DYNAMISM IN THE HUNGARIAN PREFIX: A COGNITIVE LINGUISTIC APPROACH

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Abstract

The paper gives a cognitive semantic analysis of the Hungarian prefix *fel* 'up'. The prefix *fel* 'up' expresses a dynamic upward direction in real space in its primary meaning, with simulational subjective temporality (as Hungarian prefixes in general denote dynamic directionality). This prefix, as all the others, forms a composite structure with the main verb. The paper discusses (i) the general features of the prefix *fel* 'up', (ii) it argues that the directional meaning of Hungarian prefixes is processed by mental simulation, whith this imaginative simulation as subjective motion including backgrounded temporality, closely related to the inner section of the path, (iii) gives some basic details of the spatial variants of the prefix *fel* 'up' with self-motion verbs, focusing on the verb *felmegy* 'go up', in particular.

Keywords: direction, dynamism, Hungarian, path, prefix, simulation, upwards, verb

1. Introduction

The Hungarian prefix and the prefix + verb construction has been a hot topic in linguistics for almost two centuries. The seemingly transparent, but highly complex structure has been discussed and described in several theoretical frameworks with various methodologies, still struggling with the difficulties coming from the abundance of the types within the general category. While most earlier descriptions approached the construction from the 'building block' perspective, the present overview applies a usage-based and holistic framework. The Hungarian prefix expresses spatial direction in its primary and historically earliest meaning. This directional meaning is connected to a stem verb, forming together a composite structure (in the sense of Langacker 1987). The prefix + verb structure expresses not only a direction + temporal process semantic content, since (to mention only the important factors) (i) the prefix has obtained other functions, among these is its aspectual role: it turns an imperfective verb into a perfective one; (ii) the individual prefix + verb constructions have metaphoric extensions in polysemous networks; (iii) Hungarian prefixes are the products of grammaticalization changes, being at different levels at the moment.

The present paper focuses on (i) the simalutive temporality and (ii) the physical spatial characteristics of the Hungarian prefix *fel* 'up'. I propose that the backgrounded temporality of the prefix is a necessary feature to conceive it expressing space, a path in particular, in a dynamic way, in order to specify the temporal process denoted by the stem verb. The paper gives an introductory analysis of *felmegy* 'go up' in its primary meaning of self-motion, also

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showing some variants with respect to the nature of the path and the mutual elaboration processes. The analysis presents the prototypical features of the construction in the theoretical and methodological framework of Cognitive Grammar (Langacker 1987, 2008), cognitive semantics (Talmy 2000; Heine 1997), with certain references to psychology (Pöppel 1997).

2. The spatial semantics of the Hungarian prefix

The general semantic features of the Hungarian prefix are as follows:

- its meaning is schematic,
- it expresses a spatial relation, direction in particular (in its primary meaning),
- its conceptual system has a topological nature,
- it is dynamic, i.e. it is processed by imaginative simulation.

The default meaning of the Hungarian prefix is schematized to a great extent. It is construed of the spatial relations of two schematic figures within the basic concept of direction. One figure, the primary one, i.e. the trajector with the conceptual content PHYSICAL OBJECT is placed in the focus of attention. The spatial position of this figure, as a schematized physical object, is construed according to its own dynamic direction UPWARDS, DOWNWARDS, INWARDS etc. in space. Within this attentional frame, the trajector is related to a complex secondary figure, the landmark. This landmark is construed as a specific spatial structure, more precisely a directional spatial extension of the SOURCE–PATH–GOAL cognitive model.

To give one example, detailed below: *fel* 'up' denotes an upward direction: a path is construed as a spatial sequence of component states, each a bit higher related to the spatial position of the conceptualizer (the speaker in the default case), as in (1). This is called subjective motion by Langacker (2012). In the second part of the paper I argue that this subjective motion includes conceived time.

(1) fel 'up'

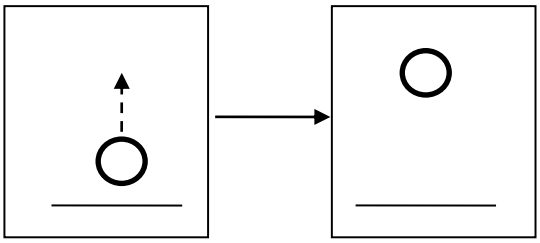

Figure 1. The starting and end point of the prefix *fel* 'up'

In the default case, the prefix forms one component structure with a verb as the other component, together in a composite structure. The baseline here usually is motion: in an everyday event a physical object is construed as moving along a path upwards, as demonstrated in (2–3).

(2) felmegy
up go

(3) A lány felmegy a lépcsőn.
the girl-NOM up-go-PRES.3SG the stairs-SUPERESS
'The girl is walking up the stairs.'

In (3) the agent (the girl) is staying at the lower end of the stairs at the starting phase, at the end phase she is at the upper end. The upwards direction of the motion event along the path is construed by the *fel* 'up' prefix, in a composite structure with the verb *megy* 'go, walk'. In the prototypical case, this direction is conceptualized in a reference frame. The speaker is the central reference point, staying on the spatial level of the starting point of the motion event; while the starting spatial position of the path is another reference point.

In this sense, direction is not a line viewed from one end by the conceptualizer in a static manner, but processed as a path with a starting and endpoint, processed by mental imagination, simulating the passing of the course (the intermediate configurations) along the path. The path, expressed as a substructure in the prefix, directed towards a certain (variable) direction is situated with respect to the spatial position of the conceptualizer who serves as a reference point at the moment of conceptualization. This reference point is also perceived by the same conceptualizer in a self-reflexive way, at least in the default case.

For the experiential interpretation of direction, the term directionality would be the better term. In the technical sense, direction is interpreted as dynamic direction in the present paper. This view harmonizes with the Oxford English Dictionary, entry direction, meaning no. 9: "The particular course or line passed by any moving body, as defined by the part or region of space, point of the compass, or other fixed or known point, towards which it is directed; the relative point towards which one moves, turns the face, the mind etc.; the line towards any point or region in its relation to other lines taken as known" (OED 735).

Many types of spatial relation can be construed by *fel* 'up'in the physical domain, even with self-motion verbs, depending on the verb type and the spatial position of the conceptualizer. But first the dynamic nature of the Hungarian prefix should be discussed. Dynamism here is connected with temporality.

3. Temporality and the dynamic nature the prefix

Linguistic expressions denoting direction are researched extensively, prepositions in English and other Indo-European languages in particular. Still, the temporal content of these grammatical units has remained out of focus, with most researchers focusing on the atemporal nature of prepositions. Langacker, however, has described temporality in prepositions, in relation to sequential and summary scanning, and conceived and processing time, in his Cognitive Grammar. Hungarian prefixes show some similarities to English prepositions, but also significant differences. One such difference is dynamism based on simulated temporality that prevails in prefixes. This feature is described as follows.

Temporality in linguistic expressions is based on the human mental experience of time. The notion of temporality as a system of discrete temporal sampling phases and the subjective feeling of temporal continuity has been worked out by Pöppel (1994, 1997). In view of Pöppel's investigations, "the apparent continuity of time is a secondary phenomenon – actually an illusion – which is only made possible by discrete information processing on different temporal levels […] Experimental evidence suggests the existence of at least two processing systems employing discrete time samplings. These presumably independent processing systems are hierarchically linked with each other" (Pöppel 1997: 107). One of these processing systems is "a high-frequency processing system generating discrete time quantita in the domain of approximately 30 milliseconds", its temporal unit is the primordial event (Pöppel 1997: 107–108), the other one is "a low-frequency processing system, which is operative in the domain of 2 or 3 seconds" (Pöppel 1997: 108), this domain being the perceptual moment. It is also

relevant how the shortest temporal durations are distinguished: "to establish distinct events that are related to each other such that their temporal order can be indicated, the shortest temporal interval is observed in the domain of approximately 30 milliseconds" (Pöppel 1997: 109). „While the high-frequency mechanism discussed above is thought to organize distributed neuronal activities and to implement "primordial events", a low-frequency mechanism appears to integrate successive events within a temporal window of approximately 2 to 3 seconds" (Pöppel 1997: 113).

Perhaps it is not a kind of overgeneralization to propose that the temporal features and sequentiality of Pöppel's primordial units correspond to the processual structure of Langacker's sequential scanning, the component states of conceived time.

Approaching the temporal nature of the Hungarian prefix, I start out from Langacker's notion of time and scanning. There is a definite difference between conceived time and processing time (see Langacker 2008: 79). Conceived time is the temporal content of the construed scene (e.g. in a clause), while processing time is the time needed for the mental processes of comprehension. The two are related not only via epistemic grounding, but also through the differences between the durations.

Langacker's Cognitive Grammar posits two ways of processing, related to processing time (Langacker 2008: 111): sequential scanning and summary scanning. Temporal events are processed sequentially, i.e. the component states of the event are processed through processing time, in the order of their occurrence. On the other hand, things and atemporal relations are processed by summary scanning: while the states of the things or relations are accessed in a "natural sequence", these states "are mentally superimposed, resulting in their simultaneous activation".

For English prepositions, the static – dynamic alignment is described by Langacker by reference to simplex or complex relationships: "In the case of spatial expressions, a simplex preposition specifies a single location: in the garage; under a tree; near the exit. In contrast, a complex preposition describes a series of locations amounting to a spatial path: into the garage; along the river; through a tunnel" (Langacker 2008: 117). Nevertheless, prepositions are processed by summary scanning here, since the preposition construes the component states (whether it has one or more) atemporally, temporality is absent or in the background: "In expressions like the road into the forest, the spatially extended trajector (the road) simultaneously occupies all the specified locations vis-a-vis the landmark. Here there is no development through time, since the entire spatial configuration obtains at any one instant. (The expression does tend to evoke the idea of something moving along the road, but this is tenuous and unprofiled.)" (Langacker 2008: 118, fn 23).

Langacker's explanation of the English prepositions does not give the real answer to the dynamic nature of the Hungarian prefix. One solution lies perhaps in imaginative simulation. Conceptualizers often build up scenes mentally through imagination, when simulating an event. As Gibbs and Matlock suggests (2008: 164): "people can readily, and mostly unconsciously, create simulations of real-world events as they communicate with others, hear stories, solve problems, and even perceive motionless displays. Psycholinguistic studies also demonstrate the importance of embodied simulations in ordinary language understanding". It also worth to note that "embodied simulation may not be something restricted to creating and understanding ad hoc categories, which include novel metaphors but are applied when common taxonomic categories are accessed as well" (see Barsalou 2003, 2008; Matlock 2017). Through mental simulation the conceptualizer runs along an event as an imaginative process.

The imaginative processing focuses on events taking place in conceived time, i.e. in the sequence of component states. Direction as construed and schematized in Hungarian prefixes

is a special case of imaginative processing: the mental simulation has a serial nature, and not only in processing time, but in conceived time, too. The simulative scanning of the path with dynamic directionality includes the simulated temporal sequence of its component states. This temporal nature is not profiled (cf. Langacker 2008: 118, fn 23), but it has its function in the construal of directionality. There is no moving object, no real motion, no real velocity, but all these are imagined, simulated. In many cases even the path itself is not visible, bounded and fixed (as a footpath, a corridor or a motorway): the region of human body motion is air, 'empty space', and while motions of a hand, for instance, do have paths, these are not perceivable in advance, only in entrenched types. That is the very nature of Langacker's serial subjective motion, at least, in the case of Hungarian prefixes.

Certainly, a path can be processed as a Gestalt, through summary scanning. But in that case the path construed so does not imply directionality.

(4) The footpath in the park is popular for joggers.

But this is not the type we have in the case of Hungarian prefixes. The difference can be demonstrated by the concepts IN and INTO. The English preposition *in* profiles the state of being inside, within a bounded space without any change, and with no suggestion of a previous state (e.g. being out of that bounded space). Conceived time has no relevance here, if only the existence of that state is within the scope of attention. This relation is processed by summary scanning.

The preposition into profiles the dynamic path that leads from an outer space into a bounded space, through its border ('being directed into something'), including the simulated passing along a path with starting point, intermediate phases and endpoint. Conceived time has relevance here, this simulated passing is construed by temporal sequence, though in the background.

Hungarian case suffixes have a topological nature, most of them denote some spatial relation (including inessiv *-bAn* 'in' and dativ *-nAk* 'to, towards, for'), and are closely related to prefixes, both etymologically and semantically. With respect to dynamics, case suffixes have two distinct groups, one static (as in (5)), and one dynamic (see (6)), in the case of inessiv *-bAn* 'in' and illative *-bA* 'into'.

(5) házban
house-in
house-INESS

(6) házba
house-into
house-ILL

With prefixes only dynamic construal is used, as in (7), with the same semantic content of 'in':

(7) bemegy
into-go
PREFIX-VERB

4. The spatial variability of the prefix *fel* 'up'

The prefix *fel* 'up' is a highly frequent and productive grammatical unit. This prefix has a rich polysemous network, with the academic Hungarian dictionary (Pusztai (ed.) 2003: 355) listing fourteen senses. Also, since every prefix is used with verb stems in composite structures, the dictionary lists 685 *fel* + verb entries, which is still far from their totality. This abundance comes mainly from the spatial relation between the *fel* prefix and the different verbs used with it. The spatial variability of *fel* 'up' has been investigated in detail by Fazakas (2007) with the prefixes *le* 'down' and *alá* 'below', adopting a version of cognitive semantics, elaborated by Szilágyi N. (1996). Her research analyses data taken from a huge historical corpus, setting up categories according to certain parameters: the direction of the motion, the bounded or unbounded feature of the region, the physical properties of the path, and the nature of the moving object (the latter roughly in the sense of Langacker's trajector). Szili (2009) gives a taxonomic overview of the prefixes *fel* 'up' and *le* 'down', using a classifying structuralist semantics, combined with Lakoff and Johnson's metaphor theory.

According to the short description in Section 1, the prefix *fel* 'up' denotes an upward direction: an entity (the trajector) is directed in physical space upwards on a path. The trajector is at the lower end of the path at the starting phase, and it is at the upper end at the end phase. The position of the starting point of the path (the landmark) is low, the end point is high, the path ascends from the lower starting point to the higher end. In the sense of physical space, this is a unidirectional direction (just as in the opposite case of *le* 'down'). In the default case, the starting point is the lowest point of the path as physical space, a firm surface, while the end point is rather an open space (e.g. air, even in a larger bounded space, in a room, hall, any roofed space), within the reachable spatial domain for the motion or object manipulation. The trajectory is a physical object, it can move or it is movable.

Also, the physical spatial directionality of *fel* 'up' is processed in the current reference frame (cf. Heine 1997). This reference frame comprises at least two reference points. One is the cardinal one, verticality. The other one is the conceptualizer, the speaker in the default case. These reference points function in scenes where the fel 'up' prefix stands for a complete answer, in an informal dialogue like (8):

(8) A: Hová mégy?
'Where are you going?'
B: Fel.
'Up.'

The answer implies something like 'going upstairs' or 'going up the attic'. In (8) the interlocutors have the necessary knowledge of the spatial conditions of the current discourse space. For instance, they are staying in their family house, at the ground floor or the ground level in the garden. Within this frame of reference, the path along which speaker B is moving up starts on the ground level, and ends upstairs or up in the attic. Although the interlocutors know the way up well, the processing of the current upward motion goes through simulative imagination, since the action of going up will be completed only after the dialogue, and speaker A does not necessarily perceive the action itself.

I give some details of he spatial variability of *fel* 'up' in two respects: frame of reference and motion expressed by the verb.

The typical instances of the prefix *fel* 'up' according to the types of reference point are as follows (based on Heine 1997).

a) The reference point is the human body of the conceptualizer, the upward direction is related to the canonical upright position of the human body, from the lower part to upper one (over the head), the trajector of the motion (direct object in the clause) is part of that same body:

(9) felemelem a kezemet
up-lift-PRES.1SG the hand-POSS.1SG
'I lift my arm.'

b) The main reference point is the human body of the agent (the trajector), the primary landmark of the motion (direct object in the clause) is the book (the physical object moved by the hand belonging to the same body):

(10) felteszi a könyvet a polcra
up-put-PRES.3SG the book-ACC shelf-onto
'She puts the book on the shelf.'

c) The reference point is a physical object or landmark, conceived within the frame of reference:

(11) Péter felmegy a dombra
Peter up-go-PRES.3SG the hill-onto
'Peter climbs the hill.'

d) The reference point is a cardinal:

(12) az expedíció felmegy északra
the expedition up-go-PRES.3SG north-onto
'The expedition heads towards North.'

Since the upward direction in the prefix *fel* is construed on a highly abstract and schematic level, it is the verb and also the clause that elaborates, specifies the upward path, while the prefix elaborates certain constraints of the process, too. The upward direction is elaborated first by the verb stem. Concentrating only on motion verbs, let's take first one of the most frequent verbs, *megy* 'go' with the prefix *fel.* In the case of self-motion, the primary participant of the clause with *felmegy* 'go up' is prototypically a human being, accomplishing a walking motion with change of location in physical space based on inner will and energy source. This feature precisely matches to the schematic semantic content of the trajectory of the verb as the nominal elaborates the trajector in the clause. The primary meaning of *felmegy* is: [someone] gets herself to a higher position by walking from a lower position in physical space based on her own volition and energy source.

(13) a. felmegy
up-go

b. A gazda felment a padlásra.
the farmer-NOM up-go-PAST.3SG the attic-SUBL
'The farmer went up to the attic.'

c. A gazda a létrán felment a padlásra.
the farmer-NOM the ladder-SUP up-go-PAST.3SG the attic-SUBL
'The farmer went up the attic on the ladder.'

The semantic description of the primary meaning of the verb (i.e. prefix + verb unit) *felmegy* is presented as follows:

- the manner of motion: active, human walking motion based on inner will and energy source,
- speed: average, nonspecific,
- temporal duration: non-specific,
- temporal starting and end points: the starting point of the process is outside, the end point is within the immediate scope (the profiled semantic part),
- the force dynamic structure of the motion: it comprises the average physical effort needed for upwards (tilted, not vertical) human motion by walking,
- spatial starting and end points: the starting point of the process is outside, the end point is within the immediate scope.

The *fel* 'up' prefix has some specific features within the *felmegy* 'go up' unit in the construal:

- the physical nature of the path: there is physical support from below, though in the background, not profiled (ground support for motion designated by *megy* 'go' is inherent; the prefix *fel* does not schematize support), has a schematic endpoint, unspecified by the sides, and the physical medium of the path is unbounded from above;
- direction of the path: ascending, with varying degress of steepness between mild ascent and the almost vertical rise;
- the direction of the upward path is mentally processed with simulated temporality (subjective motion);
- the inner section of the path is continuous, only the seriality of the episodic steps of walking divide it into parts (if at all) – this is the point where the simulative sequential but backgrounded temporality of the prefix meets with its spatial character, activated by the motion verb;
- the construal features of the path are adjusted to the verb and to other complements in the clause by elaboration processes.

The features listed above function in a spatial reference frame as a default, with the conceptualizer as the primary reference point. The accessible operation schemas of cognition determine the parameters of this spatial reference frame, and not the geometric (physical) coordinates. The spatial reference frame is set up from a human perspective; the direction upwards, the imagery path is related to the position of the human body (the conceptualizer's body) as experienced when standing on the ground (the floor) (c.f. Heine 1997; Fazakas 2007: 40). The primary meaning of *felmegy* 'go up' instantiates this reference frame, as in (13b) and (13c): in these situations the attic is related higher to the spatial position of the speaker (the conceptualizer) while uttering the clause, when construed within the real or imagined spatial vicinity of the event.

The verb *felmegy* 'go up' has semantic varieties when adjusted to specific spatial positions serving as the end point (the goal) and consequently manners of the motion. In (14–16) the

manner of motion differs from mere walking. (14) includes steep walking or climbing, often on a ready-made path with diverse degrees of steepness. (15) implies a ladder and climbing, no walking, the path is steep. The motion expressed in (16) needs grasping and stepping the path is (almost) vertical, along the trunk of a tree.

(14) felmegy a hegyre
up-go the hill-SUBL
'climb the hill'

(15) felmegy a tetőre
up-go the roof-SUBL
'climb the roof'

(16) felmegy a fára
up-go the tree-SUBL
'climb the tree'

In the clauses (14–16) the implied nature of the divers paths show their role in the construal: the inner section of the three paths differ in the episodic steps (component states) of climbing. These component states are conceived sequentially in the simulation, but differently, related to the same verb *felmegy* 'go up'. Stated above first, now demonstrated in direct examples, this is the point where the simulative sequential but backgrounded temporality of the prefix meets with its spatial character, activated by the motion verb, since the motion itself varies, expressed by the same verb, but adjusted to the imagined path.

In other cases, the type of the path itself is expressed as a complement of *felmegy* 'go up'. A ladder has an average steepness requiring feasible effort for upward human motion, with regular steps for walking; that is the semantic content of the path in (17). The scaffold demands a special upward climbing, even when provided with (steep) ladders.

(17) felmegy a lépcsőn
up-go the ladder-SUPERESS
'step up the ladder'

(18) felmegy az állványon
up-go the scaffold-SUPERESS
'step up the scaffold'

Verbs of self-motion other than *megy* 'go' also have some role in the construal of upward motion, where the upward direction is expressed by the prefix *fel* 'up'. In (19) the verb expresses the extra effort needed to climb the (steep) ramp, while in (20) the verb implies that the moving body has to grasp parts of the prototypically vertical wall in order to get higher.

(19) felkaptat az emelkedőn
up-climb-slowly the ramp-SUPERESS
'climb slowly up the ramp'

(20) felkúszik a falon
up-climb the wall-SUPERESS
'climb up the wall'

These features demonstrate that the components of the Hungarian prefix + verb composite structure form a complex grammatical (semantic and morpho-syntactic) unit. Both components have some influence on the other, and both are adjusted to the other, at the same time.

5. Summary

The paper presented a cognitive semantic analysis of the Hungarian prefix *fel* 'up', concentrating on the basic factors and features. As it was demonstrated, the prefix *fel* 'up', as Hungarian prefixes in general, expresses a dynamic direction in real space in its primary meaning, upward in this case, with simulational subjective temporality. This prefix, as all the others, forms a composite structure with the main verb. The paper discussed (i) the general features of the prefix *fel* 'up', (ii) it argued that the direction in Hungarian prefixes is processed by mental simulation along the path, scanning the component states, whith this imaginative simulation as subjective motion including backgrounded temporality, (iii) gave some basic details of the spatial variants of the path expressed by the prefix *fel* 'up' with self-motion verbs, focusing on the verb construction *felmegy* 'go up', in particular, and also mentioning other constructions specifying the features of the path and the manner of motion.

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