Abstract. This paper is a study on the degree of force dynamics displayed by three Finnish adpositional constructions where the path adposition läpi 'through' can be used: prepositional, postpositional and quasi-adpositional (with a locative-case marked complement). Our study of written data demonstrates that in actual usage three constructions set up a hierarchy prepositional < postpositional < quasi-adpositional that (from left to right) reflects an increasing degree of force dynamics, i.e., the degree to which complements of the adposition indicate an obstacle that resists or hinders the motion along the path. The study thus shows that force dynamics can be a factor that distinguishes between near-synonymous constructions.

Keywords: Finnish, preposition, postposition, adposition, cognitive linguistics, force dynamics.
in a local case and, unlike canonical adpositional complements, can be separated from the adposition by intervening elements.

At a rough level, the meaning of läpi in all these constructions is 'through'. However, a study of actual usage confirms what native speaker intuition suggests, namely that the quasi-adpositional construction correlates with a strong force-dynamic meaning, followed by the postpositional construction, whereas the weakest force-dynamic meaning associates with the prepositional construction. This can be seen both in the verbs and in the complements used in these constructions: the hierarchy preposition < postposition < quasi-adposition reflects 1) an increasing proportion (from the left to the right) of verbs that indicate the exertion of a force against an opposing force (such as 'push', 'break through', 'penetrate'), and 2) an increasing proportion of obstacle-like (as opposed to medium-like) complements. Our study thus shows that force dynamics is a relevant factor that may distinguish near-synonymous constructions from each other.

1. Introduction

1.1. Talmy’s theory of Force Dynamics

Force Dynamics is a concept introduced into (cognitive) linguistics by Leonard Talmy in his seminal paper (1985; re-published in Talmy 2000). The concept of Force Dynamics covers many kinds of causal relationships between participants of a situation, with opposing forces involved — typically, there is one participant (called the Agonist) exerting a force that attempts to alter the situation in some way (or, in some instances, to keep it unaltered), and another participant (the Antagonist) resisting such a force. The result of the interaction depends on whether the Agonist or the Antagonist is stronger. Canonical force dynamic events take place in the physical domain, but analogical constellations can be found (and the concept of force dynamics can be applied in) more abstract domains, such as the social and the psychological ones. According to the theory of cognitive semantics developed by Talmy (2000: Ch. 7), force-dynamic meanings motivate and underlie many linguistic systems expressing physical interaction but also abstract relationships.

1.2. Near-synonymous constructions with the path adposition läpi 'through' in Finnish

In this paper we apply the concept of Force Dynamics in an analysis of Finnish near-synonymous adpositional constructions that involve the path adposition läpi 'through', and argue that these constructions show differences in the degree of force dynamics they indicate in actual usage. In our study, we pay attention to the nature of the verb (whether it indicates motion against a resisting force or not) and the complement of the adposition (whether it constitutes an obstacle or not). The mover in such a situation is canonically indicated by the grammatical subject (*She ran through the house*) or the object (*She threw a ball through the window*) of the clause. The constructions we compare are: 1) prepositional, 2) postpositional, and
3) quasi-adpositional (see below). The adposition läpi (‘through’), like a number of Finnish path adpositions, can be used in all three functions. In general, most Finnish adpositions are postpositions (which is the dominant type of adpositions in Finno-Ugric languages), but around 25% (according to Grünthal 2003) are prepositions. In addition, there are a few elements that can be used both prepositionally and postpositionally. Following Hagège (2010), we call such elements bipositions. Finnish bipositions typically express a path (‘through’, ‘over’, ‘across’) or a relationship Grünthal (2003) calls circumspatial (‘in the middle of’, ‘around’).

A strong tendency in Finnish is that the complement of a postposition is marked with the genitive, whereas complements of prepositions favor the partitive. The genitive marking of the complement reflects the historical background of the postpositional constructions as NPs with a genitive modifier that later became the complement of the arising adposition, which formerly was the noun heading the NP. Since the historical structure of the phrase is often transparent, both readings (genitive modifier + head noun and complement + postposition) are sometimes possible. For instance, puu+n juure+lla [tree+GEN root+ADE] means either ‘on the root of the tree’ (if interpreted as an NP), or ‘next to the tree’ (if interpreted as a postpositional phrase). As this example shows, many Finnish adpositions still have uses as nouns as well, and maintain their locative case marking. The locative case of the adposition can also vary in the same way as in nouns — in the tree example, for instance, the static adessive ‘on’ case has the directional counterparts allative ‘onto’ and ablative ‘off of’, indicating motion onto vs. off of the root of a tree (in the NP readings) or to vs. away from the vicinity of the tree (in the postposition reading). Finnish prepositions, in contrast, usually take partitive complements, and their historical background is more obscure that that of the postpositions — Sadениemi (1960) suggests that prepositions might go back to adverbs or verb particles that have undergone a reanalysis.

In addition to the genitive and the partitive, which mark complements of canonical adpositions, some adpositions allow usages in a construction where they take a semi-complement in a local case. By the term semi-complement we mean that the function of the element resembles that of an adpositional complement but only to an extent, as its relationship with the gram is clearly looser than that of an actual complement, as will be demonstrated below. Ojutkangas and Huumo (2010) use the term quasi-adposition for such expressions, because these differ from canonical adpositional phrases both semantically and grammatically and sometimes display behavior that distinguishes them from canonical adpositional constructions. In semantic terms, the function of the genitive and the partitive that mark complements of canonical adpositions is to indicate the (grammatical) relationship between the complement and the adposition. In contrast, the locative case that marks the semi-complement of quasi-adpositional constructions contributes to the conceived nature of the relationship that prevails between the landmark and the trajector.1 In grammatical

1 In cognitive linguistics, semantic definitions are provided for relational elements. When locating or relating two entities with each other, language relies on the asym-
terms, the main difference between adpositions and quasi-adpositions is that the semi-complement and the quasi-adposition can be separated by other clausal elements. This is not possible in adpositional constructions proper: consider examples (1) vs. (2).

(1a) Koira on talo+n sisäällä (Po)
    dog is house+GEN inside+ADE
    'The dog is inside the house'

(1b) *Talo+n on koira sisäällä
    house+GEN is dog inside+ADE

(2a) Koira on talo+ssa sisäällä (QAdp)
    dog is house+INE inside+ADE
    'The dog is inside the house'

(2b) Talo+ssa on koira sisäällä (QAdp)
    house+INE is dog inside+ADE
    'In the house there is a dog inside'

Example (1a) illustrates the adpositional construction proper, where the complement 'house' is in the genitive. The ungrammaticality of (1b) shows that the components of the adpositional phrase cannot be separated from each other by intervening elements. Example (2a) illustrates the quasi-adpositional construction, where the semi-complement is marked with a local (in this case, inessive 'in') case. Example (2b) shows that the locative element can be separated from the quasi-adposition. This obviously speaks against their analysis as a phrase, though semantically they belong together in the sense that they together indicate the locative relationship that prevails between the participants.

Semantically, the inessive case in the form talossa 'in the house' in examples (2a) and (2b) indicates a relationship of containment itself. This element can thus be analyzed as an adverbial independent of the quasi-adposition — both (2a) and (2b) would be acceptable even without the quasi-adposition. In contrast, the genitive in example (1a) requires the adposition. In grammatical terms, the quasi-adposition in (2a—2b) is optional and conveys a meaning very similar to that of the inessive case itself — the quasi-adposition serves to emphasize the meaning of containment. This is probably why Grüenthal (2003) speaks of a "double coding" of the locative relationship in such instances. It is also worth pointing out that in grammatical studies of Estonian, a language closely related to Finnish, an expression type that closely resembles quasi-adpositions has traditionally been called affixal adverb. Affixal adverbs combine with verbs to create so-called particle verbs (Erelt, Kasik, Metslang, Rajandi, Ross, Saari, Tael, Vare 1993: 21) and thus differ grammatically from adpositions which form adpositional phrases together with their NP complements and have the grammatical function as adverbials. Some of the uses of the Finnish quasi-adpositions between them. In terms of Langacker (1987), the more prominent entity, for which (trans)location is of relevance, is called the trajector, while the secondary participant, the reference entity, is the landmark. For a reminiscent distinction, Talmy (2000) uses the terms Figure (for trajector) and Ground (for landmark).
sitional constructions resemble those of Estonian affixal adverbs — since the grammatical relationship between the quasi-adposition and its semicomplement is loose, the gram may sometimes carry a more direct relationship with the verb.

There are also quasi-adpositional elements that convey a meaning that is quite different from the one indicated by the local case of their semicomplement. An example of this are the terminative particles *asti* and *saakka* (studied in detail by Päiviö 2007), both meaning ‘all the way to’ or ‘as far as’. These co-occur with directional locatives (*to* vs. ‘from’ cases), but unlike these directional cases, *asti* and *saakka* profile an extent that extends to the landmark indicated by the local case (resulting in meaning differences such as ‘She ran into the church’ [bare locative] vs. ‘She ran all the way to the church’ [locative + terminative quasi-adposition]).

Most Finnish path adpositions, in addition to being bipositions, are also used as quasi-adpositions. Concerning their use as bipositions, recent studies have shown that their prepositional and postpositional uses are not synonymous (Huumo 2010; Huumo forthcoming; Huumo, Lehismets 2011). As postpositions, they favor constructions with motion verbs and indicate a path traversed by a mover — this motion may be factive (actual) or fictive; cf. (3a—3b).

(3a) Tytö juoks+i puisto+n läpi (Po)
   girl run+PST.3SG park+GEN through
   ’The girl ran through the park’

(3b) Tie mene+e puisto+n läpi (Po)
   road go+PRES.3SG park+GEN through
   ’The road goes through the park’

In (3a) and (3b) the use of the adposition *läpi* as a postposition is the unmarked option, though a prepositional use (*läpi metsän*) would also be possible, as a stylistically (slightly) marked alternative. On the other hand, the prepositional use is the unmarked option with so-called paths of occurrence (paths along which there are some entities; example 4a) and paths of process (paths along which an event takes place; 4b)

(4a) Sien+i+a kasva+a siellä täällä läpi (Pr) metsän
   mushroom+PL+PAR grow+PRES.3SG there here through forest+GEN
   ’Mushrooms are growing here and there throughout the forest’

(4b) Uudistuks+i+a vaadi+taan läpi (Pr) Eurooppa+n
   reform+PL+PAR demand+PRES.PASS through Europe+GEN
   ’Reforms are demanded throughout Europe’

Huumo (2010) argues that in expressions such as (4a—4b) the path expression serves as a starting point for the construal of the relationship: it is not construed so as to follow the route traversed by a mover (as in 3a—3b) but subjectively, and the clause gives a predication about the content of the path. Note that the partitive case is used to mark the existential subject ‘mushrooms’ in (4a) and the object of the passive (impersonal), ’reforms’ in (4b): in these functions, the partitive typically indicates indefiniteness. Huumo also argues that examples such as (4a) and (4b) utilize a close perspective to the designated configuration and produce a scan-
ning effect: when mentally tracking the path, the conceptualizer keeps encountering mushrooms or demands for reforms. While postpositions associate with motion verbs and foreground the reaching of the endpoint of the path, prepositions serve to establish a moving, proximate perspective point to the path and report what the path contains. This also motivates the unmarkedness of prepositions in expressions of time and other abstract domains, where prepositions dominate; cf. (5a—5b).

(5a) *Pakastin säilyttää marjat tuoreena läpi* (Pr) talve +n
   freezer keep.PRES.3SG berry +PL.NOM fresh +PL +ESS through winter +GEN
   'The freezer keeps the berries fresh over winter'

(5b) *Karpov tuijotti vastustajaa läpi* (Pr) ottelu +n
   NAME stare.PST.3SG opponent + PAR + 3PX through match + GEN
   'Karpov stared at his opponent throughout the match'

In addition to its uses as a preposition and a postposition, *läpi* is also used as a quasi-adposition. In this function it takes a semi-complement in the elative ‘from/out of’ case; cf. (6a—6b).

(6a) *Auto syöksyi seinään läpi* (QAdp)
   car crash + PST.3SG wall + ELA through
   'The car crashed through the wall'

(6b) *Pääsein tentiin läpi* (QAdp)
   get + PST+1SG exam + ELA through
   'I passed the exam'

Example (6a) illustrates the spatial function of *läpi* as a quasi-adposition. As can be seen, the example indicates a strong force-dynamic meaning where the mover uses force to break through an obstacle-like landmark. Though the canonical adpositional constructions (preposition or postposition) can also be used in (6a), without changing its meaning substantially, it seems (and native speaker intuition suggests; cf. Leino 1993) that it is precisely the quasi-adpositional variant that is most compatible with a strong sense of force-dynamics. Example (6b) illustrates the use of the quasi-adpositional as a conventionalized way of indicating the meaning ‘to pass an exam’: the exam can be conceived of as a metaphorical obstacle on the abstract path (of studies) traversed by a student. Again, the adpositional constructions would serve as well, but it is the quasi-adpositional construction that is the most idiomatic way to express this meaning.

All this seems to suggest that the quasi-adpositional construction [elative + *läpi*] is best compatible with a strong sense of force dynamics: the elative indicates an obstacle that is blocking the way of the mover, and the mover must apply force to pass the obstacle.

To confirm our intuition, we conducted a small corpus study on the actual use of the three constructions where *läpi* can be used: prepositional, postpositional and quasi-adpositional. Our hypothesis was that there are differences to the force-dynamic strength of these constructions and that the constructions can be arranged in a hierarchy that reflects their increasing (from the left to the right) force-dynamic strength: preposition < postposition < quasi-adposition. We thus assume prepositions to be force-dynamically weaker than postpositions, since they are often stylistically marked
in the function of indicating a path of actual motion, and serve as the
primary means of indicating paths of occurrence and process, which involve
the static presence of entities along the path rather than motion. We also
expect the quasi-adpositional construction to be stronger in force dynamics
than the other constructions.

2. Force-dynamic properties of the constructions with läpi

In this section we study the force-dynamic differences between preposi-
tional, postpositional and quasi-adpositional constructions with the bipos-
sition läpi. We pay attention to two features: the type of the verb and the
type of the landmark used in the construction. In sentences with a path
adposition, roughly three types of verbs are found in the data: 1) verbs
lacking any force-dynamics, at least as far as motion along the path is
concerned (e.g., ‘grow’, ‘be’); 2) force-dynamically neutral verbs of motion
(‘come’, ‘go’, ‘move’, ‘run’); 3) verbs with a strong force dynamic meaning
(‘break through’, ‘push through’, ‘penetrate’, ‘crash into’). Group 3 thus
includes verbs that indicate motion against an opposing force, and their
lexical meaning involves the schematic concept of an obstacle that resists
the motion of the mover.

Our data also contain uses of polysemous verbs that do not necessarily
indicate motion but receive a reading as motion verbs in the overall construc-
tion. Consider the following uses of the verbs selvitä ‘survive’ and ehtiä
‘make it (on time)’:

(7a) Poika selvis+i Myllypohja+n koulu+n Boy survive+PST.3SG Myllypohja+GEN school+GEN
    vanha+n savupiipu+n läpi (Po)
    old+GEN smokestack+GEN through
    ‘The boy made it through the old smokestack of the Myllypohja school’

(7b) Pyynikintori+lla ehti+i läpi (QAdp)
    Pyynikintori+ADE make+3SG.PRS through
    kaks+i+sta+kin vihre+i+sta valo+i+sta
    two+PL+ELA+CL green+PL+ELA light+PL+ELA
    ‘At the Pyynikintori square, one can make it through two green lights
    [without waiting]’

In analyzing the landmarks (complements of the adposition or semi-
complements of the quasi-adposition) we use a tripartition based on the
degree of force-dynamic strength they contribute to the event — that is,
whether they facilitate or resist the motion of the mover, or are neutral
with respect to it. A landmark that facilitates the motion of the mover has
the function of a channel or a medium, which provides a route for the
mover to traverse. Examples of such landmarks are tunnels, paths and roads,
holes, and metaphorical counterparts of such entities. These landmarks are
thus “benevolent” for the mover in its attempt to traverse the path. Neutral
landmarks are entities that are passed through by the mover but do not
contribute any significant support or resistance to the motion. Such land-
marks include buildings (unless the clause expresses a situation where force
has to be applied in order to penetrate through the buildings), open areas
like fields, parks, and other such entities. The last group, which is of
the greatest interest for the present study, contains landmarks that con-
stitute an obstacle to the mover in a context where the mover has to use
force in order to get through them. Such landmarks are, for example, walls,
closed doors or windows, fences, dense bushes or forests, and other such
entities.

As our data, we analyzed one hundred prepositional, one hundred
postpositional and one hundred quasi-adpositional usages of the adposi-
tion läpi, altogether three hundred instances. The data was collected
randomly from the corpus "Kielipankki" (The Language Bank of Finland)
(http://www.csc.fi/tutkimus/alat/kielitiede). We first made a rough divi-
sion between expressions that involve a strong degree of force dynamics,
and those that do not. The criterion for considering the overall meaning
of a sentence as force dynamic was that there is an opposition between
two forces, exerted by the Agonist and the Antagonist. The results of this
division are represented in Table 1, and they confirm that among the three
construction types studied, prepositional ones express a FD configuration
most rarely and quasi-adpositional ones most often. Postpositional expres-
sions occupy an intermediate position on the scale.

<table>
<thead>
<tr>
<th>Force-dynamic configurations in prepositional, postpositional and quasi-adpositional uses of läpi 'through'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>FD</td>
</tr>
<tr>
<td>no FD</td>
</tr>
<tr>
<td>total</td>
</tr>
</tbody>
</table>

As can be seen, a force-dynamic configuration is present in 33 (of one
hundred) prepositional sentences, which shows that even prepositions are
able to express it. The share is higher in postpositional sentences, where
it reaches 51/100, and, as expected, the highest in quasi-adpositional
constructions, where among one hundred instances only three do not show
a force-dynamic effect (and even in those three instances the interpretation
is to a large extent a matter of reading). A force-dynamic configuration
was unambiguously present in 97 of the one hundred quasi-adpositional
occurrences.

In the following sections we focus on the force-dynamic sentences only
and study in more detail the 33 prepositional, 51 postpositional and 97
quasi-adpositional constructions involving a sense of force dynamics. In
addition, we use data from the Internet to study the usage of the three
constructions with a few specific landmarks.

3. The verb in force-dynamic läpi constructions

Canonically, the verbs used in Finnish sentences with path adpositions indi-
cate motion (Jaakola 1997; Lehismets forthcoming). However, there is
remarkable semantic variation within the group of motion verbs, and (as
pointed out above) other verbs may acquire a sense of motion from the
surrounding construction. Some motion verbs indicate meanings that
involves strength, force, suddenness, even violence, and are, for that reason, referred to as inherently force-dynamic verbs in this paper. A few examples are tunkea ‘thrust’, painaa ‘push’, murtaa ‘break’, syöksyä ‘dash’, rynnä ‘rush’. Some inherently force-dynamic verbs, such as rysäyttää ‘crash’ or kumauttaa ‘thrump’ also encode the emission of a sound accompanying the motion. The data also includes verbs that do not express the exertion of force, strength, or power, but are more general and neutral in their meaning. These include liikkua ‘move’, mennä ‘go’, tulla ‘come’, tuoda ‘bring’, viedä ‘take’, and are referred to as neutral motion verbs. Undoubtedly, any kind of motion requires force, but motion expressed by inherently force-dynamic verbs clearly incorporates a greater degree of force compared to that of neutral motion verbs — more precisely, they convey the meaning of a counter-force that resists the motion. This does not mean that sentences with neutral motion verbs could not express a force-dynamic meaning; contrarily, such verbs are found quite often especially in quasi-adpositional sentences with a strong force-dynamic meaning. In other words, the quasi-adpositional construction itself seems to incorporate a sense of force dynamics. It seems that the remaining elements of this construction, such as the elative case of the semi-complement and the nature of the landmark contribute to the force dynamic meaning in the sentence.

The distribution of the above-mentioned classes of verbs in force-dynamic sentences is presented in table 2.

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>QAdp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inherently FD-verbs</td>
<td>23 (68 %)</td>
<td>29 (57 %)</td>
<td>50 (52 %)</td>
</tr>
<tr>
<td>neutral motion verbs</td>
<td>8 (23 %)</td>
<td>16 (31 %)</td>
<td>38 (37 %)</td>
</tr>
<tr>
<td>other verbs</td>
<td>3 (9 %)</td>
<td>6 (12 %)</td>
<td>10 (11 %)</td>
</tr>
<tr>
<td>total</td>
<td>33 (100 %)</td>
<td>51 (100 %)</td>
<td>97 (100 %)</td>
</tr>
</tbody>
</table>

The results concerning the use of the three classes of verbs in prepositional, postpositional and quasi-adpositional läpi constructions show that in prepositional force dynamic sentences, the force-dynamic meaning tends to build largely upon the meaning of the verb — in 68 % of these sentences, an inherently force dynamic verb is used. The significance of inherently force dynamic verbs decreases when we consider postpositional sentences, and is the lowest in the group of quasi-adpositional sentences. Since Table 2 only concerns instances with a strong force-dynamic meaning, this result suggests that especially in the quasi-adpositional type the force-dynamic meaning often comes from somewhere else than the verb. Lexical semantics of the other items in the clause certainly play a role, and it seems that the overall constructional meaning of the quasi-adpositional construction is also prone to indicate a strong degree of force dynamics.

In addition to this relatively rough division of verbs into inherently force dynamic and neutral ones, a further distinction can be drawn within the class of force-dynamic verbs. This group is in fact rather heterogeneous.
Some inherently force-dynamic verbs encode a quick, rapid and sudden motion, and our data suggests that such verbs are commonly used in prepositional constructions. Consider (8a) and (8b):

(8a) Yhdysvallo +i+sta lähte+nyt moraalittomuude+n aalto
United States+PL+ELA leave+PTCP amorality+GEN wave
pyyhkäis+i läpi (Pr) maailma+n
sweep+PST.3SG through world+GEN
'The wave of amorality that started from the US swept throughout the world'

(8b) Yhtiö+n perustaja vyöry+y eteenpäin ja hoplaa!
Company+GEN founder roll+PRES.3SG onward and exclamative
singahta+a läpi (Pr) ikkuna+n
dart+PRES.3SG through window
'The founder of the company rolls onward and [exclamative]! darts through the window'

Another subgroup of inherently force-dynamic verbs is one that encodes heavy, powerful, slow and forceful, sometimes even violent motion. In our data, such verbs tend to be used in postpositional rather than prepositional expressions. Consider (9a) and (9b):

(9a) Kranaatti tunkeutu+i lähetystö+n kuudenne+n kerrokse+n
Shell penetrate+PST.3SG embassy+GEN sixth+GEN floor+GEN
seinä+n läpi (Po) ja pysähtyi+i kopiokone+n
wall+GEN through and finish+PST.3SG copy.machine+ILL
'The shell broke through the sixth floor wall of the embassy and ended up in the copying machine'

(9b) Nainen hyppäs+i vankijuna+sta tai kaiva+utu+i
Woman jump+PST.3SG prisoner.train+ELA or dig+REFL+PST.3SG
selli+n lattia+n läpi(Po)
cell+GEN floor+GEN through
'The woman jumped out from the prisoners’ train or dug her way out through the cell floor'

Perhaps surprisingly (considering the hierarchy of the constructions), the inherently force-dynamic verbs of quasi-adpositional sentences resemble the ones in prepositional sentences by involving the sense of suddenness. Examples include rynnätä ‘rush’ and syöksähdellä ‘whoosh’. In our data, the encoding of a sound emission is characteristic for FD verbs found in the quasi-adpositional constructions, e.g. sivaltaa ‘lash’, rysähtää ‘crash’, jysähtää ‘thump’; consider the following examples:

(10a) Tunnelma syöksähtel+i telta+n kato+sta läpi (Qadp)
Feeling woosh+PST.3SG tent+GEN roof+ELA through
'The feeling whooshed through the roof of the tent'

(10b) Spurs pomppas+i astekko+lta ulos Nets
Spurs bounce+PST.3SG scale+ABL out Nets
rysäht+i pohja+sta läpi (Qadp)
crash+PST.3SG bottom+ELA through
'Spurs bounced out from the scale, Nets crashed through the bottom'
Table 2 demonstrates that, among sentences displaying a strong degree of force dynamics, neutral motion verbs are encountered more often in quasi-adpositional than in pre- or postpositional ones. In spite of this, quasi-adpositional sentences nevertheless carry an overall force-dynamic meaning more often than pre- and postpositional constructions (see Table 1). Consider example (11), where the neutral motion verbs *tulla* 'come' and *mennä* 'go' are used in a construction with a strong force-dynamic meaning.

(11) *Ja kerran +kin tul+i meidü+n talo+mme kato+sta pommi läpi (Qadp) ja se men+i vielä rattia+sta+kin läpi (Qadp)*  
And once +CL come.PST.3SG our+GEN house+1PX roof+ELA bomb through and it go+PST.3SG even floor+ELA+CL through  
'And once a bomb came through the roof of our house, and it even went through the floor'

As can be seen, even with a neutral motion verb, example (11) indicates a strong force-dynamic meaning. Considering the morphosyntactic differences between the constructions, the reason might be the relative case of the complement in the quasi-adpositional construction. The differences between the complement types in each construction are discussed in the next section.

4. The landmarks in force dynamic *läpi* constructions

Various kinds of landmarks are involved in different *läpi* constructions. In some instances (especially in canonical motion events) the landmark facilitates the motion of the mover by providing a channel or a medium. In such instances it does not function as an Agonist opposing the motion of the mover. In our data, this kind of a landmark is relatively rare, especially in quasi-adpositional sentences. Recall that in Table 1, there were as few as 3 quasi-adpositional constructions designating situations that do not involve an opposition of forces and where the landmark can be conceived of as facilitating the mover’s motion. Consider (12).

(12) *Viimeinen Joensuu+sta lähte+nyt laiva men+i Saimaa+n kanava+sta läpi 27. joulukuu+ta*  
Last Joensuu+ELA go+PTCP boat go.PST.3SG Saimaa+GEN channel+ELA through 27. December+PAR  
'The last boat leaving from Joensuu went through the Saimaa channel on the 27th of December'

In addition to a channel or a medium that facilitates the motion, there are landmarks that can be considered neutral with respect to the force dynamics of the motion: they do not facilitate or hinder it. Such landmarks include paths or open areas where the trajector moves. Consider (13).

(13) *Vammala+n kaupung+in läpi (Po)*  
Vammala+GEN town+GEN through  
kulkee+e 47:n traktori+n kulkue go+PRES.3SG 47:GEN tractor+GEN parade  
'Through the town of Vammala goes a parade of 47 tractors’
In such a case, there is no significant force-dynamic effect. The town is a landmark, but it does not constitute an obstacle on the tractors’ way; in fact, the situation is the opposite, as the town is a part of the vehicles’ trajectory that enables the parade to reach its destination.

The third and the most relevant type of landmarks in our data is the one constituting an obstacle that resists the mover’s motion. Such expressions thus indicate a force-dynamic interaction between the mover (Agonist) and the landmark (Antagonist). If the mover is successful, then the landmark bends, breaks or splits apart. In most such sentences, the meaning is concrete, with actual motion and concrete entities as the trajectory and the landmark. Prototypically, such obstacle-like landmarks involve many kinds of buildings and constructions such as *talo* ‘house’, *rakennelma* ‘construction’, entities surrounding such buildings such as *aita* ‘fence’, *este* ‘barrier’, or segments of buildings such as *latti* ‘floor’, *seinä* ‘wall’, *katto* ‘roof’. Such obstacles occur as landmarks in all three constructions:

(14a) *Pikku-Batmani+PL drive+PST+3PL car+ALL through wall+GEN Lahti+INE*  
'Mini-Batmans drove a car through a wall in Lahti’

(14b) *Paina paistomittari +PL drive+PST+3PL bag+GEN through ham+ILL*  
'Push the baking thermometer through the bag into the ham’

(14c) *Frenckelli+GEN office+PL+INE wait+PASS when cycle+PL drone+PRES.3PL wall+ELA through*  
'In Frenckell’s office people wait when cycles drone through the wall’

Channel- or medium-like landmarks can basically be seen on the borderline between neutral landmarks and obstacle-like ones, because they provide a route, channel or a hole that leads through an obstacle. The mover is thus capable of traversing the path without breaking the obstacle. However, not any kind of a channel or a hole in the landmark necessarily constitutes a medium: they may also be too narrow to benefit the mover, and can then be seen as obstacles the mover must overcome in order to traverse the path (as in *push oneself through a hole*). As seen above, channel-like landmarks are rare in the constructions studied here, and in contexts involving a strong FD they are not used at all.

Examples that designate sport events illustrate well how hole-like or channel-like landmarks may constitute obstacles. In general, sports events are predisposed to involve a strong degree of FD, because a quick, rapid, or sudden motion, as well as the exertion of a force, sometimes even violent force, are typical for them. It is no wonder that quasi-adpositional constructions seem to be especially frequent in the context of sports-news, where most of the verbs used are FD verbs (*karata* ‘flee, escape’, *murtautua* ‘break [through]’, *pamella* ‘push’, *taistella* ‘fight’). The landmarks contribute an obstacle, which the mover needs to overcome by applying a force. In the sports-examples of our data we can distinguish between two different kinds of obstacle-like landmarks: narrow and channel-like ones, (15a and 15b), and border-like ones (15c).
In examples (15a) and (15b) the presence of an Agonist and an Antagonist is very obvious. The function of the hands of the players of the opposing team is to block the ball hit by the other team. In (15c) the fast passing of the line is necessary for the player to get close enough to score. Interestingly, in cases where the genitive complement would be possible as an alternative to the elative, it would sometimes express a smoother movement than the one indicated by the QAdp construction. In many of the sports examples, however, the use of the genitive instead of the elative would be awkward because, on the one hand, it might decrease the meaning of force dynamics that is such a crucial part of these events, and, on the other hand, the genitive might suggest a more literal interpretation of the situation (e.g., in 15a ‘through the hands’, as if puncturing the hands).

The same phenomenon can be observed in other examples of our data where the genitive would bring about a more literal and therefore inadequate interpretation of the situation. In these sentences the FD is less obvious than in the sports examples, because it does not emerge from the meaning of the verb but from the elative case ending and the overall nature of the situation.

(16a) Hän +en mukaa+nsa henkivartija+t muun muassa
He+GEN according+3PX security.guard+PL among others
aja+vat ylinopeu+tta ja läpi (QAdp)
drive+PRS.3SG overspeed+PAR and through
risteys+ten punaisi+sta valoi+sta
intersection+GEN red+ELA light+ELA

‘In his opinion the security guards drive too fast and through the red lights of the intersections’

(16b) Nestehuka+n takia jo+i+n runsaasti neste+tä [--–]
Dehydration+GEN due.to drink+PST.1SG a lot liquid+PAR
Iltaottelu+j+en jälkeen puntari näytt+i 3,5 kilo+a
Evening.match+PL+GEN after scale show+PST.3SG 3.5 kg+PAR
liika+a sarja+an e+nkä pääs+syt vaa’a+sta läpi (QAdp)
excess+PAR division+ILL NEG+3SG pass+PTCP scale+ELA through
'Because of the dehydration I drank lots of liquids. After the matches in the evening the steelyard showed 3.5kg more than allowed in the division, and I didn’t pass through the scales'

(16c) Kokemäki+läinen Juha Korkeaoja menett+i
Kokemäki+inhabitant NAME loose+PST.3.SG
eduskuntavaale+i+ssa neljä+n vuode+n takaise+sta
parliamentary.election+PL+INE four+GEN year+GEN back+ELA
tulokse+sta+an yli 3300 ään+tä, vaikka
result+ELA+3PX more 3300 vote+PAR although
men+i+kin kirkkaasti läpi (Qadp) Satakunta+sta
go+PST.3SG+CL brightly through Satakunta+ELA

'Compared to the results four years ago, Juha Korkeaoja from Kokemäki lost more than 3300 votes in the parliamentary election, although he passed brightly in the region of Satakunta'

Note that example (16a) is in fact ambiguous between the reading given in the translation (‘the red lights of the intersections’ — the genitive form modifies the elative phrase), and a reading where the genitive ‘intersections’ is itself the complement of läpi, which in this case is a preposition. In the last-mentioned reading the example is in fact a blend of two of the constructions studied here: on the one hand, läpi is a preposition with a genitive complement, and, on the other hand, there is an elative-marked semi-complement ‘red lights’. This reading, which is quite as feasible as the one suggested by the translation, illustrates the flexibility of the quasi-adpositional construction, as well as the semantic division of labor between the complements: it is the elative that indicates an obstacle, whereas the genitive refers to a more extensive and medium-like landmark.

In the two latter examples the use of genitive might result in a more literal interpretation than the elative. If the elative were replaced by the genitive in (16b), the meaning might be that the sportsman had trouble in physically passing through the scales, possibly even by breaking them, and (16c) would not be about getting elected to the parliament but about concretely passing through the region of Satakunta (e.g. by walking). The usage of the quasi-adposition thus seems to support a more abstract interpretation, and, quite interestingly, to be able to change the conceived nature of the landmarks e.g. from a horizontally positioned and concrete kind into a vertically positioned and obstacle-like abstract kind.

There are also obstacle-like landmarks that are not concrete entities but abstract ones. These include procedures, tests, and other kinds of events that are conceived as abstract obstacles. In the relevant expressions, the point is whether the mover succeeds or fails in passing the obstacle. In our data, these kinds of situations are particularly common in quasi-adpositional constructions. Typical abstract obstacles include exams and tests where the person’s knowledge and skills are tested, and passing or failing the test depends on how well one has prepared oneself for it. For instance driving tests, school assessments and other kinds of trials occur as landmarks of these expressions. A similar meaning is expressed in the contexts of sport events, when talking about clearing a qualification and by that making one’s way to the final competition.
Another frequent situation type indicated by the quasi-adpositional construction is a situation where the result does not depend so much on the person’s knowledge or skills, but on luck. The situation described in such sentences might sometimes be risky or even illegal, such as bringing drugs through a security check or getting over a border without permission. It is common for such situation-like obstacles that there is a possibility of failure, in many cases with serious consequences. When one fails to pass a driving test, s/he will not get a driving license; when an athlete does not clear the qualification, s/he will not be able to get to the final and to compete for the medals. When one takes a risk and tries to bring illegal items over the border but fails in doing so, the consequences are serious. See the examples in (17).

(17a) Oppilaa+t ova+t pääs+see+t ajokokee+sta läpi (Qadp)  
Student+PL be+PRES.3PL get+PTCP+PL driving.test+ELA through  
[The] students have passed the driving test'

(17b) Tokio+n MM-kiso+i+ssa 1991 toistu+i  
Tokyo+GEN world.championship+PL+INE 1991 repeat+PST.3SG  
Soul+i+kohtalo: Lillak ei pääs+syt karsinna+sta läpi (Qadp)  
Seoul+GEN destiny NAME NEG get+PTCP qualification+ELA through  
'In the world championships in Tokyo 1991, destiny repeated itself: Lillak didn’t pass the qualification'

(17c) Papere+i+den avu+lla ol+i tarkoitus pääs+tä  
Paper+PL +GEN help+ADE be+PST.3SG purpose get+INF  
turvatarkastuks+e+sta ja tulli+sta läpi (Qadp)  
security.check+PL+ELA and customs+ELA through  
'By way of the papers the aim was to get through the security check and the customs'

As pointed out, these kinds of obstacles were common in quasi-adpositional sentences in our data. A Google search however shows that such a meaning can be expressed by postpositions as well. Consider the following examples (from the Internet):

(18a) Pääse+n+kö kemia+n kokee+n läpi (Po)  
Pass+PRS.1SG+Q chemistry+GEN test+GEN through  
'Will I pass the chemistry test?’ (Internet)

(18b) jei pääs+i+n mopokortti kokee+n läpi (Po)  
Yeah pass+PST+SG1 moped.licence test+GEN through  
'Yeah, I passed the moped license test!’ (Internet)

It has to be emphasized, however, that occurrences with postpositions are clearly in minority. A Google search (27.2.2012) gave the results below. Although one has to be very careful in drawing any conclusions about frequencies based on numbers of Google hits (and keeping in mind that part of the hits are not relevant for our study) the numbers in Table 3 show at least tendencies regarding the preference of postpositional vs. quasi-adpositional constructions of the given abstract landmarks.

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2 The need of luck can be coded also in the semantics of the verb: e.g. examples with the verbs livaha ‘slink, slip away’, and salakuljettaa ‘smuggle’ were found in the Internet.
Abstract obstacle-like landmarks and their preferences towards QAdp and Po constructions — a Google search (27.2.2012)

<table>
<thead>
<tr>
<th>Language</th>
<th>ELA</th>
<th>GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>koe 'exam'</td>
<td>16200</td>
<td>9690</td>
</tr>
<tr>
<td>tentti 'exam'</td>
<td>6140</td>
<td>2000</td>
</tr>
<tr>
<td>karsinta 'qualification'</td>
<td>2310</td>
<td>536</td>
</tr>
<tr>
<td>tarkastus 'inspection'</td>
<td>4350</td>
<td>2460</td>
</tr>
<tr>
<td>katsastus 'vehicle inspection'</td>
<td>69400</td>
<td>1110</td>
</tr>
<tr>
<td>vaalipiiri 'electoral district'</td>
<td>789</td>
<td>6</td>
</tr>
</tbody>
</table>

With most of the landmarks listed above, the usage of the QAdp construction is thus at least twice as frequent as the usage of the postpositional genitive + läpi construction. The clearest difference appears in the case of vehicle inspection. Here the elative (QAdp) construction katsastuksesta läpi 'through vehicle-inspection' seems to be over 60 times more frequent than the postpositional construction. This shows that the event of vehicle inspection is a very prototypical one to be expressed by the quasi-adpositional construction: it involves the need of luck and the possibility of failing.

Google examples also show that the QAdp construction often appears in negative contexts (19). Especially in these cases the obstacle-like nature of the landmark (that cannot be overcome in the situation) becomes foregrounded — in terms of Force Dynamics, the Antagonist "wins the struggle".

(19) Ei men+nyt auto katsastukse+sta läpi (Qadp) Not go+PTCP car vehicle-inspection+ELA through 'The car did not pass the vehicle-inspection'

Furthermore, quasi-adpositional constructions are used in contexts where the occurrence of the event was unexpected or the event did not happen in the expected or conventional way. In the examples below, the purpose of the landmark would have been to hinder the mover, and the fact that the mover nevertheless passes the landmark means a failure for the Antagonist. Somehow the overall situation contributes to this interpretation, because, knowing the context, we might have expected a different outcome. Thus, in (20a), the grains normally should not have got through the thresher, as the role of the thresher is to harvest the grain and to hinder it from falling outside the machine; in (20b) the man should not have succeeded in passing the line of defense; and in (20c) the expected role of the censorship would have been to ban movies that did not fit the norms of those times. The verb saattaa 'might' in this example suggests that the movie did break some norms, which should have prevented its acceptance by the censorship. However, since the breaking of the norms was done in a very sophisticated way, the censorship did not notice it and the movie was released through the abstract obstacle of the censorship.

(20a) Kynnös+ten vihreys johtu+u Vei+u mukaan Plowed land+GEN greenness result+PRS.3SG NAME+GEN according muun muassa siltä, että viime sado+n among others from that that last harvest+GEN
According to Veisu, the greenness of the plowed land results, among other things, from the fact that in the last harvest the grains were light, and more corn than usually got through the thresher.

We had five men down there, but Kerho’s man was still let through the line of defense, Läntinen wondered.

In those times the movie might have passed even the Franco censorship.

Summing up, the situations indicated by the quasi-adpositional expressions often involve all three of the above-mentioned semantic facets:

1. The obstacle-like landmark is difficult to pass, and more force is needed than in canonical motion.
2. The situation involves the possibility of failing, and it is not certain that the mover/actor will succeed in overcoming it. The breaking of the obstacle designated by the complement is not purely dependent on the skills or knowledge of the mover but also on luck.
3. The obstacle is not expected to be overcome by the mover — the overcoming of the obstacle is sometimes due to the lack of attention (by the Antagonist), a failure, or bad working of a system or a device.

The following example (21) illustrates this well. The woman with illegal cartridge tries to get through the security check at the airport. This situation involves the possibility of failing and getting caught. Passing through without getting caught requires luck; it is only in the case that the security gate does not work properly or the security guards are not alert that she may succeed.

Hän tuli turvatarkastukseen ja yritti kävelä
She came security.check and try walk
käsilaukkuun ja pieni olkalaukkuin kanssa suoraan
handbag and small shoulder.bag with straight
henkilömagneettiportista läpi
person.magnetic.gate through
Kun hän meni portin läpi, laite häälytti, jolloin
when she go gate through device alarm when

(21)
'She came through the security check and tried to walk with her handbag and her small shoulder bag straight through the gate, Karhuviita says. When she went through the gate, the alarm went on, and the woman was asked to go back. She took her money and keys out of her pocket. But the gate still alarmed and only then did they find the cartridges in her left pocket.'

Conclusions

In this paper we have analyzed three near-synonymous adpositional constructions with the path adposition läpi ‘through’, with respect to Force Dynamics. The comparison of prepositional, postpositional and quasi-adpositional läpi constructions demonstrates that the degree of Force Dynamics indeed varies between the constructions — quasi-adpositional sentences show a strong force dynamic effect in most cases, while only a third of prepositional usages of läpi expressed a force-dynamic configuration. Postpositional sentences are situated between these two, designating a force-dynamic configuration in about half of the instances.

We have analyzed the type of the verb and the nature of different kinds of landmarks that occur in these constructions. We have shown that the verb does indeed contribute to the reading of force dynamics. Especially prepositional and postpositional constructions prefer inherently force-dynamic verbs in order to express a force-dynamic meaning. The quasi-adpositional construction is able to express force-dynamic meanings even with other kinds of motion verbs. There are also more detailed differences between the verbs — prepositional sentences favor verbs that encode rapid, sudden and abrupt motion, whereas postpositional sentences tend to use verbs of slow, forceful and powerful motion. The motion verbs used in quasi-adpositional sentences often describe the emission of a sound that is caused by the motion.

Another feature that is crucial for force dynamics is the landmark. In all three constructions, the most typical landmarks are physical obstacles that block or hinder the mover’s intended motion. While landmarks of prepositional and postpositional constructions can be overcome more easily, quasi-adpositional constructions indicate that the overcoming of the landmark requires more force. Landmarks were divided into three groups: obstacle-like, medium-like and neutral landmarks. In quasi-adpositional constructions obstacle-like landmarks were most common. These could be either concrete entities like walls, doors, borders etc., or more abstract ones (exams, tests, vehicle-inspection etc.). Abstract landmarks encode situations that include the possibility failing and where overcoming the obstacle does not necessarily depend on the skills of the actor/mover but also on luck. Quasi-adpositional constructions are also used in cases where the situation may include the meaning of ‘lack of attention’: from the perspective of the
Antagonist, the obstacle should not have been overcome by the mover — the overcoming of the obstacle is due to the lack of attention of the antagonist, or to a failure or bad working of a device.

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Abbreviations


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О ВАРЬИРОВАНИИ СТЕПЕНИ СИЛОВОГО ВЗАИМОДЕЙСТВИЯ В АДПОЗИЦИОННЫХ КОНСТРУКЦИЯХ С ПРИЛОГОМ läpi В ФИНСКОМ ЯЗЫКЕ

Понятие динамики силового взаимодействия (Talmy 1985; 2000) относится к ситуации каузации, в которой представлены противоборствующие силы: как правило, один из участников пытается тем или иным образом воздействовать на ситуацию, в то время как второй сопротивляется этому воздействию. Ситуации различаются степенью проявляющегося в них силового взаимодействия. В работе выясняется, могут ли почти синонимичные грамматические конструкции характеризоваться разным силовым взаимодействием. Мы рассматриваем три финских адпозиционных конструкции с прилогом läpi ‘через’ и сравниваем степень силового взаимодействия в этих конструкциях. Прилог läpi, как и все финские прилаги со значением траектории, является адпозицией, т. е. может использоваться как предлог, и как послелог. Кроме того, он может использоваться в т. н. квазиадпозиционной конструкции. В этой конструкции, похожей на адпозиционную, (полу)аргумент прилога стоит в локативном падеже и в отличие от стандартных аргументов прилогов может быть отделен от прилога вставными элементами. В грубом приближении, прилог läpi во всех описанных случаях имеет значение ‘через’. Тем не менее, исследование случаев реального употребления подтверждает интуицию носителя языка в следующем: наиболее высокая степень силового взаимодействия соответствует квазиадпозиционной конструкции, за ней следует послеложная конструкция, тогда как предложная конструкция характеризуется самым слабым силовым взаимодействием. Это проявляется в глаголах, так и в аргументах, используемых в этих конструкциях: иерархия предлог < послелог < квазиадпозиционный глагол отражает 1) увеличение (слева направо) доли глаголов, обозначающих приложение усилия для преодоления противодействующей силы (таких как ‘продвигаться’, ‘прорываться’, ‘проникать’), и 2) увеличение доли аргументов, обозначающих препятствие, по отношению к доле аргументов, обозначающих среду. Таким образом, наше исследование показывает, что динамика сил является важным фактором, который может разграничить почти синонимичные конструкции.

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