök-nek nem volt*
but then still you-PL-DAT not be.PST.3SG
repülőgép-vásárol-hatnék-juk
airplane-buy-URGE-3PL.POSS
'but then you did not yet have an urge to buy an airplane' [2001; HGC]

b. *Aki-nek* ***Mass Effect 3-az-hatnék-a*** *támad-t,*
who.REL-DAT Mass Effect 3-VBLZ-URGE-3SG.POSS arise-3SG.PST
[. . .]

"If anyone has gotten the urge to play Mass Effect 3, [. . .]" [2012; HGC]

4 On the nature of morphological change in the impulsative

Thus far, we have provided a historical profile of the origins and expansion of the use of the impulsative construction. In the present section, we explore a striking aspect of its profile in the context of particular claims concerning processes of morphological change. We discuss morpheme amalgamation or affix telescoping as it applies to the suffix complex consisting of potential *-hAt*, the conditional *-n* and the frozen agreement marker *-ék*.

4.1 A composite affix

As previously mentioned, the Hungarian potential suffix *-hAt* has its origin in a Uralic verb form which lost its syntactic status as an independent verb, becoming an auxiliary and then a verbal suffix. This trajectory exemplifies canonical **grammaticalization**, broadly characterized by Narrog and Heine:

> Grammaticalization is the development from lexical to grammatical forms and once the grammatical form has evolved, the development of further grammatical forms. Since the development of grammatical forms takes place in specific contexts and constructions, the study of grammaticalization is also concerned with constructions and context, including even larger discourse segments. (Narrog & Heine, 2021, 1)

Interpreted strictly, this characterization also allows for the constitutive pieces of the composite *-hAtnék* suffix to have undergone "further development of grammatical forms". In particular, since the potential *-hAt*, the conditional marker *-n* and the original agreement affix *-ék* are all grammatical forms, they undergo further development. But compatibility with this characterization underdetermines both the possible structural profile of the forms and the functions with which they can be associated. In this

[14] See Alberti and Farkas (2018) and Alberti et al. (2017) for a detailed description and analysis of the synchronic construction.

respect, the original definition proposed by Kuryłowicz, cited in Campbell and Janda (2001), seems somewhat more germane, since it specifies that a movement toward "more grammatical status" may involve category change:

> Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivational [...] formant to an inflectional one. (Kuryłowicz, 1965, 69)

If we look at the impulsative in this light, we see no reduction in form. The (formal) origin of the composite *-hAtnék* is completely transparent, and the markers that make it up still separately serve their original function (what Hopper and Traugott (2003) refer to as **layering**).

In addition, and contrary to the expected development from derivation to inflection, the category change associated with the composite marker is from inflection to derivation. From this perspective the Hungarian impulsative marker superficially shows some of the counter-tendencies to grammaticalization described as **degrammaticalization** (Norde, 2009). Specifically, we are confronted with a variant of what Norde refers to as **deinflection** or **deinflectionalization** whereby an inflectional category is 'exapted' for a different purpose while retaining its original function. We will, accordingly, discuss the notion of exaptation and then return to deinflection.

4.2 Exaptation

In their re-evaluation of 25 years of work on linguistic exaptation, Norde and Van de Velde (2016) attempt to formulate a working definition that is neither too narrow nor to broad to be useful:

> As a cultural evolutionary product, language is very malleable, and though it normally changes at different levels - phonology, morphology, syntax, semantics - relatively slowly and imperceptibly, and successive stages resemble each other, it also happens that linguistic elements undergo drastic change. If that occurs, morphemes may end up encoding a meaning that is unrelated, or distantly related to what they used to express. Such a functional leap of an existing form can be referred to as linguistic exaptation. (Norde & Van de Velde, 2016, 9)

This is a notion first proposed by evolutionary biologists Gould and Vrba (1982) and introduced into linguistics by Lass (1990). An **exaptation** is the use of some structure for a purpose other than what it originally developed for. This is in contrast to an **adaptation**, a structure that has developed under selectional pressure for a particular function. Within human development, the pre-existing (in an evolutionary sense) suture lines where several different bones fuse into a single solid skull are also exploited for solving the obstetric dilemma created by the narrowing of the pelvis attendant on human bipedality: the sutures facilitate the cranial flexibility required for permitting large heads to get through narrowed openings.

In line with this, we find that Hungarian *-hAtnék* seems to exemplify the key properties identified as exaptation by Lass:

> In exaptation the 'model' itself is what's new. Certain types of morphologization however can perhaps be construed as exaptation; what was once a predictable alternation, say, can be, because of one of its old uses, reanalysed as a new primary categorial marker. [...] In a typical case, the material exapted is at the point of exaptation doing something else (which it may continue to do); but it is still capable of being remanufactured or restructured, and still exapted, in a sense, as part of a different kind of coexisting structure. (Lass, 1997, 319f)

As we have seen, the innovated Hungarian impulsative marker represents a reanalysis of three independent verbal suffixes into a single still-transparent ensemble of markers: this single marker combines with verbal stems, like the affixes from which it derives, but is markedly different in two respects: its meaning is not a straightforward combination of the meanings of its parts and it changes the lexical category of the base verb into a noun. While the old pieces in Hungarian still maintain their original functions in the modern language, their amalgamation is associated with an entirely different meaning and lexical category. Returning to deinflectionalization, we suggest a hypothesis about the Hungarian case that comports with the spirit of Campbell and Janda (2001)'s construal of Norde's approach to deinflexion:

> Norde [(2001)], for example, discusses how the notion (and phenomenon) of "deinflexion" counters certain grammaticalization-related claims, and she also emphasizes the socio-cultural context of overall grammar, arguing that grammaticalization changes must be understood in the context of a grammar's history as a whole. This perspective brings socio-cultural factors and the long-range diachrony of language systems into the picture (yet in a manner appreciably different from what is characteristic of most grammaticalization theorists), thereby raising important issues for any approach that intends to illuminate linguistic change in general and grammaticalization changes in particular. (Campbell & Janda, 2001, 107)

Norde elaborates on this view in a way that is relevant to present concerns:

> For in the history of Swedish there are several instances of morphemes that retained none of their original functions but shifted to a less grammatical status instead. These inflectional suffixes developed into derivational suffixes or an enclitic determiner respectively. Such shifts are adequately captured by the term exaptation which Roger Lass borrowed from evolutionary biology [...] (Norde, 2002, 53)

On this analysis, the classification of a marker as 'less grammatical' can be understood as referring to the lesser elaboration and integration of a marker or set of markers into the inflectional system of a language. In particular, it refers to a shift of a morphological marker or set of markers out of the inflectional system and into the derivational system, whereby the affected element begins to participate in the derivational paradigms of the morphological system.

Norde (2002) provides an example from Swedish. The phenonemon of inflectional affixes becoming derivational affixes occurs closer to Hungarian in the Uralic language Mordvin. In developing her analysis of Mordvin, Hamari observes:

> In the case of the Mordvin abessive and comparative, the inflectional-derivational continuum can even be regarded as a diachronic process in which a suffix has moved from the derivational end towards the inflectional through a functional shift, and consequently, the derivational endings of adjectives have acquired the functions of case forms. The inessive and the elative, on the other hand, seem to have moved in the opposite direction, and as a result original case suffixes have acquired functions that are more typical for adjectives. (Hamari, 2014, 173)

It is worth noting that irrespective of the directionality of the transition of change, the relevant markers display dual behavior in Erzya Mordvin. The transition of the marker *-tomo* from derivational marker to inflectional marker is exemplified from Erzya Mordvin where it serves an adnominal adjectival function in (43a) and a case function in (43b).

(43) a. *Ańśak mad'-iń – t'eke potmaks-tomo latk-s*
only go.to.sleep-1PST.1SG as.if bottom-ABE gorge-ILL
va-iń
sink-1PST.1SG
'As soon as I went to sleep – (it was) as if I fell into a bottomless gorge.' (Ezra Mordvin; Hamari, 2014, 169)

b. *Vel'avt-iń skal-tomo*
return-1PST.1SG cow-ABE
'I returned without a cow.' (Hamari, 2014, 168)

In contrast, the direction from inflectional marker to derivational marker is exemplified by the elative suffix *-sto*.

(44) a. *Min juta-tano bibl'iot'eka-sto*
1PL come-PRS.1PL library-ELA
'We are coming from the library.' (Ezra Mordvin; Hamari, 2014, 172)

b. *bibl'iot'eka-sto kńiga*
library-ELA book
'a book from the library' (Hamari, 2014, 172)

4.3 Affix telescoping

In the case of *-hAtnék*, we have seen independent affixes coalesce into a single marker. This constitutes a type of **reanalysis**: the surface expression evidently remains unaltered while the formal combination of affixes becomes associated with an entirely different meaning than its constitutive pieces. This formal fusion of the independent markers can be construed as **morpheme amalgamation** or **affix telescoping** (Haspelmath, 1995; Hüning, 1999). This is a phenomenon particularly possible in agglutinative configurations of morphemes where the linear concatenation of elements potentiates the development of a composite form that functions as a single marker. Haspelmath characterizes this as a type of reanalysis with the following profile:

> Affix telescoping is the case where a secondary derivate is related by speakers not to its immediate base (the primary derivate), but to the base of the primary derivate. As a result, the two affixes are reanalyzed as one single affix. (Haspelmath, 1995, 3)

In the Hungarian case we see that a verb serves as the base for the suffix *-hAt* yielding a primary derivate (in Haspelmath's terms) which combines with the succeeding suffix *-n* to create a secondary derivate for the suffix *-ék*. This is still an observable synchronic pattern associated with 1SG potential conditional forms of verbs. However, as previously demonstrated, these suffixes amalgamate into a single synchronic form associated with involuntary semantics and affix as unit onto the verb of the primary derivate.

From a purely formal and distributional perspective this appears to fit the characterization of affix telescoping. There are two crucial properties missing from this description. First, the meaning of the telescoped suffix is not compositional: however historically motivated the meaning of involuntary desire or impulse may be, the synchronic meaning of the marker bears no direct relation to the meanings of its identifiable parts. Second, the status of the telescoped affix results in a category change yielding a deverbal nominal. The resulting lexical category participates in the derivational paradigms or networks associated with Hungarian nominals (Bonami & Strnadová, 2019; Hathout & Namer, 2019; Ruz et al., 2022). We will look at each of these properties in turn, since they raise broader questions concerning the types of morphological change accompanying the general process of affix telescoping.

Stump develops a taxonomy of morphological constructions in which multiple affixes can be combined. He refers to this under the general rubric of the **Affix Conflation Hypothesis**:

> An affix may be a complex combination of smaller content-realizing affixes. Affixes may therefore join to form combinations of affixes before joining with a stem. (Stump, 2020, 160)

The basic observation is that in e.g., agglutinative languages with sequences of identifiable morphemes there are instances where these individual morphemes can combine to function as a single composite or conflated unit. Superficially this is descriptively coextensive with Haspelmath's affix telescoping, but Stump provides criteria to distinguish between mere conflation and affix telescoping. The relevant properties useful for differentiating between the conflation of affixes and their telescoping are what Stump refers to as **form transparency**, **category transparency** and **semantic transparency**. They are defined below adapted for present purposes:

- Form transparency: The form defined by the composite affix is like a form defined by the simple combination of its constitutive pieces.
- Category transparency: The category of the form defined by the composite affix is the same as the category of a form defined by the simple combination of its constitutive pieces.
- Semantic transparency: By default, the content realized by the composite affix is the same as the content realized by simple composition of its constitutive pieces.

Stump, in effect, defines a gradient of transition from simple conflation to affix telescoping which corresponds to degrees of deviation from the default values associated with the form, category and semantics of the participating affix complexes: the greater the departure from the default, the more the conflated affixes behave like a single composite and telescoped affix. With respect to *-hAtnék* we can say the following. It clearly exhibits form transparency in that all of its constitutive pieces are identifiable in the composite form. However, it departs from both category and semantic transparency. Concerning the former, the combination of verbal affixes corresponds to a composite marker with a nominal value, while concerning the latter, the content realized by the composite differs from the composition of its constitutive pieces. The impulsative marker is a particular variant of a type of exemplar he denominates as having **non-computable content**. He characterizes this type as follows:

> Ordinarily, the content realized by a sequence of affixes is deducible from the content realized by the individual affixes in that sequence. Yet, some affix sequences seem to realize a more specific content than can be deduced from their members. (Stump, 2020, 165)

In Hungarian this non-computable content is distributed over nominalized verbs wherever the telescoped impulsative marker appears.

As a final note, affix telescoping has sometimes been attributed to the frequency of co-occurrence of the participating morphemes and a loss of formal transparency (Haspelmath, 1995; Stump, 2022). In the Hungarian case, however, the frequency of the verbal affixes constitutive of the impulsative marker seems less of a causal force than the fact that the coalesced sequence of affixes and various types of semantic inferences have become associated over time with a meaning different from the combined semantics of the individual markers.

This is supported by the data shown in Table 2, which presents the frequency distributions of the potential marker *-hAt*, the conditional marker *-n*, their combined forms, and their impulsative uses in Old, Middle and Modern Hungarian periods, respectively.

For the OHC and MHC corpora, we filtered the impulsative uses manually. However, in the case of the Hungarian Gigaword Corpus, manually reviewing the hits was not feasible due to their large number. We decided to apply the following heuristics: If the *-hAtnék* form is not a verb, it is clearly used in an impulsative sense. If it is a verb, some co-occurring words indicating wishes make an impulsative sense very likely. These are *csak, bárcsak, bár, vajha*, each meaning 'if only'. If any of these words appeared at the beginning of a clause that also contained the *-hAtnék* verb, we labeled the corpus hit as impulsative. This means there may also be impulsative uses that we did not find and included in the *Potential + Conditional* category. The Hungarian Historical Corpus was excluded from this measurement because it is not even normalized to standard spelling, which makes reliable querying particularly challenging.

While the raw frequencies of *-hAt* and *-n* show significant individual usage across periods, there is no compelling evidence that their combination (potential + conditional) displays a particular proneness to co-occurrence based on token frequencies. Impulsative uses are even rarer.

Table 2 Token frequencies and ratios of the potential marker *-hAt*, the conditional marker *-n*, their combination, and their occurrences in an impulsative sense in the Old Hungarian Corpus (OHC), the Old and Middle Hungarian Corpus of informal language (MHC), and the Hungarian Gigaword Corpus (HGC)

	Token frequencies			Ratios		
	OHC	MHC	HGC	OHC	MHC	HGC
Potential *-hAt* in itself	626	8 049	4 730 422	17.42	45.86	60.21
Conditional *-n* in itself	2 872	8 226	2 790 822	79.91	46.87	35.52
Potential + Conditional	80	1 206	335 049	2.23	6.87	4.26
Impulsative	16	69	442	0.45	0.39	0.01

5 Conclusion

The emergence of the Hungarian impulsative in many ways represents the confluence of many familiar constructs and analytic assumptions postulated for morphological change. It also represents significant and instructive variation of them, suggesting that the possible forms of language change are richer than we might expect, but are consistent with assumptions that language is a complex adaptive system where the interaction of multiple factors can lead to the emergence of novel constructions.

In this respect, the Hungarian case exemplifies **bricolage**, and the hypothesis offered by Lass that historical linguistics, "like the evolution of biological systems, is based at least partly on bricolage, cobbling, jerry-building, whatever you want to call it; pieces of such systems are always falling off and if not lost are recycled, often in amazingly original and clever ways" (Lass, 1997, 316).

A consequence is that languages will always display variations emerging from the interactions of numerous, sometimes non-obvious, elements in their systems. Where resources in systems are similar the possibilities for familiar recurrences of change, both formal and functional, can occur. While the particularities of each system will lead to variations among cross-linguistically familiar changes, the emergence of unfamiliar novelties can also occur given the impossibility of predicting all of the potential outcomes of systemic interactions both in language and other evolving systems.[15]

> Languages are constantly losing (relatively) 'deep' contrasts, but retaining the 'surface' material that used to underwrite them, and then (if they don't dump it), reusing it for new purposes, often at quite different structural levels. In fact junk is crucial, because if languages were 'perfect' systems they'd have no room for play, and hence no freedom to change. (Lass, 1997, 317)

While some languages, described in Sect. 2, redeploy impersonal, reflexive or causative constructions for this purpose, Hungarian has innovated its own path: arising from pragmatic inference in particular speech contexts, it has created a composite category changing affix with a new function, while preserving the original functions of the participating inflectional affixes. This was facilitated by analogy with the independent nominal possession construction and the anteceding phenomenon of possessive inflection on nouns. The language has redeployed and refunctionalized old

[15] See Corning et al. (2023) for instructive analogies concerning emergent novelty in complex systems.

grammatical resources to develop a novel reflex of a lesser attested grammatical construction. It has done so by tinkering with forms in ways that enrich our insight into the imagination of human language systems as they change over time.

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