The non-dominant hand perseveration and movement in SZJ locative constructions

Matic Pavlič (Center for Slovenian Sign Language research)
matic.pavlic@zveza-gns.si

Abstract

In sign languages, signers habitually encode the relations between locative arguments with a complex predicate consisting of several independent morphemes, as shown by Pfau and Aboh (2012) for Sign Language of the Netherlands. In this study, I examine perseverations and movements of the non-dominant hand (H2) in Slovenian Sign Language (SZJ) locative constructions.

In SZJ, the H2 may be persevered after producing the two-handed Ground in locative constructions. This is shown by the data collected from seven first language SZJ informants, using a Picture Description Task. The referential location as well as the orientation and the handshape of this perseveration may change at the sign-boundary when the one-handed Figure has just been articulated and the one-handed predicate is about to be signed. Before this sign-boundary, the handshape of the persevered H2 refers to the Ground – and is therefore a Ground classifier. After that boundary, the handshape of the persevered H2 refers to the part of the Ground that is relevant for localizing the Figure – and is therefore an axial part classifier that projects a Measure Phrase.

Keywords: locative construction, non-dominant hand perseveration, measure phrase, Slovenian Sign Languag

1 Introduction

Signs are the basic lexical units of sign languages. They are transmitted through the gestural-visual channel and, consequently, endowed with some specific characteristics. I will present them in this introduction, focusing primarily on the phenomenon of perseveration (1.1), locative constructions in sign languages (1.2) and concluding with a note on elicitation (1.3).

1.1 Simultaneity

First of all, signs are produced in the signing space which is commonly understood as a frame defined by the top of the head and the hips in the transverse (x) plane of the human body, by the width of the extended arms in the lateral (y) plane of the human body and by the end of the extended arms in the frontal (z) plane of the human body. In order to encode the locative information in the language, signers map the real position of the locative arguments to the coordinate system represented by the signing space. Second, signs are usually compared to words in oral languages, but note that the different physical instantiation results in structural differences as well. Signs tend to use the iconic component much more efficiently than oral languages (which are limited to acoustic iconicity as explained in Taub (2001), among

Pavlič, Matic (2018). The non-dominant hand perseveration and movement in SZJ locative construction. *FEAST* 1: 48-58. https://doi.org/10.2436/20.8050.03.5
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others), and they are much more simultaneously organized than words, as claimed by Stokoe (1960). The extensive use of simultaneity is due to the fact that manual signs may be produced by one or by both hands. Two-handed signs are further classified as symmetric (both hands make the same movement) and asymmetric (a dominant hand (H1) makes a movement while the non-dominant hand (H2) is usually stationary). After producing a one-handed or two-handed sign, the signer may hold the H2 stationary during the simultaneous articulation of the one-handed sign(s) that follow it. Such a simultaneous construction is called *perseveration* by Miller (1994), Vermeerbergen et al. (2007), and Pfau and Aboh (2012) and is used especially productively within locative constructions.

1.2 Locative constructions

In sign languages, spatial information is not necessarily vehiculated by overt spatial adpositions. Instead, the location of the Figure with respect to the Ground tends to be encoded within a complex predicate consisting of several independent morphemes. In (1), this is illustrated for SOV sign language: The Sign Language of the Netherlands (Coerts 1994; NGT). In order to describe the situation, the NGT signer articulates the sign TABLE before the sign BALL. Lastly, the relation among them is set by the classifier predicate. The movement subcomponent of the classifier predicate is adapted to the R(eferential)-loci (Lillo-Martin and Klima 1990) where TABLE and BALL have been articulated so that the predicate movement starts in the locus where BALL is produced and ends in the locus where the sign TABLE is produced. This way, a complex meaning glossed as BE-LOCATED is encoded yielding the OSV word order. Locative sentences in other SOV sign languages such as Irish Sign Language (Johnston et al. 2007) and Italian Sign Language (Laudanna 1987) also display the OSV word order. The canonical word order in locative sentences of SVO languages such as American Sign Language (Liddell 1980), Croatian Sign Language (Milković, Bradarić-Jončić, and Wilbur 2007), Russian Sign Language (Kimmelman 2011), SZJ (Pavlič 2016), Australian Sign Language and Flemish Sign Language (Johnston et al. 2007) also display the OSV order.

(1) TABLE BALL CL:UNDER
'A/the ball is under a/the table' (NGT; Coerts 1994, p. 65)

1.3 A note on data elicitation

SZJ locative constructions that are examined bellow were elicited from seven SZJ native deaf signers. In eliciting the data, I followed the influential work by Volterra et al. (1984), who first introduced Picture Description Task (PDT) in sign language studies in order to investigate Italian Sign Language (LIS) word order. Since they paid special attention to locative constructions this methodology was especially suitable for my research. Nevertheless, I designed the stimuli myself because I needed to manipulate them according to my intentions. Thus, I was able to elicit all possible combinations of one- versus two-handed signs, animate versus inanimate Figures and Grounds and bigger and immobile versus smaller and mobile Figures and Grounds. Furthermore, when designing the elicitation stimuli, I tried to depict both prototypical Figures (animate, small and mobile) and prototypical Grounds (inanimate, big and immobile) as well as non-prototypical Figures and Grounds. In elicitations, I mainly used photographies of still life; they are printed to the right of the examples. My informants were shown them one by one on a computer screen and were asked to describe the depicted situations to the interpreter/deaf co-signer.

2 The use of on-dominant hand

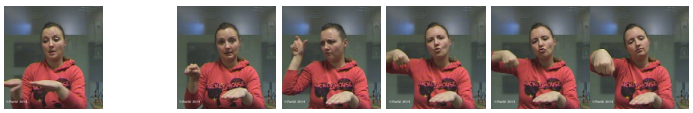
In this study I explore the simultaneity of signs in SZJ. Specifically, I draw attention to the use and the functions of H2 in locative constructions. In (2.1), I will analyse the H2 perseveration as a Ground classifier during the production of the Figure, and as Ground's axial part classifier during the production of the predicate. In (2.2), I will show that the movement subcomponent in SZJ locative predicates is constrained so that it can only connect two R-loci on the same Cartesian geometrical axis.

2.1 Perseveration

In this section, I follow Pfau and Aboh (2012) exploring the use of H2 that signs a Ground but is under certain conditions persevered during the production of a Figure and a predicate. I explore different instantiations of this perseveration in SZJ locative constructions.

In (2), for example, the Ground TABLE is produced by a two B-shaped hand configurations. The H2 is persevered in a B-handshape while, with the H1, the signer simultaneously continues to produce a sequence of one-handed signs, namely a Figure and a predicate sign. What is the grammar of this H2 perseveration? What does it refer to? In (2), it refers to the Ground TABLE, but since it is not signed with both hands, it only seems to denote a salient characteristic of TABLE – is it a classifier?

(2)



top,eye-gaze$_b$ — TABLE$_b$

H1: $\overset{\text{TOP}}{\text{IX}_b}$ $\overset{\text{EG}_c}{\text{BOY}_c}$ BASKET$_a$ $\overset{\text{EG}_{a\rightarrow b}}{{}_a\text{BE-LOCATED(A)}_b}$

H2: .....

'A boy put the basket on the table.' (SZJ; m75)[1]

I will show that H2 perseveration is indeed a classifier that refers to the Ground, but only during the production of the Figure, while it refers to the axial part of the Ground during the production of the predicate. Now, let me introduce the term *axial part* by quoting Culicover and Jackendoff (1996), who discuss it within the spatial cognition framework:

> "The 'axial parts' of an Object —its top, bottom, front, back, sides and ends— behave grammatically like parts of the entity, but, unlike standard parts such as a handle or a leg, they have no distinctive shape. Rather, they are regions of the entity (or its boundary) determined by their relation to the entity's axes. The up-down axis determines top and bottom, the front-back axis determines front and back and a complex set of criteria distinguishing horizontal axes determines sides and ends." (Culicover and Jackendoff 1996, p. 14)

Svenonius (2006, p. 49) adopts the term in order to explain the syntactic pattern illustrated with his examples from (3) to (8). He argues that axial-parts develop from relational nouns. *Relational nouns* refer to real parts of an entity and are used with a genitive dependent that expresses the whole. Such structure may sometimes get "re-analysed as a locative expression, referring not to a part of the entity but to a space defined with reference to that part."

[1] This number identifies the given example within a small SZJ corpus that is presented more in detail in Pavlič (2016).

It becomes a functional category and is overtly projected in many languages. To show this, Svenonius (2006, p. 49) compares the minimal pair (3a–3b). The sentence in (3a) denotes a *kangaroo* that is seated in the front seat or hidden in the space under the bonnet beside the engine, while the sentence in (3b) denotes a *kangaroo* that can be found in the area defined by the nearest part of the car with respect to the point of view that one takes. Svenonius claims that in the first case, *front* is the head of a noun phrase, while in the second case, it is the head of an axial-part phrase.

(3) a. There was a kangaroo in the front of the car.

b. There was a kangaroo in front of the car.

An axial-part phrase is constrained in its distribution since all the prepositions may take a relational noun as their complement (for example *in* in 3a and *on* in 4a) but cannot always select an axial-part phrase (compare grammatical *in* in 3b to ungrammatical *on* in 4b). Svenonius (2006, p. 50) goes on to list certain syntactic differences between relational noun phrases and axial-part phrases. Relational nouns are habitually modified by a determiner (4a), while axial parts cannot be (4b):

(4) a. There was a kangaroo on [$_{DP}$ the [$_{NP}$ front of the car]]

b. *There was a kangaroo on [$_{AxialP}$ front of the car]

Relational nouns are habitually pluralized (5a), while axial parts cannot be (5b):

(5) a. There were kangaroos in the fronts of the cars.

b. *There were kangaroos in fronts of the cars.

Relational nouns are habitually modified by an adjective (6a), while axial parts cannot be (6b):

(6) a. There was a kangaroo in the smashed-up front of the car.

b. *There was a kangaroo in smashed-up front of the car.

Relational nouns cannot be modified by a measure phrase (7a), while axial parts may be (7b):

(7) a. *There was a kangaroo sixty feet in the front of the car.

b. There was a kangaroo sixty feet in front of the car.

Relational nouns are habitually stranded from their preposition (8a), while axial parts cannot be (8b):

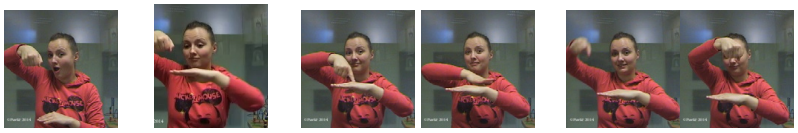
(8) a. It was the front of the car that the kangaroo was in.

b. *It was front of the car that the kangaroo was in.

The difference between relational nouns and axial parts may also be observed in SZJ, for example in (9).[2]

[2]This example is grammatically degraded due to the non-basic word order.

(9)



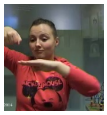
top	top,eye-gaze$_{c\rightarrow b}$	top	top	
H1: BASKET$_a$	**H1:** ...	**H1:** IX$_b$	**H1:** TABLE$_b$	**H1:** $_a$BE-LOCATED(A)$_b$
H2: CL(B)$_c$	**H2:** $_c$CL(B)$_b$	**H2:** ...	**H2:** ...	**H2:** .....

'There is a basket on the table.' (SZJ; m32a)

Let me go through example (9) step by step (10a–10e):

(10)

a.  The Figure is articulated with the H1 accompanied by the H2 in B-hand.

b.  The H1 is persevered in place while the H2 takes over (an instance of 'dominance reversal'). It is pulled up from 'c' to 'b' in order to be assigned its R-locus at 'b'. This movement is followed by an eye gaze (c→b).

c.  The eye gaze is again directed towards the addressee while the H1 index finger points to the H2 that has persevered its R-locus and its B-hadshape.

d.  The Ground TABLE is articulated in a non-canonical way, since the H2 perseveres its R-locus and orientation towards the lateral side (normally, it would be orientated towards the addressee while moving to the contralateral side, simultaneously with the H1 but in the opposite direction).

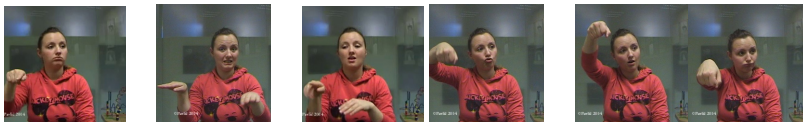
e.  The sentence ends with a classifier predicate that is executed by the H1 in s-configuration (that refers back to the Figure) and is simultaneously accompanied by the H2 classifier.

Now, compare the H2 classifier CL(B) (that denotes surface of the Ground) during the step (10a), during the step (10b) and during the rest of the utterance (step 10b to step 10e). Although the manual component of the three occurrences of the classifier CL(B) superficially seem to be the same, they can be distinguished clearly. During the production of the one-handed Figure, H2 is already B-shaped, but it does not occupy an R-locus in space and is not followed by the signer's eye gaze. The second occurrence of CL(B) is a dominant component of the two simultaneous manual signs, although it is signed by the H2 (an instance of dominance reversal'). It is accompanied by an eye gaze towards the R-locus to which the handshape is being moved and which is to be assigned to the sign. The sign is then followed by a pointing sign. Pointing signs carry out various functions. It is not important for this analysis what the exact function of the pointing sign in this position is. Being either an article, a determiner or a locative pronoun, it is projected within a DP. The correct representation of the structure in (10c) appears to be $[\overset{\text{top}}{\overline{\substack{\textbf{H1:}\ \text{IX}_b \\ \textbf{H2:}\ \text{CL(B)}_b}}}]$ and not $[\overset{\text{top}}{\overline{\substack{\textbf{H1:}\ \text{IX}_b \\ \textbf{H2:}\ \text{TABLE}_b}}}]$. Why? According to Svenonius (2006) and his examples (4a) and (4b), only the relation noun phrase may be modified

by a DP. Since the classifier CL(B) is modified by a pointing sign in function of a determiner, this means that the classifier CL(B) is a relational noun phrase. On the other hand, the third occurrence of the sign CL(B) is actually a persevered H2 that is never specified with a determiner of any kind. Therefore, it is not a relational NP but the head of an axial-part projection (remember that axial parts cannot be modified by a determiner (4a–4b)).

Note that according to Pfau and Aboh (2012, p. 96) H2 perseveration is only occasionally realized overtly in NGT, while it seems to be rather frequent in SZJ. But, according to grammaticality judgements of my informants, it is not obligatory either – as proven by example (11). In (11), the word order is again Ground–Figure–Predicate. Both the Figure and the Ground are accompanied by a pointing sign, presumably a demonstrative or a locative pronoun. H2 is not persevered: there is no axial part classifier representing the surface of the Ground. Instead, the one-handed predicate sign (articulated with H1) ends with a distinct hold. This confirms that the axial part classifier does not have to accompany the locative predicate in SZJ: it only optionally accompanies one-handed predicates (and cannot accompany the two-handed predicates for articulatory reasons).

(11)

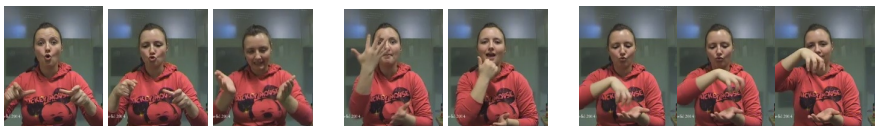


H1: IX$_a$ top **H1:** IX$_b$ **H1:** BASKET$_b$ **H1:** $_b$BE-LOCATED(A)$_a$ Stimulus
H2: - - - TABLE **H2:** … **H2:** - - - **H2:** - - - - - - - - - - (SZJ; m76)

'There is a basket on the table.'

Now, I would like to return to the H2 perseveration in example (2) above. There, the H2 that produced the Ground was simply persevered in space unchanged throughout the rest of the utterance. In example (12), however, the location of the perseveration changes twice. First, after producing the Ground, H2 is moved slightly downwards where it 'waits on stand-by' during the production of the Figure. Second, when it re-activates: moving slightly upwards when the production of the predicate starts.

(12)



top **H1:** CL(5)$_b$ … **H1:** BE-LOCATED(5-B)+DM Stimulus
DISH$_a$ IX$_a$ CL(5)$_a$ **H2:** FIVE APPLE **H2:** CL(5)$_a$ ..... (SZJ; m42b)

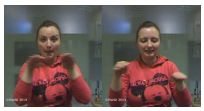
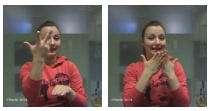
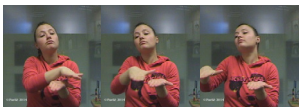
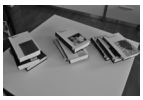
'There are five apples on the plate.'

The change of H2 perseveration is even more evident in example (13), because not only its locus but also its orientation changes. In (13), the signer establishes the Ground TABLE first: it is signed with two B-handshapes moving away from each other facing downwards. Its H2 is partially persevered throughout the complex Figure THREE BOOK. Then, the predicate is signed with one B-handshape facing downwards and moving from the Figure's R-locus towards the Ground (it is then repeated two more times due to the distributivity morpheme). Simultaneously, the surface of the Ground is represented by the H2 B-handshape facing upwards. This orientation is rather informative. It confirms that the H2 perseveration which simultaneously accompanies the Figure and the H2 perseveration which simultaneously accompanies the predicate are two different signs. The former refers to the Ground as a whole,

while the latter refers only to its surface, that is to its axial part. Note that the two classifiers may also be represented by the same sign.

Essentially, my claim that H2 perseveration (see example (2)) involves two distinct signs is in accordance with the analysis of the NGT data by Pfau and Aboh (2012, p. 99). They claim "that what looks like a perseveration at the surface underlyingly actually involves two separate signs. The whole entity classifier that localizes the Ground is part of the Ground DP [while] a phonologically similar if not identical sign is employed to represent the Part of the Ground."

(13)

top
TABLE — **H1:** THREE **H2:** ... BOOK — **H1:** BE-LOCATED(B-DOWN)+DM **H2:** CL(B-UP) — Stimulus

'There are three books flat on the table.' (SZJ; m44)

In this subsection, I drew attention to the H2 that may be persevered throughout the locative construction in SZJ. I showed that the R-locus and the handshape of this perseveration may change during the production of the locative construction. In particular, the R-locus and the handshape of this perseveration change at the sign-boundary when the Figure has just been articulated and the predicate articulation is about to start. Before that, the handshape of the persevered H2 refers to the Ground and is therefore a Ground classifier.[3] After that boundary, the handshape of the persevered H2 does not refer to the Ground as a whole any more. It refers to the relevant part of the Ground (the surface, for example) and is therefore an axial part classifier. I conclude that many times apparently monolite H2 perseveration actually involves two signs: a whole entity Ground classifier and an axial part classifier – as I argue for in the next subsection.

2.2 Movement

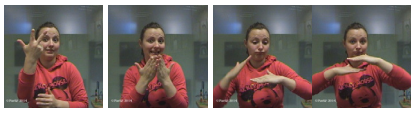
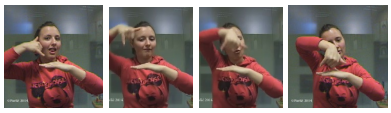
In this section, I examine the movement subcomponent of locative classifier predicates with special attention to the function of the H2 perseveration. I show that the movement subcomponent of SZJ locative classifier predicates differs from the movement subcomponent in SZJ non-locative verbal predicates precisely in the use of the H2. This distinction gives support to the original distinction between agreeing and spatially agreeing predicates that was suggested for ASL by Padden (1983).

Observe the movement subcomponent in example (14), where the predicate movement within the SZJ locative predicate (BE-LOCATED(Y)) consists of two components. In the first segment of the movement subcomponent, the signer lifts her hand and moves it forward until she reaches the vertical line above the Ground. This only allows the signer to move the articulator to the R-locus that is relevant for the spatial agreement of the predicate that is to follow. Thus, it is phonetic or phonological and I label it a *carrier movement*; it can be seen from still 5 to still 7 in example (14). Crucially, in SZJ locative constructions, a carrier movement starts in the Figure's R-locus and goes to the closest point on the geometrical axis of the Cartesian coordinate system (x, y, z) that is relevant for the Figure's configuration with respect to the Ground. I call the second segment a *measure movement* and it can be seen

[3]Note, that simultaneous H2 perseveration during the Figure is not phonetic or phonological hold since it can be referred to in the following discourse.

from still 7 to still 8 in example (14). Measure movement is restricted to the three geometrical axes: it can only connect two loci on the same geometrical axis.

(14)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THREE BOOK CL(B)+DM$_a$

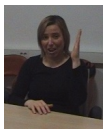
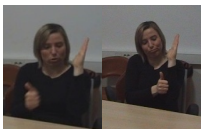
H1: PHONE$_b$ $_b$BE-LOCATED(Y)$_a$
H2: CL(B)$_a$ .....

Stimulus

'There is a pile of three books and there is a phone on the top of it.' (SZJ; m29)

In non-locative regularly agreeing transitive predicates, the movement subcomponent is always directed from the Subject to the Object. In locative predicates, however, the movement subcomponent may be directed either towards or away from the Ground's R-locus. To show this distinction between locative and non-locative movement subcomponent in SZJ I examine examples (15) and (16). They have been elicited by two pictures depicting the very same set of participants but differing with respect to the distance between them and the side to which one was placed with respect to the other – as can be seen by looking at the stimuli next to the elicited sentences. Observe the direction of predicate movement in these examples. In (15) the signer articulates a classifier for a tree with H2. Then, she activates H1 that was lying loose on the table. First, she raises it to the level of the CL(TREE), and up to this point the hand is already A-shaped. Here, the movement changes its course and smoothly continues in the perpendicular direction *towards* the CL(TREE), which was persevered by the H2. On the other hand, 'boy' and 'tree' are signed overtly in (16). First, BOY is signed at the signer's contralateral temple. After producing the sign TREE, H1 is persevered in space as CL(TREE), while H2 once again articulates the sign BOY – this time at the signer's contralateral temple. Then, the H2 drops until it is levelled with the CL(TREE). At this point, the movement changes its course (again without a hold) and continues in the perpendicular direction *away* from the CL(TREE).

(15)

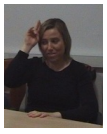
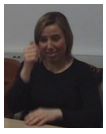
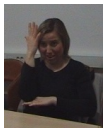

TREE$_a$

H1: $_b$BE-LOCATED-CL(A)$_a$
H2: .....

Stimulus

'Someone is next to a/the tree to the left.' (SZJ; loc25n)

(16)

BOY$_a$ CL(A)$_a$ TREE$_b$

H1: .....
H2: BOY$_c$ BE-LOCATED-CL(A)$_c$

Stimulus

'A/the boy is near a/the tree to the right.' (SZJ; loc22n)

Indeed, in locative predicates, the second segment of a movement subcomponent, a measure movement, starts on the axis that is relevant for the Figure's configuration with respect to the Ground – and continues on this axis either towards the Ground or away from it. In (15), the measure movement is directed towards the Ground and there is no gap left in between H1 and H2 after they come to a hold at the end of the predicate. Consequently, the utterance

encodes the spatial configuration of a Figure being *at/next to* the Ground. In (16), the measure movement is directed away from the Ground and there is a gap left between H1 and H2 after they come to a hold at the end of the predicate. Consequently, the utterance does not encode the configuration of a Figure being at/next to the Ground but *near* the Ground. It seems as if the gap between H1 and H2 represented the distance between the Figure and the Ground. Therefore, I compare this gap to measure phrases such as *sixty feet* in the English example (7b) above. However, the distance between H1 and H2 does not represent the distance between the Figure and Ground directly, as I will show in the SZJ example (17).

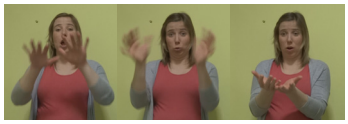
In example (17), the H2 5-shaped classifier that represents the axial part of the Ground BALL is persevered during the production of the predicate. Note that the 5-shaped classifier does not mark the Ground's surface that is the closest to the Figure with respect to the position of the Figure.[4] The addressee has to take into consideration that the Ground is a ball, therefore a spherical entity, and then he also has to visualize the sphere in order to decode the actual position of the Figure with respect to the Ground. In this example, the Figure is positioned *on* the Ground, not *above* it. To be precise: the distance of the Figure with respect to Ground's surface is zero. This is evident from the stimulus picture and is also a matter of common sense: penguins usually do not float in the air above balls. But, is this information also encoded linguistically? Is there a difference between example (16), where there *is a distance* between the Figure and the Ground (and a measure phrase is expected to be present in the construction), and example (17), where there *is no distance* between the Figure and the Ground (and a measure phrase is not expected to be present in the construction)? Note, of course, that in both examples there *is* a gap left between H1 and H2 after they both come to a hold!

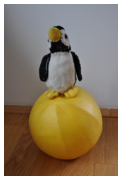
The key to this answer is the direction of movement and the behaviour of the H2. In (16), but not in (17), the H2 is not stationary. Its movement starts only after the H1 has executed the carrier movement and has reached the relevant geometrical axis. At that point, both H1 and H2 start moving in the very same direction – away from the Ground's R-locus.

I conclude that the measure phrase in SZJ locative constructions consists of two components: H1 movement and H2 movement. If H2 does not move, the H1 moves towards the Ground's R-locus and covers the full distance on the relevant geometrical axis in order to reach it. This way, the meanings 'on' and 'under' (y axis), 'at the right' and 'at the left' (x axis) and 'in front of' and 'behind' (z axis) are encoded. If H2 does move, both hands move away from the Ground's R-locus, and the distance between H1 and H2 on the relevant axis is persevered. This way, the meanings 'this distance above' and 'this distance below' (y axis), 'this distance to the right of' and 'this distance to the left of' (x axis) and 'this distance in front of' and 'this distance behind' (y axis) are encoded. According to my informants' intuition, verified in a grammatical judgements test, a configuration in which a Figure and a Ground are not on one and the same geometrical axis (either x, y or z) is not possible to encode with a locative classifier predicate in SZJ.

[4] This unexpected axial part is due to the fact that the sign BALL is expressed by the hands starting at the top, tracing the circular shape and coming together again at the bottom. Once there, due to phonetic or phonological reasons the H2 does not resume the expected position and orientation that would represent the relevant axial part of the BALL.

(17)



top
BALL — **H1:** STAND **H2:** CL(B) — PENGUIN — Stimulus

'A/the dog stands on a/the ball.' (SZJ; loc11n)

3 Conclusion

In this article, I pursued an analysis of the functions that H2 may carry out in SZJ locative constructions. I analysed the H2 perseveration as a Ground classifier during the production of the Figure and as Ground's axial part classifier during the production of the predicate. I showed that the movement subcomponent in SZJ locative predicates may be carried out either by the H1 alone or by both H1 and H2. If H1 is directed towards the Ground's R-locus, H2 does not move and the measure phrase is zero (and not realised in the structure). If H1 is directed away from the Ground's R-locus, H2 moves along with H1 and the measure phrase is not zero. Furthermore, in SZJ locative predicates, the movement subcomponent is constrained so that it can only connect two R-loci on the same geometrical axis.[5] It is to be researched in the future why this constraint applies in SZJ and whether it can be deduced from the linguistic organisation of signing space. If this is indeed the case, such constraint is expected to restrict the locative movement in other sign languages, too.

Acknowledgments

This study is based on subsections 7.4 and 7.5 of my doctoral thesis. It was partially supported by the Scholarship for Slovenian citizens for postgraduate study abroad number 11010-716/2012, COST Action summer school grant IS1006-060614-044777 and Ca' Foscari internal funds for PhD mobility. Slovenian association of deaf clubs helped me to establish and maintain contact with SZJ interpreters and native deaf signers. For their generous collaboration, I am greatly indebted to them all. I am also grateful to my supervisor Chiara Branchini, Roland Pfau, anonymous reviewers and audience of FEAST 2017 in Reykjavik. All the remaining errors are my own.

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[5] Note that the described constraint does not prevent the signers to encode the locative relation in which the Figure would not be placed on the same geometrical axis as the Ground – only that in this case, the signers would use two independent locative predicates in which both locative arguments would function as Figures with respect to the non-specified Ground in the neutral signing space.

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