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## **Elliptical phenomena in Finnish Sign Language**

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### **1. Introduction**

This chapter discusses ellipsis in Finnish Sign Language (FinSL). First, in order to provide a necessary background for the discussion, an overview is given of both the basic grammar of FinSL (Section 2) and the larger role ellipsis plays in FinSL (Section 3). After this (Sections 4–6), several elliptical phenomena discussed in this book (nominal ellipses, conjunction reduction, VP-ellipsis, sluicing, gapping, stripping, and fragment answers) are introduced and described for FinSL, together with other elision phenomena (e.g. argument ellipsis, also known as pro drop). Not all the phenomena can be discussed in equal depth, nor can all the phenomena presented in the book be addressed, because research into ellipsis in sign languages, FinSL included, is still in its early stages (e.g. Cecchetto et al. 2015; Jantunen 2013; the majority of the work carried out so far has dealt almost exclusively with argument ellipsis, see Bahan et al. 2000; Jantunen 2008; Koulidobrova 2012; Wulf et al. 2002). Finally, the chapter takes a broader view of ellipsis once again and contemplates the role that gesture and mime have in the elliptical phenomena found in signed languages, and perhaps also in spoken languages (Section 7).

## **2. Background on FinSL grammar**

The grammar of FinSL, and consequently ellipsis in the language too, have been investigated from the ontological premises of the functional (communicative–cognitive) approach outlined, for example, in Van Valin and LaPolla (1997).

Methodologically, the research has been based on the general conventions of Basic Linguistic Theory (Dixon 2010; Dryer 2006; Jantunen 2009), a framework which is widely used by, for example, field linguists, and which emphasizes informal description over formal explanation. On the other hand, research into FinSL grammar has also been influenced by one of the guiding assumptions of modern functional typology, that is, that individual languages should be described as much as possible in their own terms with locally defined categories (e.g. Haspelmath 2007a, 2010; Jantunen 2009).

### **2.1 Major sign classes**

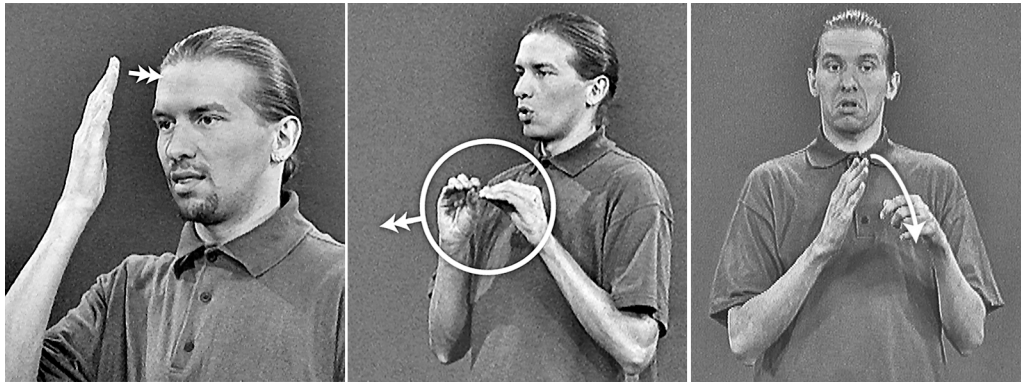
The word-like units – signs – of FinSL, as of all sign languages, vary in the degree to which their form–meaning connection is fixed (e.g. Jantunen 2010; Johnston and Schembri 1999; Liddell 2003). In many signs this connection is highly conventionalized and categorical, a relatively stable form always conveying a relatively unambiguous meaning. However, in some signs the form–meaning connection is based on looser principles, either the form (or some aspect of it) or the meaning, or both, displaying a relatively high degree of unconventionality and gradience. On the basis of this difference, FinSL signs have been distributed on a sign-type continuum of which (conventional, categorical, and often arbitrary)

monomorphemic lexemes form one end and (unconventional, gradient, and typically highly iconic) pantomimic gestures the other (for more on the underlying semiotic view on gesture, see Okrent 2002).

Apart from clear instances of gesture and mime, signs can also be assigned into sign classes (cf. word classes, parts of speech). In FinSL, the major sign classes are the nominal and the verbal (Jantunen 2010; Rissanen 1985, 1998). These categories have been defined by semantic and grammatical criteria such as reference (nominals refer to entities, verbals to temporally manifested dimensions of events), the marking of aspect (the markers of aspect and Aktionsart distinctions attach only to verbals), and distribution in clauses (the position of verbals in clauses is more constrained than that of nominals, see 2.2). The categories of nominal and verbal are not the same as the categories of noun and verb, for various reasons. First, unlike traditionally defined nouns and verbs, nominals and verbals in FinSL also include signs which are closer to the gesture-end of the sign-type continuum. Examples of such nominal signs – that is, nominal signs with a gestural component – are the various pointing signs referring to entities, which in other frameworks have often been analyzed as pronouns but in FinSL research are treated as a subclass of nominals. Examples of verbal signs with a gestural component, on the other hand, are the so-called Type 2 verbals, which can be meaningfully directed in space, as well as the formationally and semantically complex depicting signs, which in the present framework are called Type 3 verbals (for both types of verbals, see below). Second, unlike traditionally defined nouns and verbs, the definitions of FinSL nominals and verbals also cover signs that denote property. Consequently, as characterizing signs are analyzed according to their semantics and grammatical behavior as either marginal nominals or marginal verbals, there is no need for a third major sign class, adjectives, in FinSL (Jantunen 2010).

The typology of verbal signs is relevant in a discussion of ellipsis in FinSL. In general, FinSL verbals are analyzed as belonging to one of three main subcategories: Type 1, Type 2, and Type 3 verbals (Jantunen 2008, 2010, 2013; for other types of classifications, see Engberg-Pedersen 1993; Liddell 2003; Padden 1990; Rissanen 1998). Type 1 verbals are formationally the most fixed type of FinSL verbals, with a relatively straightforward form–meaning connection. Type 2 and Type 3 verbals, on the other hand, are groups of signs which include gradient features (i.e. a gestural component) as part of their structure. In Type 2 verbals (as, for example, in pointings), the gestural component is manifested through the directionality of the movement of the hand: in order to understand the meaning of these signs, the addressee must make a semantic association between the morphological content of the sign and the location toward which the sign is directed (see Liddell 2003). In Type 3 verbals, the gestural component refers to the analogous and gradient properties inherently present in the placement, orientation and movement parameters of the sign structure. Together these features enable Type 3 verbals to iconically depict various events that have movement taking place in different topographic locations; Type 3 verbals also contain a nominal classifier morpheme (the handshape), which refers to the entities present in the event. Examples of the three verbal types are given in Fig. 1.

{Fig. 1 approximately here.}



**Fig. 1.** FinSL verbals with the meanings (from left to right) 'know' (the finger pads of the open hand touch the forehead twice), 'teach [someone in front of the signer]' (the two hands move forward twice in the shown configuration), and 'an oblong vehicle (e.g. a bicycle) drives forward over a mound-like location' (the dominant hand articulates an arc-shaped movement over the stationary non-dominant hand). The verbals represent Type 1, Type 2, and Type 3, respectively (see also Fig. 2). Images from *Suomalaisen viittomakielen perussanakirja* (1998).

## 2.2 Basic syntax

Both nominals and verbals can function as predicates in FinSL clauses (Jantunen 2007, 2008). Simple declarative (e.g. identificational, characterizing) clauses with a nominal predicate have the non-copular structure nominal phrase followed by another nominal phrase which expresses the main predication (Jantunen 2007). Declarative clauses with a semantically one or two-place verbal predicate (V) display more variation in their structure: While intransitive clauses follow the SV pattern (S=single participant, prototypically the agent), transitive clauses may be ordered either according to the AVP pattern or the APV pattern (A=active participant, prototypically the agent; P=passive participant, prototypically the patient). The factors affecting the

choice of the order are primarily textual (e.g. thematic continuity) and semantic (e.g. avoidance of ambiguity), the AVP order being the more common of the two (Jantunen 2008).

The predicates of the AVP and APV transitive clauses discussed above are either Type 1 or Type 2 verbals. Type 3 verbals form a syntactically separate class as they are considered to be full, well formed clauses on their own (Jantunen 2008). The analysis derives on the one hand from the fact that the classifier handshake or handshakes included in these verbals can be analyzed as nominal core arguments of the predicate, and on the other from the fact that the meaning of these verbals is typically very clause-like, that is, it covers the whole event. Due to the semantics of classifiers, however, there is often some vagueness in the meaning of such verbals/clauses. For this reason, Type 3 verbals may be preceded by one or two topics, which are nominal phrases that function to set an interpretative framework for the main predication (here: the Type 3 verbal). In such structures, the Type 3 verbal is always sentence final (Jantunen 2008). Due to their articulatorily bound status as well formed clauses, Type 3 verbals are not a direct target of the elliptical phenomena discussed in this chapter.

In general, the topic-comment structure of FinSL can be used to encode all types of events (e.g. identificational, intransitive, transitive etc.) with all kinds of signs. The topic of the topic-comment structure is a clause-external left-detached nominal phrase, whose function is to set a spatial, temporal, or an individual framework for the subsequent comment. Topics in FinSL are marked syntactically/prosodically by their sentence initial position, topic-final pause, and a layered non-manual feature, "eyes widened and eyebrows raised". It is also possible

to mark topics morphologically, that is, with a topic-final index finger pointing (Jantunen 2009).

Adding a topic in front of the clause makes the structure as a whole more complex. Another way to create complex structures is to bind together two (or more) clauses. Structurally, the resulting complex sentences are traditionally analyzed as being constructed either through coordination or through subordination. To date, only clausal coordination has been investigated in FinSL (Jantunen 2015, 2016). Concerning its three main types (Haspelmath 2007b), conjunctive coordination ('and') in FinSL is primarily asyndetic (i.e. it relies on juxtaposition), whereas adversative ('but') and disjunctive ('or') coordinations are primarily expressed syndetically (i.e. they rely on attaching coordinators, the signs BUT and OR, respectively, to the second coordinand). Reverse options for all three types are also possible: that is, conjunctive coordination can be expressed syndetically (the signs ALSO and PLUS attaching to the second coordinand function as coordinators) and adversative and disjunctive coordinations can be expressed asyndetically (with the appropriate prosody and other non-manual behavior, see Section 6.2). Because of their relatively infrequent use, the reverse forms are treated in FinSL research as marked.

In constructing central functional sentence types other than declarative sentences – that is, negative and interrogative sentences – FinSL employs manual signs together with specific non-manual operators (Rissanen 1985; Savolainen 2006). The basic negative operator in FinSL is a headshake. The scope of the headshake can be the whole sentence or a shorter sequence. However, no matter where the headshake begins, it tends to last to the end of the sentence. The interrogative operator in FinSL has two main forms, one for yes/no questions and the other for wh-questions. In the main yes/no question marker, the head tilts forward and the eyebrows are raised,

while in the main wh-question marker the forward head tilt is accompanied with furrowed eyebrows. The scope of the non-manual interrogative operator is conditioned similarly to that of the negative operator.

### **2.3 Constructed action**

When situated in the wider cross-linguistic context, the basic grammar of FinSL, and especially its syntax, shares many of the characteristics found in the world's spoken languages. However, this is not to say that the visual-gestural channel of FinSL – as of all sign languages – does not affect the manifestation of grammatical phenomena: there definitely are modality differences. In addition to signs with gestural components, another salient example of these is the frequent use of constructed action, that is, of gestural enactment (mime) in the creation of linguistic messages.

The use of constructed action is not exclusively limited to the domain of sign languages (e.g. Ladewig 2014) but – as, for example, Liddell (2003), Lukasczyk (2008) and Ferrara and Johnston (2014) have shown – sign languages employ it extensively and very similarly on various grammatical levels. In FinSL, constructed action is almost obligatorily linked to the use of Type 2 and Type 3 verbals: when these verbals are used in signing, the signer typically also shows via "acting" some aspects of the location, behavior, or motion of the entity participating in the event. Another domain where constructed action is very saliently employed in FinSL is direct speech: to directly report the words, actions or thoughts of others, signers literally transform their bodily behavior via enactment into that of those others. Moreover, together with other types of use of space (e.g. pointing to spatial locations with the index finger and articulating signs in different spatial locations), constructed



action is also an important means to indicate and increase discourse cohesion in FinSL and to maintain discourse reference.

On a general level, Ferrara and Johnston (2014) have shown that constructed action combines with all types of signs and clauses to form composite expressions that affect the construction of meaning in sign languages. They have also argued – in line with claims made on FinSL (Jantunen 2008, 2013) – that constructed action can also influence the surrounding grammatical structure. This observation is relevant for the discussion of ellipsis in FinSL and we will return to it in Sections 4.3 and 7.

### **3. On the general role of elliptical phenomena in FinSL**

Let us now turn to elliptical phenomena, and first to their overall role in FinSL grammar. Previous studies (Ala-Sippola 2012; Jantunen 2008, 2013) have demonstrated that, in terms of their preferred argument structure, the clauses discussed in Section 2 are frequently realized in a way that can be considered to be incomplete. For example, Ala-Sippola (2012) found that 50 percent of the clauses in her data (52 instances out of a total of 105 clauses) occurred without the expected S/A argument. There was thus a high incidence of argument ellipsis in Ala-Sippola's data, but this is fully in line with the numbers presented for other sign languages: for example, in their quantitative study on pro drop, Wulf et al. (2002) found that American Sign Language expressed only 35 percent of its subject-like core arguments belonging to what they defined as the class of pronoun signs (see also Bahan et al. 2000; Koulidobrova 2012). Similar observations about the frequency of argument ellipsis have also been made regarding Danish Sign Language (Engberg-Pedersen 2002) and Australian Sign Language (Johnston and Schembri 2007).

New corpus data processed for the purpose of this chapter further demonstrates that the elision of core arguments is indeed a frequent phenomenon in FinSL. In a sample of 712 structurally annotated intransitive (n=331) and transitive clauses (n=381) containing a Type 1 or Type 2 verbal predicate, collected from 10 FinSL signers telling a story about a cartoon, a total of 553 clauses –78 percent – were produced without their S/A and/or P arguments. For intransitive clauses, the share of S argument ellipsis was 65 percent, that is, S was left unexpressed in 215 clausal instances. The corresponding figures for transitive clauses are given in Table 1.

**Table 1.** Ellipsis of A and P core arguments in the sample of 381 transitive clauses containing a Type 1 or Type 2 verbal predicate.

Type of ellipsis	N	%
A argument ellipsis	299	79%
P argument ellipsis	150	39%
Ellipsis of either A or P argument	323	85%
Ellipsis of both A and P arguments	126	33%

As can be seen from Table 1, argument ellipsis in transitive clauses of FinSL affects not only the A argument but also the P argument. Another important observation is that only 15 percent of the transitive clauses were realized with a syntactically full structure (see the line "ellipsis of either A or P argument"). It is also worth noting that 33 percent of the transitive clauses consisted only of a two-place verbal predicate without any nominal elements.

On the basis of the high frequency of argument ellipsis, for one thing, Jantunen (2013) has claimed that FinSL is a highly discourse-oriented language (claims of this type have also been presented for other sign languages at least since Friedman 1976, a recent overview being included in Kimmelman 2014). Theoretically, Jantunen's argument is grounded in McShane's (2005) cross-linguistic work on ellipsis. According to McShane, discourse-oriented languages permit more elliptical phenomena than non-discourse-oriented languages, elide especially thematic elements, and use elliptical phenomena as central means to support the discourse structure. In other words, in discourse-oriented languages the clause is not a unit that is highly governed syntactically, (con)textual and thematic relations being more important than grammatical ones in the creation and interpretation of meanings.

The discussion so far has shown that, at least in terms of eliding clausal core arguments, ellipsis is highly permitted in FinSL: when contrasted to the ellipsis rates of non-discourse-oriented languages such as Spanish, in which the ellipsis rate has been evaluated, on the basis of speech corpora, to be 7.5 percent (Alcántara and Bertomeu 2005), it is evident that FinSL fulfils the first of McShane's criterion. With regard to the two other criteria, however, some further explication is needed. Let us first consider the claim that FinSL elides especially the thematic elements.

The example in (1) shows an excerpt from a narrative in which the signer is talking about a journey he made abroad. (Note that in the examples, the signs are transcribed with upper-case glosses presenting the rough meaning of the signs; glosses may include additional information specifying, for example, the approximate location at which the sign is produced/directed; and the apostrophe marks a syntactic-prosodic break and the backslash a pause.) The story begins in line 1 with a pragmatic discourse particle marking the beginning of the narrative. In line 2, the signer

produces a complex sentence with two conjunctively coordinated intransitive clauses. The clause in line 3 is a transitive one and it is followed in line 4 by an embedded nominal locative clause explicating the setting in which the meeting referred to in line 3 took place. In line 5 the signer repeats the sentence in line 3 and goes on with the story.

(1) *The signer is talking about his journey abroad:*

line 1: SUCH-THINGS /

line 2: ME FLY-THERE:left ' STAY-THERE:left /

line 3: MEET THERE:left /

line 4: DALLAS AIRPORT THERE:left /

line 5: MEET...

'So, I flew there and stayed there. I met there, there at Dallas airport... I met there (the person responsible for international affairs.)'

(adapted from Jantunen 2013: 320)

In (1), there are altogether four verbal-centered clauses, in lines 2, 3, and 5. However, only one of these clauses, the very first intransitive clause in line 2, is realized as syntactically full, the other three being incomplete in terms of their S or A arguments. Syntactically, the missing elements have different roles (i.e. they are either S or A) but thematically they all represent the same thing: the discourse theme 'me', overtly expressed only in the first clause with the nominal pointing sign ME. This type of thematically based argument ellipsis is observed widely in FinSL narratives and is not found in non-discourse-oriented languages.

The third one of McShane's (2005) defining criteria of discourse orientation – that ellipsis is not merely an optional grammatical process in discourse-oriented languages but an important means of supporting the discourse structure – can also be exemplified for FinSL with the help of example (1). An important dimension in the structuring of discourse is cohesion. When talking about increasing the cohesion of texts or discourse, people often expect to see overt markers such as particular morphemes, a certain word order, or a specific choice of words. However, as Hendriks and Spenader (2005) point out, not saying something aloud often increases cohesion to at least the same extent: for example, by leaving the S argument of the second clause unexpressed in line 2 of example (1) the second clause becomes automatically connected to the first clause, because the overtly mentioned theme in the first clause has to be used to retrieve the referent of the missing element. When the non-expression of the theme is repeated over a longer stretch of discourse (in lines 3 and 5), the consequent effect – combined with the co-referential use of space (see Section 2.3) – is that this stretch of discourse also becomes thematically a cohesive whole. This is precisely how ellipsis works in FinSL.

#### **4. Elliptical phenomena involving nominal phrases in FinSL**

This section focuses on elliptical phenomena that involve syntactic constituents headed by nominal signs, that is, nominal phrases. The ellipsis of core arguments, discussed on a general level in the previous section (3), was already one example of such a phenomenon: in the prototypical case, core arguments are realized as nominal phrases, yet they can also be realized as clauses. Because of the frequency and importance of argument ellipsis in FinSL and in other sign languages, the

phenomenon will also be further discussed in this section when addressing the contexts that encourage the ellipsis of whole nominal phrases (see Sections 4.2 and 4.3). However, before turning to these, this section (4.1) first describes for FinSL some elliptical phenomena that target elements inside the nominal phrase.

#### 4.1 Nominal phrase-internal ellipsis

The ellipsis of elements inside nominal phrases – corresponding to the phenomena of nominal ellipses discussed elsewhere in this book – have not been thoroughly investigated in FinSL. However, it is known that, within nominal phrases, simple lexical nominals may be left unexpressed in complex sentences if they are preceded by a numerical or a characterizing nominal sign within the nominal phrase. Elicited examples of such instances are given in (2); square brackets indicate nominal phrases and the symbol "Ø" the site of ellipsis.

- (2) a. BOY BUY [TWO BOOK] ' GIRL BUY [THREE Ø]  
'The boy bought two books, the girl bought three.'
- b. BOY HAVE [RED FLOWER] ' GIRL HAVE [BLUE Ø]  
'The boy has a red flower, the girl has a blue (one).'

In (2), the nominal phrases functioning as P arguments in the second clause are manifested as syntactically incomplete, the referents of the missing (a) numerical and (b) characterizing signs being retrieved on the basis of the information expressed in the corresponding nominal phrases of the first clause. Concerning both examples, it is worth noting that the verbal signs BUY and HAVE in the second clauses – as well as

the sign HAVE in the first clause of (2b) – are optional, that is, they could also be omitted.

Many languages allow the head of the NP to be elided in the second clause if the head is preceded by a possessive pronoun. A corresponding process is possible also in FinSL, as demonstrated by the complex identificational sentence in (3) with its several pointing signs referencing object and person.

(3) *There are two glasses on the table:*

THAT:left [MY-OWN GLASS] / THAT:right [YOUR-OWN Ø]

'That (on the left) is my glass and that (on the right) is yours.'

In (3), the sign THAT is an index finger pointing which, in the first identificational clause, is directed at the glass located on the signer's left and in the second at the glass located on the right. The signs MY-OWN and YOUR-OWN also involve gestural pointing: they are produced with an open palm moving in the first case toward the signer's chest and in the second toward a spot in front of the signer. Again, it is worth noting that the head nominal GLASS can also easily be left out of the predicating nominal phrase of the first clause: all the meaning can easily be constructed on the basis of the directionality of the remaining signs and the situational context.

#### **4.2 Ellipsis of nominal phrases in coordinated two-clause structures**

A syntactic context that strongly attracts the ellipsis of full NPs in the world's languages is the two-clause structure of conjunctive coordination. As seen in the

previous examples (2 and 3), this context also allows the ellipsis of nominal phrases in FinSL. In addition to internal elements in the nominal phrase, the target of the ellipsis in this domain in FinSL is in many cases the whole S/A argument of the second clause, which makes the process similar to the one discussed in this book under the name of conjunction reduction. The phenomenon is exemplified from this perspective in (4); transcripts with lines above the glosses indicate various non-manual behaviors and their scope.

(4) a. *The signer is telling a story about a snowman:*

constructed action

SNOWMAN GO-IN ' Ø LOOK-AROUND ' ...

'The snowman goes in and looks around.'

(Jantunen 2016)

b. MAN GO-IN / Ø SEE WOMAN

'The man goes in and sees the woman.'

(Jantunen 2013: 316)

In the examples in (4), the valency of the verbal predicates LOOK-AROUND and SEE suggests that the S/A argument should be present also in the second clause of the two-clause structures. However, in the examples, no such element is expressed, which together with other similar instances has led Jantunen (2013) to propose, following McShane (2005), that in FinSL the symmetric structure of conjunctive two-clause coordination makes it very easy for the second clause to manifest itself as syntactically incomplete: the overt expression of the S/A argument in the first clause and the semantic–structural parallelism between the coordinated clauses provide



strong cues to recover the referential identity of the elided element. In (4a), the constructed action through which the signer mimically with his bodily behavior shows the snowman looking around the premises, layered with the Type 2 verbal predicate LOOK-AROUND, further reduces the need to lexically express the 'looker'.

Superficially, the examples in (4) seem to suggest that the referents of the missing elements are recovered on the basis of a pivot constraint similar to that which governs the occurrence of ellipsis in corresponding English sentences (i.e. the elided NP and the NP with which it is co-referential both have to be in S/A function). A pivot constraint controls the way two clauses combine to form a complex sentence; they are language specific and involve constraints in terms of co-occurrence and omission on the syntactic functions (S/A and P) of an NP that is common to the two clauses (Dixon 1994). However, example (5) demonstrates that FinSL behaves differently from English:

(5) MAN GO-IN / WOMAN LOOK-AT Ø

'The man goes in and the woman looks at (the man/him).'

(Jantunen 2013: 317)

In (5), the elided nominal phrase in the second clause has the syntactic function of P, yet it is referentially identical with the S/A nominal phrase referent ('man') in the first clause. Consequently, because languages have been shown to prefer either the S/A or S/P paradigm (Dixon 1994), it cannot be argued that the identity of the referents of the missing elements in (4b) and (5) can be recovered on the basis of any pivot constraint. Instead, drawing on the fact that FinSL is a discourse-oriented language (Section 3), it is suggested that, in the retrieval of the referential identity of

the missing nominal phrases in second coordinands, FinSL simply employs the discourse theme (here: 'man'). The two-clause coordinated structures – and, in (5), also the inherent directionality of the Type 2 verbal LOOK-AT – are additional means that make it possible to rely very effectively on this recovery method based on the discourse theme.

### 4.3 Other contexts encouraging the ellipsis of nominal phrases in FinSL

In addition to two-clause coordinated structures, the preceding discussion has made it clear that there are also other contexts in FinSL that allow a relatively systematic elision of nominal phrases functioning as clausal core arguments. These include the contexts of constructed action and Type 2 verbals involved in examples (4a) and (5) above, as well as the topic-comment structure (see 2.2). Let us now take a look at these, considering first the topic-comment (TOP-COM) structure, of which two examples are given in (6).

(6) a. *When explaining her daily use of languages:*

TOP1[AT-HOME] / TOP2[UNIVERSITY AREA] / COM[Ø SIGN]

'As for my home, as for the university campus, (I) sign.'

(Jantunen 2013: 322)

b. TOP[KEY THERE:down] / COM[WOMAN Ø TAKE:down]

'As for the key, the woman picks (it/the key) up.'

(Jantunen 2013: 322)

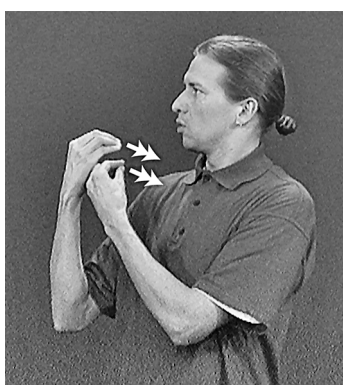
The sentence in (6a) is a two-topic structure in which the topics function to set a locative framework for the following short comment clause. In the example, the comment clause consists only of the Type 1 verbal predicate SIGN. The S argument of the clause has been elided and its referent (the first person 'I') is inferred on the basis of the discourse context.

The sentence in (6b) represents a different kind of topic-comment structure, with only one topic and an elided nominal phrase in the role of the P argument. The important thing in (6b) and structures like it is that in the formal framework (e.g., Aarons 1996; Liddell 1980; Sandler and Lillo-Martin 2006) they have not been analyzed as involving any kind of ellipsis but as the movement of an element from the clause-internal object (or subject) position to the specific clause-external topic position. In the grammatical study of FinSL, however, the ellipsis analysis has been favored (Jantunen 2013). One type of justification for this analysis comes from the work done on functional information structure and semantics: researchers in this field (e.g. Lambrecht 1994; see also Chafe 1976) have claimed that topics in general are not under the influence of the valency of the comment clause predicates, as assumed in the movement analysis. Another, and more concrete, argument for the ellipsis reading of (6b) is the fact that it is definitely possible (albeit marked) to produce the example so that the comment clause includes, for example, a pointing sign (P argument) indicating the same referent as that identified by the clause-external topic (see the symbol “Ø” in the example). If the topic were analyzed as being moved, it would still be considered to have a relationship with the predicate, and no anaphoric pointing could be used in the comment clause.

As was mentioned in Section 2, Type 2 verbals (such as TAKE in 6b) include a gestural component which allows them to be meaningfully directed and moved in

space between referents of the situations they encode. As the referents are often – but not obligatorily (de Beuzeville et al. 2009) – indicated by the forms of the verbals themselves, their overt expression within the clause with lexical elements is unnecessary (although this also frequently happens in FinSL). The locations of the referents at which the verbals are directed may be physical or they may be grammatically established. In (7), displayed also in Fig. 2, the Type 2 verbal TEACH (for a context-free variant of this signs, see Fig. 1) is directed between two abstractly created locations referring to 'the tall (and presumably older) you' and to 'the short (presumably younger) me'. The clause formed around the verbal does not contain an overtly expressed A or P but their referents are retrieved from the context with the knowledge that the verbal TEACH always points toward the patient or undergoer-like referent.

{Fig. 2 approximately here.}



**Fig. 2.** FinSL Type 2 verbal TEACH as used in the elliptical clause (7). Note that the signer also employs constructed action to show the imaginary locations of the referents. Image from *Suomalaisen viittomakielen perussanakirja* (1998).

(7) *During a story about teaching:*

constructed action

Ø you:TEACH:me Ø

'(You who are tall/older) teach (me who is short/younger).'

(Jantunen 2013: 324)

The use of Type 2 verbals such as TEACH in (7), together with the use of Type 3 verbals (see Section 2), has been found to be strongly linked to the phenomenon of constructed action (see De Beuzeville et al. 2009), which is yet another context favoring argument ellipsis in FinSL (see also Wulf et al. 2002 for American Sign Language). For example, in (8), the argument structure of the transitive Type 2 verbal LOOK-AT (see also example 5) is realized incompletely because the nominal P argument – supposed to convey the meaning 'text (on the computer screen)' – is elided. However, from the point of view of semantic interpretation this is not a problem because the way the signer mimics the person working with the computer (also associated with the verbal predicate WRITE-KEYBOARD of the previous clause) provides all the necessary information for the construction of the correct meaning. In the case of LOOK-AT, the constructed action is manifested through the signer's body posture, eye gaze, and the downward movement of the hand and fingers, which represent the eyes. Overall, the constructed action explicates the meaning by creating a pantomimic image of the signer actually reading – literally with her eyes – the text from the computer screen.

(8) constructed action constructed action

COMPUTER / ME WRITE-KEYBOARD / ME LOOK-AT:up-down Ø

'I was typing with the computer. When I was reading (the text on the screen)...'  
(Jantunen 2013: 323-324)

As has been shown in the examples above, the various contexts favoring ellipsis in FinSL are often realized at the same time. This makes the overall effect of elliptical phenomena sometimes appear very strong as it is possible for the discourse to proceed with only a minimal amount of lexically expressed information (see, for example, (7), which is a full clause consisting of only one lexical sign). In particular it can be argued that the gestural and mimical aspects of signs (e.g. signs with gestural components) and signing (e.g. constructed action) contribute strongly to the occurrence of elliptical phenomena in FinSL (see Jantunen 2013). We will return to this issue with more evidence in Section 7.

## **5. Elliptical phenomena involving verbal predicates**

Let us now turn to the issue of elliptical phenomena involving verbal predicates in FinSL. First, it should be noted that as yet little is known about these types of issues in sign languages: several instances of ellipsis involving a verbal predicate (e.g. sluicing, gapping, and stripping, often also treated as instances of clausal ellipsis) have been described for FinSL by Jantunen (2013), but it is only recently that investigation has begun in sign languages of the elliptical phenomenon resembling the VP-ellipsis of spoken languages, for example (Cecchetto et al. 2015). Accordingly, a lot of additional work is still called for in the whole field of elliptical phenomena in sign languages related to the verbal predicate. The following two sections present on a

general level what the traditional elision phenomena of, on the one hand, VP-ellipsis (5.1) and, on the other, sluicing, gapping, and stripping (5.2), could be like in FinSL.

### **5.1 On the elliptical phenomenon resembling VP-ellipsis**

In spoken languages, VP-ellipsis – also discussed under the name of predicate ellipsis in this book – is a process that typically elides the whole verb phrase constituent, that is, the verb together with its possible complements and adjuncts (McShane 2005).

VP-ellipsis is well attested in English but it is not always clear if it exists as a process in many other languages.

Cecchetto et al. (2015) – working in the formal framework – have argued that Italian Sign Language exhibits an elliptical process that shares common properties with VP-ellipsis in languages like English. They note, like McShane (2005) in the functional framework, that the process is not easily distinguishable from the elliptical process of stripping, for example, but argue that the presence of what they call a modal or an auxiliary-like element together with evidence from, for instance, embedded *wh*-structures, support the VP-ellipsis reading. One example Cecchetto et al. provide of this VP-ellipsis-like phenomenon, demonstrating the presence of the modal element *MUST*, is given in (9) (for a discussion, see Cecchetto et al. (2015)).

(9) GIANNI BOOK BUY MUST. MARIA MUST SAME

'Gianni must buy a book and also Maria must (buy a book)'

(Cecchetto et al. 2015: 222; original notation)

Corresponding examples of what Cecchetto et al. (2015) analyze for Italian Sign Language can also be constructed for FinSL. One that directly resembles (9) is given in (10), which shows that the signs BUY and APPLE that are present in the first clause – perhaps constituting a unit that may be called a verbal phrase – are not expressed in the second clause.

(10) *Telling a story about a boy and a girl who go to the shop together:*

BOY WANT BUY APPLE ' GIRL WANT Ø ALSO

'The boy wants to buy an apple and the girl wants (to buy an apple) also.'

If the phenomenon of verbal phrase ellipsis does indeed exist in FinSL, sentence (10) is most likely an example of it. However, it must be noted that not all FinSL signers consider sentence (10) to be an entirely natural expression. The hesitation of these signers relates to the presence of the verbal WANT in the second clause: to express (10) more naturally, the sign WANT would be left out of the second clause. This, on the other hand, would change the analysis of (10) from verbal phrase ellipsis to something more like stripping (Jantunen 2013). Alternatively, the order of WANT and ALSO could be reversed. However, while some signers say this configuration is possible, others indicate that this kind of ellipsis is perhaps blocked completely, or that at least it feels unnatural.

Another type of evidence against the reading of (10) as verbal phrase ellipsis draws on the diagnostics of strict vs. sloppy reading. Claims have been made (e.g. Quer and Rossello 2013) that in VP-ellipsis there is a sloppy reading available for the elliptical clause (i.e. the elliptical English clause showing the translation of (10) also includes the meaning 'the girl wants the boy to buy an apple'). However, in the actual



signed example (despite the use of the English word *also* in the glossing), the availability of the sloppy reading is questionable (the preferred reading being the strict one shown in (10)). More work is needed on the phenomenon in FinSL.

## 5.2 Gapping, stripping, and sluicing in FinSL

According to Jantunen (2013), FinSL exhibits the traditional elision phenomena of gapping, stripping, and sluicing. Like the process resembling VP-ellipsis described above (5.1), the processes of gapping, stripping, and sluicing – often considered to be traditional cases of clausal ellipsis – have not yet been thoroughly investigated in FinSL. Consequently, they too will be only generally outlined in the following.

Let us first consider the examples in (11). They include gapping which, in the spoken language literature, has been defined as an elliptical process that renders unexpressed the verb and, optionally, other elements of the verb phrase in the latter clause(s) of a two-clause coordinate or comparative structure (McShane 2005: 136).

(11) a. GIRL HAS-GOT TWO-PIECES / BOY Ø ONE-PIECE

‘The girl has two and the boy (has) one.’

(Jantunen 2013: 317)

b. *The boy and girl go to the shop together:*

BOY BUY APPLE ’ GIRL Ø ORANGE

‘The boy bought an apple and the girl (bought) an orange.’

(Jantunen 2013: 317)

The sentences in (11) are two-clause coordinate structures in which the verbal predicates of the second clauses have been omitted. The meaning of the second clause is interpreted, in both cases, on the basis of the overtly expressed verbal predicate in the first clause, that is, on the basis of the structural and semantic parallelism between the two clauses. This parallelism is quite strong and reliable: for example, in (11a), if the second clause were to stand on its own as an isolated clause, the interpretation of its meaning would be 'one (piece of a) boy'. However, in the actual elliptical clause in (11a), there is no danger of such ambiguity.

Like gapping, so too stripping is based on the structural parallelism between the directly connected antecedent clause and the ellipsis clause. In stripping, as defined in the spoken language literature, all but one main constituent in the ellipsis clause is stripped away under identity with the antecedent clause; some peripheral constituents, like adverbial elements or negators, can be overt in the stripped clause as well (McShane 2005: 143). Cross-linguistically, stripping bears a strong resemblance to VP-ellipsis (see 5.1); of the two, however, stripping is normally considered the more common.

The sentences in (12) are examples of stripping in FinSL.

(12) a. MY FRIENDS VISIT-ME HOSPITAL ' RELATIVES ALSO

'My friends came to visit me at the hospital, and (my) relatives (came to visit me at the hospital) too.'

b. neg

BOY WIN COMPETITION ' FATHER

'The boy won the competition, the father (did) not (win the competition).'

In (12a), the second clause lacks the verbal predicate and the subsequent locative P argument present in the first clause. However, the clause contains as a peripheral element the sign ALSO, belonging to a minor sign class of particles in FinSL, to mark stripping. In (12b), the second clause includes only the A argument, followed by the non-manual negative operator (i.e. a headshake, although a reduced one). Note that the non-manual operator is produced after the A argument as an independent element, perhaps providing structural evidence that the ellipsis of manual clausal material has indeed occurred after the A argument; in FinSL, non-manual operators are layered upon manual activity (see 2.2).

Sluicing is an elliptical process that affects interrogative clauses. In sluicing, interrogative clauses are elided in such a way that only their wh-words or phrases are left overt. Sluicing is a slightly different phenomenon from gapping or stripping: in addition to being licensed by the structural parallelism between the antecedent and ellipsis clause, it is also licensed by the preceding wh-word (McShane 2005: 144).

According to Jantunen (2013), the sentence in (13) represents an example of sluicing in FinSL (square brackets indicate the sluiced element).

- (13) \_\_\_\_\_ wh-question  
 ME KNOW [YOU BUY+ALREADY APPLE] ' BUT WHY [Ø]  
 'I know you bought an apple but (I don't know) why (you bought it)?  
 (Jantunen 2013: 321.)

The example in (13) is a two-sentence complex structure involving both clausal subordination and coordination (see 2.2). Of the two coordinated sentences, the second one is manifested elliptically in that the content of the complement clause in

the first sentence, expected to function as an interrogative clause in the second sentence, is elided. To mark the ellipsis, the second clause includes the question sign WHY accompanied with the non-manual wh-question operator. Note that the operator starts already during the conjunction sign BUT and ends with a hold that relaxes only after the interrogative sign WHY. The hold of the non-manual operator after the interrogative sign may function here as a similar formal marker of ellipsis to that discussed with respect to example (12).

## **6. On other types of ellipsis in FinSL**

The previous sections have discussed several major types of elliptical phenomena involving both nominally and verbally headed units in FinSL. This section addresses two more types of elliptical phenomena in FinSL: answer ellipsis (6.1) and the ellipsis of conjunctions (6.2).

### **6.1 Answer ellipsis**

Work on FinSL (Jantunen 2013; see also Caponigro and Davidson 2011 for American Sign Language) has shown that question and answer pairs form yet another discourse-grammatical context that clearly favors ellipsis in FinSL: questions permit reduced answers (cf. fragment answers) because all the necessary information has typically already been included in the question part (Jantunen 2013; McShane 2005). A classic example of the phenomenon is the signed question, *Are you deaf?*, which may be answered only with a head nod without manual signs (cf. 12 and 13 above). Another example, extracted from an actual dialogue, is given in (14). In (14), the reduced

answer contains neither A nor P – the latter of which may be analyzed to be a full subordinate clausal complement – because their meaning can be directly inferred from the preceding question.

(14) *Question:*

\_\_\_\_\_ yes/no \_\_\_\_\_

AT-ALL YOU THINK / HOW MANY DIFFERENT LANGUAGES

\_\_\_\_\_ wh

DURING-ONE-DAY YOU USE

'Have you thought how many different languages you use during a day?'

*Answer:*

YES / Ø OFTEN THINK Ø

'Yes, (I have) often thought (about it/how many languages I use daily).'

(Jantunen 2013: 320)

In addition to the very common argument ellipsis present in (14), the question and answer context in FinSL creates a specific discourse framework in which verbal predicates, for example, can also be elided relatively freely. Consider the example in (15), which is a transitive clause immediately following the answer given in (14):

(15) *The signer is continuing to answer the question of what languages she uses*

*daily:*

ME Ø SIGN-LANGUAGE / ...

'I use sign language.'

(Jantunen 2013: 317)

In (15), the overt structure of the transitive clause is similar to the nominal phrase plus nominal phrase structure found in FinSL nominal clauses (see 2.2). However, as the meaning of the clause in (15) obviously cannot be 'I am (in) sign language', the clause is interpreted as being incomplete in terms of its verbal predicate, the sign USE. The meaning of the missing verbal in this case is inferred on the basis of the preceding context, that is, the question asked by the other signer: in fact, in this stretch of conversation, the verbal USE occurs only in this discourse-initial question and is consistently omitted – similarly to nominal discourse themes – in the rest of the discourse. It should be noted that superficially the process resembles gapping (see 5.2). However, unlike in gapping, there is no real structural or semantic parallelism with any directly connected sentence in the example that could be referred to in the retrieval of the missing predicate.

## **6.2 Ellipsis of conjunctions**

In spoken languages, the ellipsis of conjunctions is a process that elides elements that function as conjunctions (McShane 2005). In general, languages differ in the degree to which they allow this type of ellipsis: some languages (e.g. English) prefer to express all conjunctions overtly whereas others (e.g. Russian) permit conjunctions to be omitted relatively freely. Naturally, there are also languages in which conjunctions do not exist, either at all, or for every structure (see Haspelmath 2007b for an overview from the perspective of coordination). In such languages it does not make sense to talk about the ellipsis of conjunctions.

As mentioned in Section 2.2 and as we have seen in the examples in this chapter, FinSL is a language that typically does not use conjunction signs when coordinating clauses conjunctively (cf. 'and' coordination): conjunctions *may* be present in these structures but, given their low frequency of occurrence and native intuitions, among other things, (Jantunen 2016), such cases are best analyzed as instances of adding a conjunction sign to the structure, rather than treating the other cases, in which they are not used, as instances of leaving the conjunction out. However, in the typical adversative ('but') and disjunctive ('or') coordination, the conjunction signs (BUT and OR, respectively) are used. An example of this is shown in (16), which demonstrates a FinSL disjunctive two-clause structure with the conjunction sign OR in between the clauses.

- (16) ...ME SELF GROW-UP ALREADY ' OR CULTURE CLIMATE CHANGE...  
 '(I don't know if it is) me who has grown up or if the cultural atmosphere has changed...'  
 (Jantunen 2016)

In (16), the disjunctive linkage is typically marked not only by the conjunction sign OR but also by an emphatic change in the head or upper torso position between the two clauses. Interestingly, if the non-manual activity manifesting the prosodic break between the clauses is made very explicit – that is, it is almost exaggerated – the disjunctive linkage can also be expressed without the sign OR (Jantunen 2016; for American Sign Language, see Davidson 2013). As the syndetic (with OR) form of the linkage is considered to be the neutral one in FinSL, the asyndetic instance (without OR) can be analyzed as being a marked result of the ellipsis of the conjunction

element. A similar elliptical phenomenon with a non-manual intensification process can also target adversative coordination employing the conjunction sign BUT (Jantunen 2016).

### **7. On the role of gesture and mime in the elliptical phenomena of FinSL**

As we have seen in this chapter (Section 3), elliptical phenomena are widely permitted in FinSL because of the language's discourse-oriented nature, which emphasizes the coherence of thematic structure over clausal structure. Another general factor that could be linked to the frequent occurrence of elliptical phenomena in FinSL is gesture and mime: because the channel of gesture and mime is naturally available in FinSL (via its visual-gestural modality), the construction of meaning does not have to rely solely on traditional grammatical structures such as full phrases or clauses. This, again, means that these units can manifest themselves relatively freely as incomplete (Jantunen 2008, 2013).

That gesture and mime actively participate in elliptical phenomena in FinSL has been shown in many of the examples in this chapter as well as in the discussion of contexts that especially favor ellipsis in FinSL (Type 2 verbals and constructed action in particular). Similar observations about the role of gesture and mime in ellipsis have also been made in the research into other sign languages. For example, in their work on the role of constructed action in Australian Sign Language clauses, Ferrera and Johnston (2014) summarized its effect on grammatical structure as being identical to that found in FinSL (CA=constructed action):



CA has the potential to influence surrounding grammatical structure. First, signers may use CA instead of manual lexical signs to effect a particular construal of an event and to profile participants and processes. -- Secondly, and more generally, -- [t]he meanings prompted by a CA may cause a signer to -- leave an argument or process unexpressed by manual lexical signs, because it is already ‘active’ in the discourse. (Ferrara and Johnston 2014: 211.)

To demonstrate how the constructed action affects full clausal structure from the perspective discussed by Ferrara and Johnston (2014), let us consider the FinSL example in (17), illustrated with images captured from the video in Fig. 3 (cf. example 8).

{Fig. 3 approximately here.}



**Fig. 3.** Video frames showing the production of the sentence (17).

(17) *In telling a story about a boy, dog, and a frog:*

\_\_\_\_\_ constructed action

BOY LOOK-AT Ø ' Ø let-it-be

'The boy watched (the dog barking around) and (thought:) "umh, let it be".'

(Jantunen 2016)

The sentence in (17) contains two conjunctively coordinated main clauses. The first clause is exceptional in that the whole subordinate complement clause in P function has been omitted ('the dog barking around') because the activity of the dog that the boy is observing is made clear by the discourse context and enacting. The second clause, on the other hand, expresses overtly only the gestural behavior of the signer that, via constructed action, signals the direct speech of the boy ('umh, let it be'). This simple gesture may be analyzed as the P argument of a matrix clause that has been omitted from the sentence because the boy's thinking is already made visible by the signer enacting the boy. The remarkable thing in (17) is that, regardless of its highly reduced syntactic structure, the meaning of the whole complex sentence can still be understood without difficulty.

Linguistic structure is frequently reduced and subsumed under gesture and mimic behavior in sign languages. However, as an important final remark, it must be noted that gesture and mime are not an exclusive property of sign languages but occur also with speech (e.g. Kendon 2004; McNeil 1992); this means that they may also play an important role in the elliptical phenomena found in the grammar of spoken language. Ladewig (2014), for example, has discussed how gestural enactment may fill syntactic gaps of either nouns or verbs in German. One of her examples involves a story describing how a girl is pushed through a window by relatives. The story proceeds in spoken German until the end of the second clause, *und wir hinten* ('and we from behind'), of a two-clause coordinated structure, toward the end of which a two-handed gestural action describing the pushing movement replaces the speech

(Ladewig 2014: 1667). Concerning this replacement, Ladewig argues that the gesture fills a syntactic slot that is normally occupied with a finite verb following the subject *wir* ('we') in the construction.

The process described by Ladewig (2014) is intuitively very familiar and is also known to occur in spoken language more generally. Incidentally, the process that originally causes the syntactic gap in Ladewig's example quite closely resembles the elliptical process of gapping. In traditional accounts of elliptical phenomena in spoken language, the role of gesture and mime has not been the focus of attention. However, the evidence presented here suggests that the gestural dimension should perhaps be taken more widely into account in this field, too.

## **8. Conclusion**

This chapter has presented an exposition of ellipsis in FinSL. Within the limits of the grammatical work carried out so far on FinSL, the chapter has discussed both nominal and verbal ellipsis and has touched upon several other types of elliptical phenomena. The chapter has also discussed the relationship between ellipsis, discourse orientation and gesture in FinSL. As a contribution to the field, the chapter has suggested that gesture and mime, used extensively in FinSL, may also have a larger role than is normally assumed in many of the elliptical phenomena found in spoken languages.

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## **Biography**

Tommi Jantunen holds an MA in General Linguistics from the University of Helsinki, Finland, and a PhD and a degree of docent (adjunct professor) in Finnish Sign Language (FinSL) from the University of Jyväskylä (JyU), Finland. He is currently affiliated as an Academy Research Fellow at the Sign Language Centre in JyU, Department of Languages, and in his research he investigates FinSL grammar and phonetics as well as sign language technology.

### **A list of items to be indexed:**

sign language

Finnish Sign Language / FinSL

verbal (predicate)

nominal

argument ellipsis

nominal phrase ellipsis

gapping

stripping

sluicing

verbal phrase ellipsis

answer ellipsis

ellipsis of conjunctions

discourse orientation

gesture

mime

constructed action

### **Abstract**

This chapter discusses several of the elliptical phenomena presented in this book as found in Finnish Sign Language (FinSL): nominal phrase-internal ellipsis (cf. nominal ellipses), the ellipsis of nominal phrases in two-clause coordinated structures (cf. conjunction reduction), phenomena resembling VP-ellipsis, sluicing, gapping, stripping, and also fragmented answers. In addition, because of its high frequency in FinSL and other sign languages, the chapter also addresses the ellipsis in FinSL of clausal core arguments – also known as pro drop – together with a few other elision phenomena, such as the ellipsis of conjunctions. The chapter broadly considers the role of discourse orientation as well as gesture and mime with respect to the various elliptical phenomena, and in conclusion it is suggested that gesture and mime, used extensively in FinSL and other sign languages, may also have a larger role than is normally assumed in many of the elliptical phenomena found in spoken languages.

**Key words:** ellipsis, discourse-orientation, gesture, mime, sign language

### **List of figure and table captions**

#### *Figure captions*

**Fig. 1.** FinSL verbals with the meanings (from left to right) 'know' (the finger pads of the open hand touch the forehead twice), 'teach [someone in front of the signer]' (the two hands move forward twice in the shown configuration), and 'an oblong vehicle

(e.g. a bicycle) drives forward over a mound-like location' (the dominant hand articulates an arc-shaped movement over the stationary non-dominant hand). The verbals represent Type 1, Type 2, and Type 3, respectively (see also Fig. 2). Images from *Suomalaisen viittomakielen perussanakirja* (1998).

**Fig. 2.** FinSL Type 2 verbal TEACH as used in the elliptical clause (7). Note that the signer also employs constructed action to show the imaginary locations of the referents. Image from *Suomalaisen viittomakielen perussanakirja* (1998).

**Fig. 3.** Video frames showing the production of the sentence (17).

#### *Table headings*

**Table 1.** Ellipsis of A and P core arguments in the sample of 381 transitive clauses containing a Type 1 or Type 2 verbal predicate.