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# A quantitative analysis of the use of posture verbs by French-speaking learners of Dutch

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## *Résumés*

This article presents a study of the use of the Dutch cardinal posture verbs *staan* ('stand'), *liggen* ('lie') and *zitten* ('sit') by French-speaking learners of Dutch; the data is drawn from a corpus of semi-spontaneous oral picture descriptions. Due to the typological differences between French and Dutch in the spatial domain (see Talmy 2000; Lemmens & Slobin 2008), the use of posture verbs is a highly problematic subject for French-speaking learners of Dutch. As a result, their interlanguage is typically characterized by an *overall underuse* of posture verbs as well as a *confusion* of the different posture verbs. Our study evaluates how the use of the posture verbs by the learners aligns with their level of proficiency. Strikingly, the statistical tendencies in our data show that a higher proficiency does not correspond to a more accurate use of posture verbs. At first sight, this seems to suggest that advanced learners have become worse at the use of posture verbs. A more refined analysis, however, shows that despite the increase of errors, the learners adopt more native-like strategies as their level of foreign language proficiency increases, suggesting that they gradually become more aware of the strong locative character of Dutch.

Cet article présente une étude de l'utilisation des verbes de posture cardinaux du néerlandais *staan* ('être debout'), *liggen* ('être allongé') et *zitten* ('être assis') par des apprenants francophones. Nos données sont tirées d'un corpus de descriptions semi-spontanées d'images à l'oral. En raison des différences typologiques entre le français et le néerlandais dans le domaine spatial (cf. Talmy 2000; Lemmens & Slobin 2008), l'usage des verbes de posture est un sujet particulièrement problématique pour les apprenants francophones du néerlandais. De ce fait, leur interlangue présente typiquement une sous-utilisation générale des verbes de posture ainsi qu'une confusion entre ces différents verbes. Notre étude évalue dans quelle mesure l'usage des verbes de posture par les apprenants est lié à leur maîtrise de la langue. De manière frappante, les tendances statistiques dans nos données montrent qu'une meilleure maîtrise de la langue n'implique pas forcément une utilisation plus juste des verbes de posture. À première vue, il semblerait que la compétence des apprenants avancés dans l'usage de ces verbes se détériore. Cependant, une analyse plus approfondie révèle qu'à mesure que leur maîtrise de la langue s'accroît, et en dépit d'une augmentation des erreurs, les apprenants adoptent des stratégies plus proches de celles des locuteurs natifs, ce qui suggère qu'ils deviennent progressivement plus sensibles au caractère fortement locatif du néerlandais.

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*Texte intégral*

# 1 Introduction

1    All languages seem to have lexical patterns that learners find extremely strange or exotic.[1] For Dutch, this certainly holds true for the use of the three cardinal posture verbs *zitten* ('sit'), *liggen* ('lie') and *staan* ('stand'). This is because these verbs have grammaticalised in Dutch to "basic locative verbs" that, in addition to their prototypical reference to human posture[2] are used to express the location of any entity (locative use); they are also used in a wide range of idiomatic or metaphorical expressions. Their grammaticalisation has continued into aspectual uses, expressing progressive aspect (see Lemmens 2005a) where the posture verbs continue their locative uses (e.g., progressives with inanimate 'agents') and in some contexts, the ongoing activity is plainly incompatible with the semantics of the posture verb, as, e.g., in *zitten rond te lopen* 'sit to walk around' (= be walking around).

2    This article presents a quantitative study, based on elicited production data (semi-spontaneous picture descriptions), of the difficulties that (Belgian) French-speaking learners of Dutch encounter during the acquisition of these verbs. The results that we present in this paper confirm the earlier findings in Lemmens & Perrez (2010), analysing written learner productions (essays), but they also align with more general findings in the literature on learner proficiency (cf. Viberg 1998, Gullberg 2009, Narasimhan & Gullberg 2011).[3] The present study adds some new insights to the literature as well. First of all, our analysis is concerned with static location, rather than placement verbs (in addition to the cited studies, see also Kopecka & Narasimhan 2012). While similar to some extent, the two domains are still different. Secondly, we discuss different types of errors that learners make in their locative descriptions, even if the main focus of the present paper is quantitative.

3    The article is structured as follows. Section 2 below sketches the background to the use of posture verbs in Dutch, essential to understand the strong postural logic of Dutch and the difficulties it poses for the French learners. In Section 3, we will present the methodology and data underlying the current study. Section 4 gives the main results of our quantitative analysis, which will be discussed in more detail in Section 5.

# 2. Dutch posture verbs: L1 and L2 perspectives

4    The difficulties that French learners have with the acquisition of posture verbs in Dutch can be explained against the background of a more fundamental typological difference between Germanic and Romance languages: the former have a high tendency to use manner verbs for both motion and location events, whereas the latter typically do not, and often cannot (see Talmy 2000). The details of these differences do not really concern us here (see Lemmens 2005b and Lemmens & Slobin 2008 for a more thorough description); suffice it to retain that French tends to be fairly vague about manner of location (hence, we could characterise it as essentially "location-poor"), whereas Dutch tends to be "location-rich", encoding more locational detail, particularly through the (obligatory use of) posture verbs. In other words, when learning Dutch, French speakers must reconstruct the semantic categories via a

one-to-many mapping, i.e. from a single semantic category expressed by the general verb *être* 'be' to semantically differentiated categories expressed by the three posture verbs. As has been shown in the literature (e.g., Viberg 1998; Pavlenko & Driagina, 2007), this kind of mapping seems particularly difficult. Phrased in Narasimhan & Gullberg's (2011) terms, the factors that play a role here are (i) L2 input frequency, which is very high for Dutch posture verbs,[4] and (ii) semantic transparency, which given the semasiological and onomasiological variation is undoubtedly quite opaque to the French learners.

5    The difficulty that French learners have acquiring Dutch posture verbs is perhaps best illustrated by the following example from our corpus of elicited descriptions (see Section below for a description of the corpus), said by the same speaker (but relative to different pictures).

(1)    a.    *Twee andere klanten **zijn** … **zitten** (en)fin euh non … **staan** voor de comptoir* (OPD-Du2F-14-2)[5]

              two other costumers **are** … **sit** … well err no … **stand** in front of the counter

       b.    *De eerste **is** euh **ligt** euh* <gesture> *op de linkse hoek van de foto. Ja, ik zeg **ligt** maar dat kan ook **staat** zijn.*(OPD-Du2F-14-2)

              the first **is** err **lies** err <gesture> on the left corner of the picture. Yes, I say **lies** but that can also be **stands**

6    In (1a), the speaker initially uses the neutral verb *zijn* ('be), then selects the wrong posture verb (*zitten*), then corrects this to *staan*, the appropriate verb encode the posture of these customers. To a native speaker, such hesitation is quite striking given the salient semantic difference between the last two choices. In (1b), the speaker, talking about the location of a chair, provides a meta-linguistic comment on her own coding, indicating her hesitation as to which verb should be used.

7    As has been pointed out elsewhere (see Lemmens 2002b; Lemmens & Perrez 2010), the difficulties that French learners have with the use of Dutch posture verbs can be situated on three interrelated levels: (i) coding flexibility, (ii) coding variability and (iii) coding obligation. As the term suggest, **coding flexibility** refers to the wide range of semantic extensions (semasiological variation) that the posture verbs have in Dutch, given their grammaticalisation to basic locational verbs, expressing the location of ***any*** entity, animate or inanimate (or even abstract sometimes). The second difficulty concerns the **coding variation**, which represents the other side of the coding coin (onomasiological variation), since one and the same spatial configuration, such as for example in *De boter _____ in de koelkast* ('the butter _____ in the refrigerator') may be coded either with *staan* (in which case it metonymically refers to the butter dish 'standing' on its base), with *liggen* (in which case it talks about the package typically lying on its longest side), or with *zitten* (an "a-positional" usage referring to containment only). Often, (French) L2 speakers are misled by the entities' real dimensions, as in the following example.

(2)    *in het midden van van* [sic] *de kamer **ligt** een bed* (OPD-Du2F-10-3)

       in the middle of of [sic] the room **lies** a bed

8    A bed has a salient horizontal dimension/orientation which leads the learner to code it as 'lying' whereas in Dutch *staan* ('stand') is to be used (motivation: ENTITY ON ITS BASE, see below).

9    The third level of difficulty, the **coding obligation**, concerns the fact that the use of a posture verb is (usually) obligatory in Dutch whenever an entity is located in space, whereas in French (but also in other Germanic languages, like English), it is quite common (if not required) to use a neutral verb, usually a verb of EXISTENCE (such as *be/être*) in locative predications.[6]

(3)    a.    *de tweede klant* (*)*is aan de deur* (OPD-Du2F-14-2)

the second customer **is** at the door

b.  *en de stoel* (*)**is** *euh naast de … bathroom* (OPD-Du2F-11-1)

and the chair **is** err next-to the … bathroom

10  For both sentences, the use of *zijn* ('be') is quite inappropriate and highly unidiomatic.[7]

11  As pointed out by Lemmens & Perrez (2010), French learners will in general make two major types of "errors" as far as posture verbs are concerned. On the one hand, they will, under influence of usage patterns in their mother tongue, refrain from using a posture verb in locative contexts and use a neutral verb instead (notably, *zijn* "be"), as in (3) above. We will term this **posture verb underuse**. On the other hand, as illustrated in (2) above, they may choose the wrong posture verb; this type of error we call **posture verb confusion**. Interestingly, the learner data analysed for this study also show cases of **posture verb overuse** where a posture verb is used in a context where none is allowed and a neutral verb is to be used. Strikingly, the last two types of errors occur with learners of a higher level of proficiency. Posture verb overuse is a more specific instance of overgeneralisation errors that have been described in the literature.

12  In order to understand the importance of posture verbs in Dutch, it is warranted that we give a short overview of their basic usage patterns. We cannot afford to give a full overview here, but restrict ourselves to the major locative usages (and their motivations) necessary to understand the issues at work in the learner data. In this paper, we are only concerned with locative events and we fairly much ignore the (extensive) metaphorical uses of these verbs.[8] For a more detailed analysis of Dutch posture (and placement) verbs, the reader is referred to Lemmens (2002; 2006).

13  In line with the verbs' prototypical meaning, referring to the three basic human postures, the basic opposition between *staan* ('stand') and *liggen* ('lie') may at first sight seem to be the different ontological dimensions: *staan* codes entities that are saliently vertical (similar to standing humans), whereas *liggen* is used for entities that are saliently horizontal (in analogy to a lying human being). *Zitten* would in this respect be neither horizontal nor vertical. However, while this holds for some cases, this is only partially correct, since in many contexts, it is not the real dimensions that play a role. For *staan*, the basic key to its usage is whether the entity in question has legs or a base (analogous to human feet). In other words, if the located entity has a side on which it rests when it is in its canonical and/or functional position, *staan* is to be used, regardless of the entity's verticality. This explains why bottles, cups, plates and saucers, computers, cars, all types of furniture, boxes, and other kinds of functional objects are all said to be standing when they are resting on their base. A case in point is the position of plates: if they are in a functional position on their base, *staan* is used; however, if they are upside-down, one uses *liggen*. In both contexts, the vertical orientation in reality is identical. Similarly, a car on its side is higher than when it is on its wheels; nevertheless, *liggen* is used in the former context and *staan* in the latter. In short, the opposition between *staan* and *liggen* is most often explained in terms of BE ON ONE'S BASE, where the base is the origin of a mental vertical scanning operation (see also Serra-Borneto 1996). It is only in the absence of a base that the real dimensions come into play for entities that display a (salient) difference in height and width. A book, for example, does not really have a base; if it is in an upright position (on its smallest side, like in a bookshelf) *staan* will be used, *liggen* if it is on its front or its back. Even if the entity in question has a base, but this base has been cancelled out in the spatial configuration, *staan* can be used if the orientation is **saliently** vertical. As said, a car on its side would typically be coded with *liggen* but when it is positioned upright on its front, one could use *staan*; similarly, dishes placed in the dishwasher are typically coded with *staan*. Notice that in such contexts, one could say that the notion of a base has become irrelevant in the

conceptualisation, in which case the real dimensions become determinative.

14    A special case are symmetrical entities, lacking any differentiation in terms of verticality or horizontality. Interestingly, Dutch has extended the verb *liggen* to encode these, which explains why the location of balls, dice, wads, and the like are all expressed by *liggen*. Similarly, Dutch uses *liggen* to encode the location of non-rigid entities, like clothes, ropes, and all kinds of substances. These entities not only lack a base but also the rigidity to keep themselves in a 'standing' (vertical) position. Unless constrained by some container, these entities automatically take a horizontal extension under the forces of gravity. Hence, the metonymical relation underlying the pair *Het zout **staat** op tafel* (the salt stands on (the) table), which refers to salt in the saltshaker that is standing (i.e., resting on its base) on the table versus *Het zout **lies** op tafel* (the salt lies on (the) table), which is referring to (a heap of) loose grains of salt on the table.

15    *Zitten* is a particularly interesting verb, which has extended its semantic coverage to encode contexts of CLOSE CONTAINMENT or CLOSE CONTACT, where the actual position of the entity contained (or stuck onto something) is totally cancelled out and typically varies along with variations of orientation of the container. Continuing our example above, one could thus say, in Dutch, that the salt is 'sitting' in the salt shaker (cf. also our earlier example about the butter 'sitting' in the fridge = "being contained in"). The tricky part with CONTAINMENT *zitten* is that its use is influenced by the closeness of the containment: the larger the container *vis-à-vis* the entity contained, the more likely it is that the position of the latter will determine which verb is to be used. A bottle of milk could be said to be standing in the fridge but to be sitting in the bag (even if upright). For learners, this gives rise to a double difficulty: not only is closeness of containment a gradable notion, one may, in some cases of loose containment, still decide to highlight the idea of containment rather than the entity's position (cf. our example of the butter in the fridge). As we will show, learners do have some difficulty with that (cf. section ).

16    Two special cases deserve to be mentioned here: location in the air and location in liquids. In case the entity is suspended, typically the verb *hangen* 'hang' is used; the number of contact points is not all that relevant for Dutch, and there may even be none at all (e.g., an object hanging in mid-air without any contact point is also coded with *hangen*). In our data set there are quite a number of entities hanging usually with one or more contact points (on the wall, on hooks, on bars, etc.). Things get more complicated with location in liquids. Typically, when immersion is at issue, *zitten* is a typical coding, referring to being contained in the liquid, e.g. *er zit veel vuil in het water* 'there sits a lot of dirt in the water'. Strikingly, if the object is floating on the surface of a liquid, the verb *drijven* 'float' is used (which can code both dynamic and static situations, see Lemmens & Divjak 2006) or *liggen*. The latter is clearly experientially motivated, as objects floating on the surface will assume a horizontal extension, and their base (if they have one) is no longer relevant. In other words, if a bottle floating on the water (typically but not necessarily on its side), it will be said in Dutch to be 'lying' on/in the water. In our stimuli, there are no cases of entities located in liquids.

17    As described in more detail below, the pictures used in our elicitation experiment trigger the expression of the location of a wide range of entities (some of which were targeted in the guiding questions in the experiment instructions). Here is a (non-exhaustive) overview of some of the entities referred to and the posture verb(s) that is (are) typically used (or expected):

- **people**: *zitten* or *staan* (not *liggen*, since no human is portrayed in a lying posture)
- **pieces of furniture** (bed, cupboard, dresser, table, chair, stool): *staan* (entity on base)
- **clothes**: *liggen* (non rigid entity); *hangen* 'hang' (when suspended); *zitten*

(when (closely) contained)

- **shoes**: *staan* (when on their base) or *liggen* (when not on their base)
- **handbags**: *staan* (on their base) (not *liggen* since no handbag is portrayed that is not on its base)
- **vegetables**: *liggen* (mostly round or elongated shape), *zitten* (containment), *hangen* (some are suspended)
- **meat & delicacies** (sausages, cheese, etc.): typically *liggen* (substance or elongated shape and no base), for some, *staan* (metonymical reference to container on base), *hangen* (suspended hams and sausages)

18      Overall in the descriptions, there is a higher frequency of entities whose location is typically expressed (or, for the learner data, should have been expressed) with *staan* (given again the importance of the notion of a base): pieces of furniture, shoes (most of them are on their base), handbags, goods in containers, etc.

# 3. Data and method

## 3.1 Elicitation study (Oral Picture Description)

19      The data used for the present study is part of a larger data set for different languages (comprising for the moment English, Dutch, French and Swedish) as used by native speakers and learners.[9] For all languages, the set-up is the same and the data concerns elicited descriptions of five pictures taken from two wordless children's books.[10] Each picture displays a different type of environment: (1) a clothing shop for kids, (2) a shoe store, (3) a bedroom, (4) a street market and (5) a butcher's shop. They are rich in detail, with lots of entities located in different manners and in different places. Each picture has a typical array of objects, respectively: clothes (P1), shoes and bags (P2), furniture and clothes (P3), vegetables (P3; at three vegetable stands), and meat and delicacies (P5). The subjects were to describe these pictures successively, but for each there was a lead-question, targeting particular entities, e.g., *Can you tell me where the clothes are in this shop and what type of clothes they are?* (see Appendix A for the full list of stimuli questions). The questions were always double in scope (as here: *Where ...?* and *What type ...?*); a simple question (like, e.g., *Where are the clothes?*) would most likely have triggered enumerative answers with verbless clauses (e.g., *The clothes are on the wall, on the counter, in the shelves*) which would be fairly useless for our purposes. A double-scope question minimises the chances for such answers, even if enumeration is never totally excluded.[11] For all pictures except Picture 2 there was only one question; only for Picture 2 (the shoe shop) there were two questions, the first one asking about the shoes and the bags, and the second one (asked after the first answer was finished) inquiring about the whereabouts of the customers. The latter is to include one lead-question targeting the location of human beings; this is particularly interesting in comparison with French, where apart from some rare exception human posture is the only context in which posture verbs (*être assis* 'be seated', *être couché* 'be lying', *être debout* 'be upright') can be used (but even then often are not, as it turns out).

20      The subjects were presented one picture at a time, were given the lead-question and could look at the picture for a while before putting it on a stand to their right and beginning their description. The order of presentation of the pictures was rotated randomly for the participants in order to avoid any order effect (see Appendix B for a summary of the randomized order of the pictures for the participants). The subjects were seated on a chair without arm-rests. They were video-taped to allow later analysis of co-verbal gesture as well (cf. Dubois 2010, Peyré 2012, Peyré & Lemmens

2012). Their descriptions were transcribed verbatim (using CHAT). For the contrastive study of locative verbs, all locative clauses were manually extracted from these descriptions (see below).

## 3.2 Subjects and experiments

21    Twenty-two Belgian French-speaking learners of Dutch (18 female and 4 male subjects) took part in this oral picture description study. These learners are all undergraduate students majoring in Dutch and one other Germanic language (English or German in this case) studying in Brussels. Depending on their specific profile, they have started learning Dutch either at the beginning of their basic school education (e.g., at the age of 6) or at the beginning of their secondary school education (e.g. at the age of 12). This means they have respectively been learning Dutch in an explicit instruction context for 12 and 6 years before beginning their academic curriculum. Most of them come from Brussels or the surrounding French-speaking area. This implies that they exclusively use French in their daily interactions but that they might be more frequently exposed to Dutch as a second language in some public contexts (in the train, on the street, etc.) than learners living in the French-speaking part of Belgium (see Mettewie 2004 for more detailed information about French-speaking learners of Dutch in Belgium). These learners did not receive any specific instruction on the use of posture verbs before they took part to the Oral Picture Description.[12] The learners were divided in three proficiency groups on the basis of their results on an independent foreign language proficiency test. This test has been developed at the Institute of Modern Languages (ILT) of the *KU Leuven* (University of Leuven) in collaboration with other institutions to assess the proficiency level of incoming students in order to distribute them into appropriate groups.[13] The test, composed of 80 items, aims at measuring the grammatical and lexical knowledge of the students as well as their reading and listening proficiency. Table 1 gives a general overview of the scores on the basis of which we defined three different FL proficiency groups for our subjects.

| Groups | N students | Mean score (max. = 80) | MIN | MAX | STD |
|--------|------------|------------------------|-----|-----|-----|
| FLP1[14] | 8 | 49.25 | 47 | 53 | 2.37 |
| FLP2 | 7 | 60.00 | 56 | 64 | 2.76 |
| FLP3 | 7 | 69.85 | 67 | 74 | 2.54 |
| TOTAL | 22 | 59.22 | 47 | 74 | 9.03 |

Table 1: Foreign language proficiency groups

22    A one-way ANOVA ($F_{(2,19)}$=121.58, p<0.001) confirms that the group's proficiency scores differed significantly from each other. These learner groups can therefore be considered as being representative of different stages of foreign language acquisition.

23    As a control group, we used the descriptions of 12 native speakers of (Belgian) Dutch (3 male, 9 female), all students at the KU Leuven, coming from different regions in Flanders (the Dutch speaking part of Belgium).

## 3.3 Coding

24    For the contrastive study of locative verbs, all locative sentences were manually extracted from the descriptions. The definition of what constitutes a locative sentence is not without problems. Take for example a sentence like the following (translated from the Dutch L1 corpus): *on the bed [that stands in the middle of the room], there lie clothes.* From a strictly grammatical perspective, there are two

locative clauses, the main clause locating the clothes (using *liggen*), and a relative clause locating the bed (using *staan*), which functions as the Ground for locating the clothes. From a discourse-functional perspective, one could argue that there is only one locative event locating the clothes, the relative clause (locating the bed) merely being auxiliary to the successful identification of the clothes' location. Since for the present study, we are particularly concerned with the use of locative verbs, we followed the strictly grammatical perspective and coded these as two separate clauses.

25    In our analysis, a locative clause is fairly broadly defined as any clause that contains a locative element, be this a locative verb (such as a posture or placement verb) or a locative phrase (adverbs like *there* or *here*, prepositional phrases like *on the bed* or *next to the counter*, or particles). This means that a sentence like *A man is tying his tie in front of the mirror* has also been counted as a locative clause, given the locative adjunct *in front of the mirror*. The subsequent coding will indicate that the verb that is used is an action verb, which sets it apart from the clauses with a stative locative verb (be it the copula *be* or a more specific posture verb). The criterion of a locative element means that a (presentational) sentence like *There are clothes on the bed* counts as one single locative, but so does *There are clothes that lie on the bed* even if, strictly speaking, there are two clauses. The reason for considering this sentence as a single locative is that there is no locative information if the relative clause is left out (*there are clothes*). The fact that this is a presentational clause followed by a subclause with more specific locative information has been marked explicitly in the coding.

26    All the locative clauses have been imported into a spreadsheet where they were further coded for a number of variables, of which the most important ones are the following.[15]

- ***Figure***: identifies the entity located (general labels are used, e.g., *clothes*, *shoes*, etc.)
- ***Ground***: identifies the entity that is the reference point, need not be the supporting ground (even if it often is)
- ***Verb***:infinitive of the verb used
- ***Verb type***: larger semantic verb categories, i.e., Postural, Neutral, Possessive, Perception, Disposition, and Other.
- ***Use***: postural, locational or metaphorical
- ***Construction***: e.g., Presentational, Basic Locative Construction, Identificational
- ***Verb Satellites***: identifies possible additional elements, e.g. *liggen uitgespreid* (lit. 'lie **out-spread**' = 'lie scattered out')
- ***Level of proficiency***: 1, 2, or 3
- ***Error***: identifies the sentence as an error and marks the type of error (underuse, overuse, confusion).
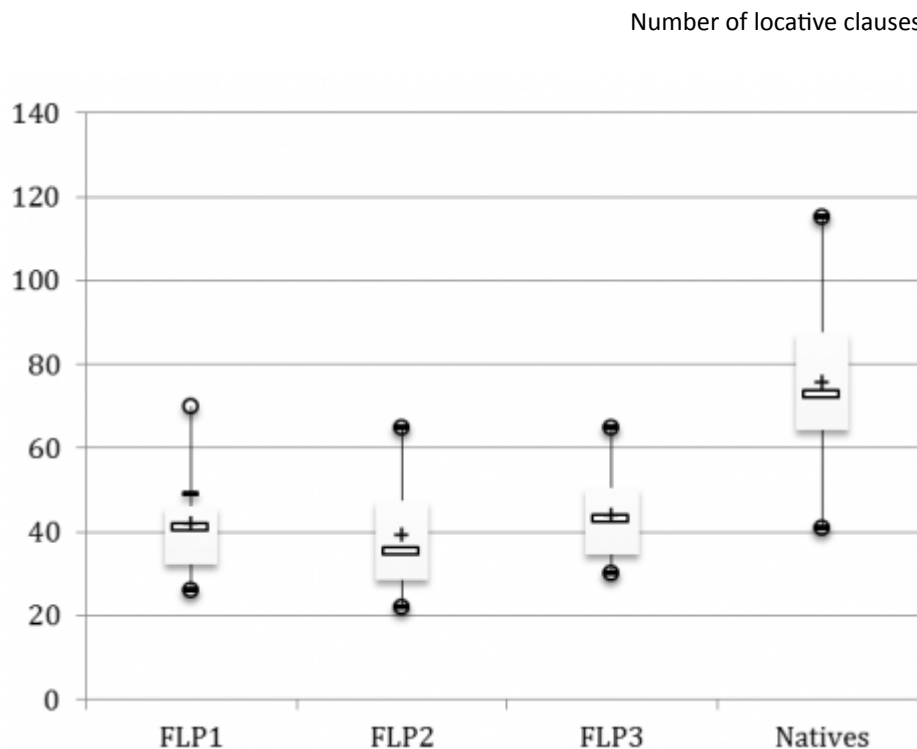
27    We emphasize that while we mark some uses with the label "error" (which, from a L1 perspective these sentences may very well be), they may be quite motivated (and thus, in a sense correct) within the learner language. For the sake of convenience, we will continue to use the term "error", but this should more appropriately be understood as "L2 coding decision". Importantly, the category of "error" is not an all-or-nothing affair. In many cases, it was fairly straightforward to identify a usage as infelicitous or highly unidiomatic, but in other cases, it was not. Such "errors" have been identified via two sources: (i) our intuitions (errors were marked as such only if both authors agreed on this) and (ii) a comparison with the native speaker data. The latter was particularly important for the use of neutral verbs in a locative context: if a comparable construction had been attested in the native data, it was (obviously) not counted as an error. Ideally, an independent source for error judgment should be

used, e.g., via acceptability judgments by more native speakers; this was not possible within the scope of this paper, but is planned for the future.

# 4. Results

## 4.1 General harvest

28     A first observation concerns individual variation in the production of locative clauses within the proficiency groups as well as between them. For example, the most prolific learner (FLP1) produced 70 locative clauses, whereas the least prolific one (FLP2) only produced 22 locative clauses. The same observation goes for the native speakers: the most prolific one produced 115 locative clauses whereas the least prolific one only produced 41 clauses (which equals the mean production score of the learners). The high level of individual variation in the production of locative clauses is further illustrated by Graph 1, which points to rather dissymmetric distributions among the different groups.

Number of locative clauses



Graph 1: Production of locative clauses across the proficiency levels

| Groups | N | Mean score | STD | MED | MIN | MAX |
|---|---|---|---|---|---|---|
| **FLP1** | 8 | 41.87 | 13.85 | 41 | 26 | 70 |
| **FLP2** | 7 | 39.14 | 15.78 | 35 | 22 | 65 |
| **FLP3** | 7 | 44 | 12.70 | 43 | 30 | 65 |
| **Learners (total)** | 22 | 41.68 | 13.60 | 38,5 | 22 | 70 |
| **Native speakers** | 12 | 75.66 | 21.62 | 72,5 | 41 | 115 |

Table 2: Production of locative clauses across the proficiency levels

29     Graph 1 and Table 2 also suggest that the native speakers on average produce more locative clauses per interview than the learners. A one-way ANOVA confirms that this difference is significant ($F_{(3,30)}=10.112$, $p<0.0001$). Further post-hoc tests according

to the Bonferroni method indicate that the native speakers significantly produce more locative clauses than the learners of the three proficiency groups (Native speakers vs. FLP1: p<0.001; Native speakers vs. FLP2: p<0.001; Native speakers vs. FLP3: p<0.005). However, these post-hoc comparisons do not show further significant differences between the learners of the different proficiency groups (p=1.000 for all inter-group comparisons). This suggests that, although native speakers of Dutch seem to produce locative clauses more easily in their descriptions, the overall production of locative clauses by the learners is not dependent on their level of proficiency in the target language.

## 4.2 Verb types

30      The general overview given in the preceding section considers all the verbs used by the learners and native speakers in locative sentences. This section will discuss these verb types in more detail. The discussion will not include all the categories included in the overview in Section 2. First of all, the category of DISPOSITION verbs is too small to be of any significance, even in the native data (2 occurrences). These concern locative verbs, such as *scattered* or *spread out* or a*ttached*, which provide some more precise information about the entity's disposition.[16] Also the category of OTHER verbs will not be considered in our more detailed comparison; while there is a striking difference between the learners (1 occurrence, level 1) and the native speakers (39 occurrences), they concern a wide variety of non-locative verbs and are thus not really relevant to the scope of our study. Finally, the cases where no verb was used (ELLIPSIS) have also been excluded. There are several reasons for doing so. First of all, the use of ellipsis does not constitute a typological difference, since it can be used both in Dutch and in French. Secondly, the elliptical uses are quite a heterogeneous group, both within and across the groups, where the learners do seem to use it differently than the native speakers. Its use, which does increase slightly with each level, seems to indicate a higher degree of general discourse fluency rather than a mastering of the location verbs. Finally, the cases of ellipsis are sometimes quite problematic, even in the native data. Consider the following example, said by a native speaker of (Belgian) Dutch, in which the second and the third clause omit the verb (between square brackets).

(4)     *er **hangt** ook vlees aan de plafond aan haken en [er **hangen**] worsten meer aan de rechterkant … en helemaal rechts in de winkel  [\***hangen** er] zakjes chips en koekjes en zo* . (OPD-DU-01)
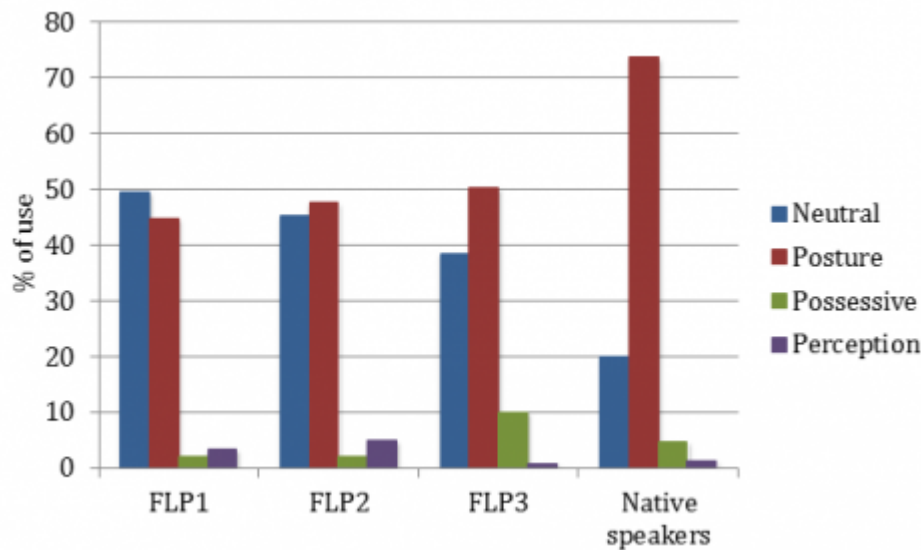
there **hangs** also meat on the ceiling on hooks and [there **hang**] sausages more to the right … and fully to the right in the store [there \***hang**] bags and cookies and so

31      While the first ellipsis is correct (the sausages are indeed hanging down from a bar on the ceiling), the one in the last clause is semantically incompatible with *hang*, as the bags of cookies are resting on their base; the verb to be 'reconstructed' is thus *staan* ('stand'). This shows that elliptical cases are semantically more complicated than they may seem at first; as such, it is warranted to leave them out in our comparison of verb types. Table 3 and Graph 2 show the overall distribution of verbs in the learner data and compare it to that of the native speaker data.

| Verbs | FLP1 | | FLP2 | | FLP3 | | Native Speakers | |
|---|---|---|---|---|---|---|---|---|
|  | N | % | N | % | N | % | N | % |
| Neutral | 146 | 49.65% | 110 | 45.30% | 95 | 38.60% | 132 | 20.15% |
| Posture | 132 | 44.90% | 116 | 47.70% | 124 | 50.40% | 483 | 73.75% |
| Possessive | 6 | 2.05% | 5 | 2.05% | 25 | 10.15% | 31 | 4.75% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Perception | 10 | 3.40% | 12 | 4.95% | 2 | 0.85% | 9 | 1.35% |
| **TOTAL** | **294** | **100%** | **243** | **100%** | **246** | **100%** | **655** | **100%** |

Table 3: Overall distribution of (relevant) verb types for learners and native speakers



Graph 2: Overall distribution of verb types for learners and native speakers

32    At all three levels, the learners still follow the tendency of their native language (French) of using a neutral verb in locative contexts; there is a decrease over the three levels (49.65% – 45.3% – 38.6%), but Level 3 speakers still use these verbs almost twice as often as the native speakers (38.6% vs. 20.15%). This decrease is only partially paralleled with a slight (5%) increase of posture verbs.

33    The decrease of neutral verbs for FLP3 is also counterbalanced by, on the one hand, an increase of POSSESSION verbs, e.g., *you **have** clothes on the right* or *a lady **has** clothes in her hand* (which they use, however, double as often (percentage-wise) as the native speakers) and of ELLIPTICAL or verbless constructions, on the other hand. As said, the DISPOSITION verbs are too infrequent in both the learner and native speaker data to give any significant result. The same holds for PERCEPTION verbs (e.g., *you **see** clothes on the left wall*). In comparison with the native speakers, the learners almost never use any other type of verb in a locative clause (category OTHER). This can be explained by an overall limitation in their lexical variation.

34    In order to evaluate to what extent the observed tendencies are significant, a multinomial logistic regression analysis has been performed, where the use of the different types of verb for each group has been compared to a given reference category. In this analysis, several comparisons are carried out using each level group as a reference category.  These comparisons are presented below for each reference category (the output tables of the multinomial logistic regression are included in Appendix C). We will come back to these results in the general discussion (section 4).

35    When the native speakers are taken as reference group, we observe significant differences at various levels. Firstly, when we concentrate on the use of posture verbs, it turns out that the native speakers significantly produce more posture verbs than the FLP1 learners (p<0.005) and the FLP2 learners (p<0.001). The comparison with the most proficient learners (FLP3) is, however, not significant (p=0.854). Secondly, similar observations can be made for the possessive verbs. The native speakers significantly differ from the FLP1 (p<0.01) and FLP2 (p<0.005) learners but not from the FLP3 learners (p=0.118). Finally, the comparisons between the FL proficiency groups regarding the use of neutral verbs do not show any significant differences.

36    When the FLP3 learners are taken as reference group, significant differences can be observed at different levels as well. When focusing on the use of neutral verbs, the

FLP3 learners differ significantly from the FLP2 learners (p<0.05), but not from the FLP1 learners (p=0.133). When considering the use of posture verbs, it turns out that the FLP3 learners significantly use more posture verbs than both the FLP1 (p<0.05) and the FLP2 learners (p<0.05). The same observation can be made regarding the use of possessive verbs: FLP3 learners seem to use significantly more possessive verbs in their interviews than the FLP1 (p<0.0001) and the FLP2 learners (p<0.0001) Interestingly enough, the comparisons of the uses of the different types of verbs (neutral, posture and possessive verbs) between the FLP3 learners and the native speakers do not point to significant differences.

37      The comparisons with the FLP1 and FLP2 learners as reference groups confirm the significant differences discussed above for the various verb types and do no point to any new significant differences between these two learner groups.

38      These results show that independently of the reference categories considered, two homogenous subgroups can be identified with respect to the use of the different verb types in their locative descriptions: (i) the learners of the first two groups of foreign language proficiency (FLP1 and FLP2) and (ii) the learners of the third proficiency level (FLP3) and the native speakers. The results confirm that the decrease in neutral verb and the simultaneous increase of posture and possessive verbs across the proficiency levels is significant and, as nicely visualized by Graph 2, that the learners with the highest level of foreign language proficiency tend to behave more native-like in their encoding of locative events.
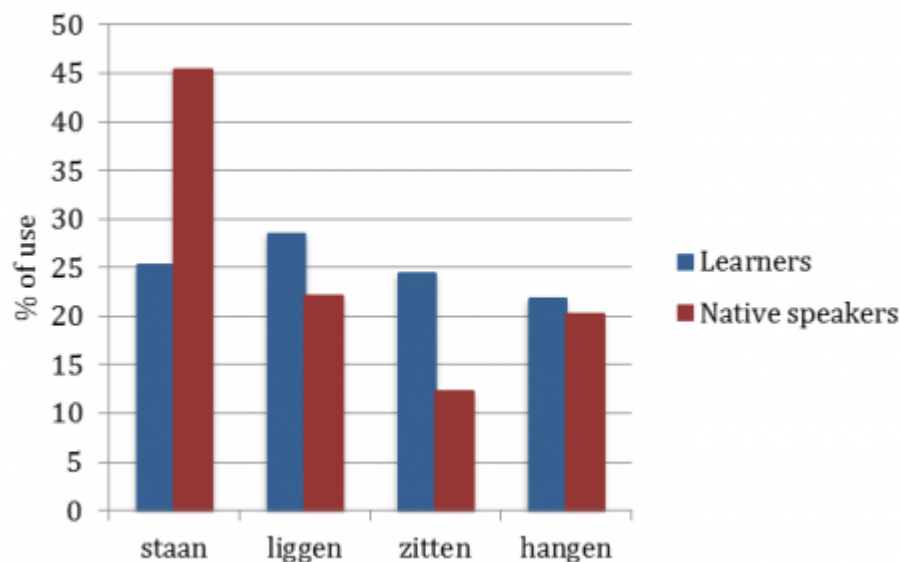
39      In the following sections, the implications of this claim will be fine-tuned by further comparisons of the specific uses of posture verbs by the learners and the native speakers.

## 4.3 Use of posture verbs

40      Looking at the use of the individual posture verbs gives the distribution tabulated in Table 4 and shown in Graph 3. Note that *hangen* has been included in the set of posture verbs given that it is a common verb for several of the items to be described (clothes hanging on the wall or on racks, sausages and vegetables hanging on hooks, etc.) and it is also a source for confusion (esp. with *staan*). The relative frequency of this verb is comparable for the two data sets.

|            | Learners |        | Native speakers |        |
|------------|----------|--------|-----------------|--------|
| **VERB**   | N        | %      | N               | %      |
| *staan*    | 94       | 25.27% | 218             | 45.42% |
| *liggen*   | 106      | 28.50% | 106             | 22.08% |
| *zitten*   | 91       | 24.46% | 59              | 12.29% |
| *hangen*   | 81       | 21.77% | 97              | 20.21% |
| **TOTAL**  | **372**  | **100%** | **480**       | **100%** |

Table 4: Overall distribution of posture types for learners and native speakers

Graph 3: Overall distribution of verb types for learners and native speakers

41    Apart from *hangen*, the frequencies for the learners and the native speakers are quite different. Percentage-wise, *staan* is used less frequently in the learner data than in the native speaker data, but *liggen* en *zitten* have a higher frequency in the learner data. A Pearson Chi-square test performed on the raw frequencies confirms that these differences are significant ($\chi^2$ = 44.573, df = 3, p < 0.001). The higher frequency of *staan* in the native speaker data could be said to line up with the claim that, all things being equal, this is the canonical (and thus most frequent) locative verb (cf. Lemmens 2002, Lemmens & Perrez 2010), yet this is only partially applicable to this data set, since metaphorical and idiomatic uses (for which the idea of a canonical verb particularly applies) have been excluded. In and by itself, the higher frequency of *staan* in the native speaker data does not mean much, since clearly, the frequency of the individual verbs depends on the stimuli. For example, two of the 6 guiding questions have a built-in bias to *staan*, asking for the location of furniture (P3) and of shoes and shoeboxes (P3); logically then, this verb will be more frequent in the descriptions.

42    The stimuli and questions being the same for both groups, the point is of course the difference between the two data sets. The underuse of *staan* and the higher use of *liggen* in the learner data is indeed partially explained by the nature of the stimuli: there are 26 cases where the learners erroneously use *liggen* instead of *staan*; 10 of these concern pieces of furniture (6 for the location of a double bed), 7 concern shoes.[17] This indicates that the learners are not yet sufficiently aware of the central role played by the feature BASE in the coding decision. The overuse of *zitten* in the learner data indicates another type of difficulty that the learners have with the CONTAINMENT relation, since they express it (via *zitten*) in contexts where the relationship between container and contained is insufficiently close for *zitten* to be used felicitously. While the preceding error with *staan* suggest an absence of awareness of patterns of use in the target language, the overuse of *zitten* indicates that the learners have become aware of at least one typical use of *zitten*[18] and overextend this; this conclusion lies in line with the findings in Lemmens & Perrez 2010 on written data.
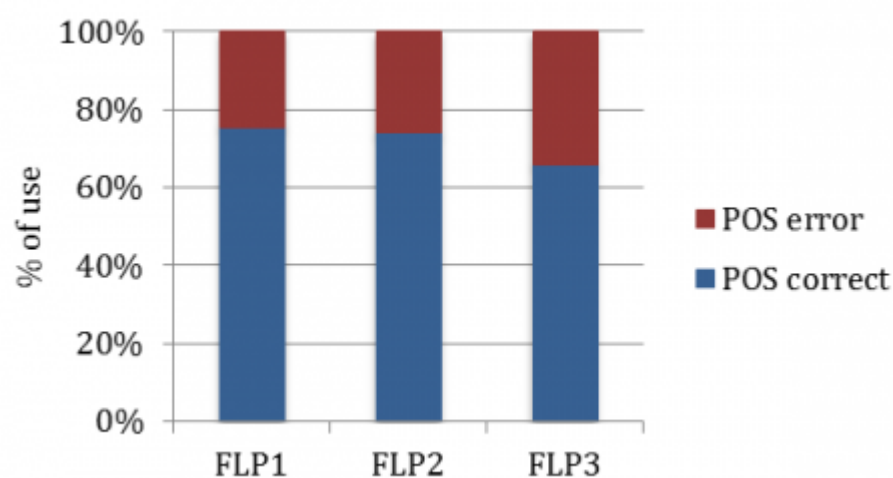
43    The following section presents a more detailed quantitative view on the posture verb errors in the learner data; after that, we will look at all the errors in the learner data.

## 4.4 Posture verbs errors

44    Table 5 below, graphically presented in Graph 4, shows that, somewhat unexpectedly, the percentage of errors in the use of posture verbs in the learner data steadily *increases* over the different levels. A Pearson chi-square test performed on the raw frequencies point out that these differences are not significant ($\chi^2$ = 3.31, df = 2, p = 0.191). While this tendency seems to suggest that the learners get worse as they reach the higher level, this is an incorrect interpretation (due to a too narrow focus). We will return to that point in the general discussion (see Section ).

|  | FLP1 | | FLP2 | | FLP3 | |
|---|---|---|---|---|---|---|
|  | N | % | N | % | N | % |
| **Total POS errors** | 32 | 24.24% | 30 | 25.86% | 42 | 33.87% |
| **Total POS correct** | 100 | 75.76% | 86 | 74.14% | 82 | 66.13% |
| **TOTAL** | **132** | **100%** | **116** | **100%** | **124** | **100%** |

Table 5: Error percentage in the learner data for use of POSTURE (POS) verbs
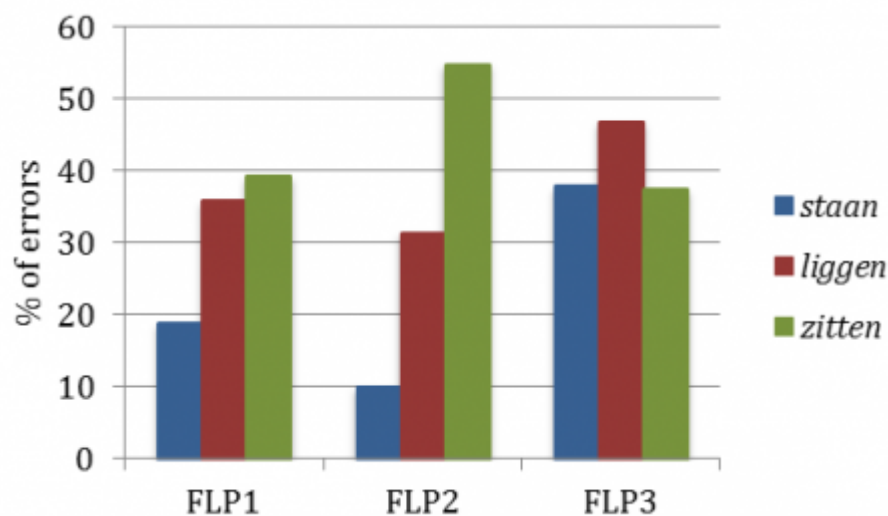


Graph 4: Distribution of correct and erroneous uses of posture verbs (POS) across the levels of proficiency

45    Table and Graph 5 below give a more detailed overview of the errors for the individual posture verbs.[19] Strikingly, *zitten* shows an evolution opposite to that of the other verbs: starting at 39%, its error rate peaks at level 2 (55%) and then decreases again (38%), whereas for the other three verbs, the error rate drops in level 2 but then increases drastically in level 3. (Since for *hangen* there is only one error, this verb can be ignored for this discussion.)

|  | Correct | | Error | | Total |
|---|---|---|---|---|---|
|  | N | % | N | % | N |
| **Level 1** | | | | | |
| *staan* | 30 | 81.08% | 7 | 18.92% | 37 |
| *liggen* | 25 | 64.10% | 14 | 35.90% | 39 |
| *zitten* | 17 | 60.71% | 11 | 39.29% | 28 |
| *hangen* | 28 | 100% | | 0% | 28 |
| **Total level 1** | **100** | 75.76% | **32** | 24.24% | **132** |
| **Level 2** | | | | | |
| *staan* | 18 | 90.00% | 2 | 10.00% | 20 |

| | N | % | N | % | N |
|---|---|---|---|---|---|
| *liggen* | 24 | 68.57% | 11 | 31.43% | 35 |
| *zitten* | 14 | 45.16% | 17 | 54.84% | 31 |
| *hangen* | 30 | 100% | | 0% | 30 |
| **Total level 2** | **86** | 74.14% | **30** | 25.86% | **116** |
| **Level 3** | | | | | |
| *staan* | 23 | 62.16% | 14 | 37.84% | 37 |
| *liggen* | 17 | 53.13% | 15 | 46.88% | 32 |
| *zitten* | 20 | 62.50% | 12 | 37.50% | 32 |
| *hangen* | 22 | 95.65% | 1 | 4.35% | 23 |
| **Total level 3** | **82** | 66.13% | **42** | 33.87% | **124** |
| **All Levels** | | | | | |
| *staan* | 71 | 75.53% | 23 | 24.47% | **93** |
| *liggen* | 66 | 62.26% | 40 | 37.74% | **91** |
| *zitten* | 51 | 56.04% | 40 | 43.96% | **106** |
| *hangen* | 80 | 98.77% | 1 | 1.23% | **81** |
| **TOTAL** | **268** | **72.04%** | **104** | **27.96%** | **372** |

Table 6: Error percentage in the learner data for use of POSTURE verbs



Graph 5: Error percentage in the learner data for the individual posture verbs

46     Posture verbs cannot be used in French to express the location of inanimate entities (locative uses), but they can be used to encode the postures of human beings. Therefore, it is interesting to examine whether learners have more difficulty with the locative uses than with postural uses (the latter being equivalent to the uses in French). The distribution, given in Table 7 below, indeed suggests a significant interaction between usage (postural or locative; the single metaphorical usage has been ignored) and error rate ($\chi^2 = 11.149$; df = 1; $p < 0.001$).

| USAGE | Correct | | Error | | Total |
|---|---|---|---|---|---|
| | N | % | N | % | **N** |

| | | | | | |
|---|---|---|---|---|---|
| Postural | 71 | 86.59% | 11 | 13.41% | **82** |
| Locational | 196 | 67.82% | 93 | 32.18% | **289** |
| Metaphorical | 1 | 100% | | 0% | **1** |
| **TOTAL** | **267** | **71.77%** | **104** | **27.96%** | **372** |

Table 7: Learner errors for POSTURE verbs in relation to usage

47    A Pearson chi-test performed on the raw frequencies suggest that the distribution of correct or incorrect across usage (postural or locational) does not differ significantly over the different proficiency levels (correct sentences: $\chi^2$=2.72; df=2; p= 0.26; erroneous sentences: $\chi^2$=5.32; df=2; p=0.07).

## 4.5 Global error analysis

48    The above error analysis only concerned the use of posture verbs. In this section, we will look at all errors taking a more onomasiological perspective, looking at the learners' coding from the contextual features, and evaluating whether the verb they used is correct. As such, the perspective is much larger than in the preceding section, since we also evaluate the use of the other verbs in locative clauses (neutral verbs in particular). Table below gives such a general overview of errors in the learner data, distinguishing the three main categories already mentioned in the introduction: POSTURE VERB UNDERUSE (use of a neutral verb where a posture verb should have been used), POSTURE VERB CONFUSION (wrong posture verb is chosen) and POSTURE VERB OVERUSE (use of posture verb where none is allowed).[20] The first two have been illustrated before; here are two examples of the latter (overuse):

(5)    a.    Sommige schoenendozen euh **zitten** in de armen van een man
             (OPD-Du2F-15-3)

             some shoeboxes err sit in the arms of a man

             'A man is holding some shoeboxes in his arms.'

       b.    Daarnaast altijd tegen de muur **staat** er een deur (OPD-Du2F-17-3)

             next-to-that still against the wall stands there a door

             'Next to that, also against the wall, there is a door.'

49    The use of *zitten* in example (5a) is not without motivation: the learner expresses a relation of close containment for which this verb is typically used in Dutch; however, the usage is unidiomatic because being in one's arms is unlikely to be thought of as close containment. More typically is to have a coding in terms of a person "holding" or "carrying" the boxes in his arms. Example (5b) is infelicitous (or marginally acceptable at most), since a door coded as 'standing' strongly suggests that it is not on its hinges but leaning against the wall as a board would. Possibly, there is some contamination with the context of doors being open, in which case *openstaan* (lit. 'open-stand') or *op een kier staan* (lit. 'stand on a crack') are commonly used. This is, however, not the context underlying the above example.

| | Occurrences | % |
|---|---|---|
| **1. POSTURE VERB UNDERUSE** | **38** | **26.39%** |
| POSTURAL CONTEXTS | 8 | 5.56% |
| LOCATIONAL CONTEXTS | 30 | 20.83% |
| **2. POSTURE VERB CONFUSION** | **97** | **67.36%** |

| | | |
|---|---|---|
| CONTEXT NEEDING *STAAN* | 58 | 40.28% |
| CONTEXT NEEDING *ZITTEN* | 6 | 4.17% |
| CONTEXT NEEDING *LIGGEN* | 27 | 18.75% |
| CONTEXT NEEDING *HANGEN* | 6 | 4.17% |
| **3. POSTURE VERB OVERUSE** | **4** | **2.78%** |
| **4. MISCELLANEOUS** | **5** | **3.47%** |
| OVERLOCATIVISATION | 2 | 1.39% |
| UNCLEAR | 3 | 2.08% |
| **Total** | **144** | **100%** |

Table 8: Onomasiological perspective on learner errors in locative clauses

50      The MISCELLANEOUS category comprises 3 errors where the interpretation of the sentence remained unclear and 2 cases of what we term ***overlocativisation***, when a locative coding is used for a context that generally is not expressed in locative terms. These are similar to the cases of posture verb overuse except that a neutral verb is used (*zijn* 'be'); in both cases (said by different speakers) the context is that of clothes being located on people. Here is one of these:

(6)      *en sommigen kleden **zijn** op de mensen omdat ze proberen de kleden*
         (OPD-Du2F-03-1)

         and some clothes are on the people because they try the clothes

51      The choice of a locative construal [CLOTHES BE **ON** PEOPLE] may have been pragmatically motivated, i.e., triggered by the experiment instructions (the speaker is answering to the question "where are the clothes?"). Also in the native speaker data there is an occasional reference to clothes worn by people in answer to this question, yet this is never coded as a locative event (i.e., as clothes located on the people). Here is a rare occurrence of a native speaker talking about clothes worn by people:

(7)      *en dan zijn er ook natuurlijk nog de verschillende kleren die dat de mensen aan hebben.*(OPD-DU-08)

         and then there are of course the different clothes [that] the people wear (lit. 'have on')[21]

52      In contrast to the example (6), this example is a non-locative presentational sentence; its discursive function is still to locate the clothes, but it does so via the people wearing them, not by the clothes being located on the people. Including these two cases of overlocativisation, there are in total 40 instances of unidiomatic use of a neutral verb in a locative clause in the learner data.

53      Finally, we consider to what extent the frequency of errors and their types is dependent on the level of proficiency, as shown in Table 9 below.

| | Level | | | | | | |
|---|---|---|---|---|---|---|---|
| | FLP1 | | FLP2 | | FLP3 | | TOTAL |
| **Type of error** | N | % | N | % | N | % | **N** |
| posture verb underuse | 17 | 44.74% | 12 | 31.58% | 9 | 23.68% | **38** |
| posture verb confusion | 32 | 32.99% | 29 | 29.90% | 36 | 37.11% | **97** |
| posture verb overuse | | 0.00% | 1 | 25.00% | 3 | 75.00% | **4** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| miscellaneous | 1 | 20.00% | 1 | 20.00% | 3 | 60.00% | **5** |
| **TOTAL** | **50** | | **43** | | **51** | | **144** |

Table 9: Distribution of learner types of error across the proficiency levels

54    The posture verb underuse goes down as the proficiency increases, but the percentage of posture verb confusion goes up. The same holds for the posture verb overuse and the miscellaneous mistakes, even if the low frequencies motion to caution. A Pearson chi-square test performed on the raw frequencies show that these differences are not significant ($\chi^2$ = 7.293; df = 6; p = 0.294). Although not significant, the tendency remains that percentage-wise the more advanced learners make more mistakes than the less advanced learners, but that these are mistakes of a different kind, which still suggests a higher degree of proficiency, as explained next.

# 5. Discussion

55    The results of our study can be summarized as follows: first, as could be expected, the use of neutral verbs decreases and that of posture slightly increases over the different proficiency levels and second, the number of posture verbs errors slightly increases with the level of foreign language proficiency. In other words, the frequency of the posture verbs goes up, but the learners produce more errors. In view of these results, one might be tempted to conclude that the learners' proficiency in the domain of locative expressions **decreases** as the general proficiency increases. This interpretation is, however, incorrect. Instead, the general hypothesis that we argue for here is that the learners in level 3 make more posture verb related errors precisely **because** they are beginning to behave more like the native speakers.

56    This interpretation is in the first place confirmed by the results of the multinomial logistic regression regarding the distribution of the verb types across the proficiency levels, which suggested that the level 3 learners and the native speakers showed similar patterns to encode locative events. Secondly, when considered in a larger perspective, the data reveal how more advanced learners indeed show a higher degree of 'locative sensitivity' leading to more idiomatically correct Dutch, despite the individual errors. Three observations can be mentioned in support of this claim.

57    The first (and obvious) observation is that while level 3 speakers still differ from the native speakers in their overuse of neutral verbs, there **is** a decrease of these verbs and a slight increase in the use of posture verbs. Secondly, even if the changes in these two verb categories are not inversely proportional, one notices that the learners at proficiency level 3 increase in their use of an alternative, idiomatically correct, strategy for expressing locative event, *viz.* the use of a possessive verb. Dutch does allow such alternate encoding, even for the location of inanimate entities, as illustrated by the following examples (from the native speaker data).

(8)    a.   *in het groentekraam zelf, heb je op de tafels links, helemaal links, de bloemkolen* (OPD-DU-03)

        in the vegetable stand itself you have on the table left completely left the cauliflowers

    b.   *en [de verkoopster] heeft ook nog een kist op de grond met aardappelen* (OPD-DU-08)

        and [the saleswoman] has also a crate on the ground with potatoes

58    Example (8a) presents a viewer perspective, which is the most common use of the possessive verb *hebben* 'have'; (8b), in turn, presents a character-perspective where one of the entities portrayed on the picture 'possesses' the located entity.[22] Strikingly, it is the more advanced speakers that use this alternative more frequently, thus adopting a more native like behaviour. A third argument in support of an increased

'***locative proficiency***' of the more advanced speakers is, ironically, the increase of errors, which occurs because they are becoming more locative in their expression. On the one hand, they begin to get into the habit of using a posture verb in locative contexts, which logically means that there is a higher chance that they will make an error (posture verb confusion). Yet also the errors of overlocativisation (atypical use of a locative construction) and of posture verb overuse (the use of posture verb where none is allowed) indicates their higher locative proficiency. Strikingly, some of these errors occur in contexts where a coding with a possessive verb would have been more idiomatic than the locative construal used by the learner, see examples (5) and (6) above.

59    In other words, learners become increasingly aware not only of the need to use a posture verb but also, more generally, of the overall locative character of Dutch; both phenomena are radically different from their native language (French). The errors they make are often a case of overextension where they either overextend a particular use of a posture verb (such as the CONTAINMENT use of *zitten* in cases of loose containment when either *liggen* or *staan* is to be used) or cases of overlocativisation where learners overextend the use of locative constructions for contexts where native speakers would typically not use them.

60    One could object that the increase of errors in the use of posture verbs with increasing proficiency is simply be due to the standard observation that more proficient learners produce more language and are therefore more inclined to produce errors (see, for instance, Iwashita 2010 and Magnan 1988 on oral proficiency). This observation is, however, not entirely applicable to the current data set. Clearly, overall more proficient language users will produce more language, thereby increasing the chances for errors; however, in our sample, more proficient users did not produce more locative clauses than less proficient users; however, the clauses they use are qualitatively different.

61    Our study confirms previous studies on errors in learner data that have shown that an increase in proficiency can align with an increase in errors, given notably the strategies of overextension. It is particularly worthwhile to consider the study reported on in Viberg (1985, 1998) [also quoted in Gullberg 2009: 225] that considers the use of Swedish location and placement verbs (*lägga* 'make.lie', *sätta* 'make.sit', *ställa* 'make.stand') by Spanish, Finnish and Polish adult learners. Viberg shows that these learners all have problems with posture verbs in Swedish, and that all groups show simplification, yet he also shows the influence of the native language, which is quite different. On the one hand, Spanish and Finish learners whose mother tongue does not have the fine-grained distinction that Swedish has (difficulty of one-to-many mapping) overgeneralise one of the specific verbs to become a general placement verb, whereas Polish speakers, speaking a L1 which does have two specific placement verbs do not do that, but struggle with the one that has no equivalent in Polish ('make-sit'). Our data does not support this tendency. As said, there is L1 influence in the overuse of the general verb *zijn* 'be', but unlike in the study of placement verbs, it is not the case that one of the three Dutch posture verbs is chosen as the catch-all verb. The reason is that the cross-linguistic lexical categories are different for placement events than for static locative events. For placement events, the L1 in question has a general placement verb (e.g., French *mettre*, both equivalent to English *put*) whereas such a verb does not exist for Dutch (the verb *plaatsen* 'place' being highly infrequent and often not appropriate for location events[23]). For static location, however, there is a possible equivalent between French *être* and Dutch *zijn*. In other words, the catch-all verb for French learners is this equivalent verb *zijn* 'be', which they overuse at all levels of proficiency.

# 6. Conclusion

62    Drawing on data from oral picture descriptions by French-speaking learners of Dutch, the present paper has provided a first quantitative analysis of one the major (lexical) stumbling blocks for these learners, the correct use of the cardinal posture verbs *liggen* ('lie'), *zitten* ('sit') and *staan* ('stand'). The difficulty arises from the fact that the use of these verbs, which have grammaticalised to basic location verbs, is fairly compulsory when one wants to express the location of an entity in space, some exceptional contexts notwithstanding (such as a collection of entities in different positions). Influenced by their native language, French learners will typically use a neutral verb, mostly *zijn* 'be' to express the location of an entity where Dutch prefers or requires a posture verb.

63    While at first sight this seems to suggest the learners do not seem to improve all that much in their 'locative proficiency', we have shown that, when the whole picture is taken into account, the data clearly indicate that the learners do improve and that the more advanced speakers are significantly closer to the native speakers than to the learners of the two lower proficiency levels. In other words, the more advanced speakers do become more native-like in their overall language production.

64    The results of the present study confirm the earlier findings in Lemmens & Perrez (2010), analysing the use of posture verbs in written learner productions (essays). Taken together, both studies provide further evidence, based on specific case studies, of more general findings in the literature on learner proficiency. Clearly, the present analysis is only a first, largely quantitative, view on the elicitation data, which should be complemented with a more detailed qualitative analysis of the types of errors that learners make, for instance by focusing on the question of how learners deal with more specific locative situations. Also here one sees that these "errors" are not random, but that they are in fact symptoms of learner strategies, such as overextension, not unlike those one finds in first language acquisition. Further investigation is also warranted concerning the density of the use of neutral verbs in locative descriptions. The native speaker data clearly indicates that neutral verbs are sometimes possible to encode location, yet in the learners' data the accumulation of these in the span of a short description deviates from native speaker tendencies. Since the present study has only presented a global overview that cuts across different descriptions of individual scenes, such a close-up analysis is clearly needed to complement the present analysis.

# Appendix A: Stimuli questions for each picture

65    **Picture 1 (children's clothing shop)**

> Can you tell me where the clothes are in this shop, telling me what types of clothes they are as well?

66    **Picture 2 (shoe shop)**

> a. Tell me where the shoes and the shoe boxes are in this store?
>
> b. Can you please describe for me where the customers are, talking about each of them individually ?

67    **Picture 3 (parents' bedroom)**

> Here I'm interested in the clothes and the furniture. Can you tell me where they are?

68    **Picture 4 (market place)**

Can you tell me where the different vegetables are?

69    **Picture 5 (butcher's shop)**

What kinds of products are being sold here, and where are they?

# Appendix B: Randomized order of the pictures for different subjects



# Appendix C: Multinomial logistic regression: verb types * proficiency levels (learners vs. native speakers)

70    Significant differences are highlighted in red in all tables below.

| Effect | Verbs – likelihood ratio test type I<br>Distribution : multinomial<br>Link function : LOGIT | | | |
|---|---|---|---|---|
| | -2 Log likelihood of reduced model | Chi-Square | df | Sig. |
| Intercept | 11301.47 | | 3 | |
| group | -1227.39 | 148.1669 | 9 | 0.00 |

71    —

| Effect | Verbs – parameter estimates<br>Distribution : multinomial<br>Link function : LOGIT | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Level Effect | Level Reponse | column | estimat. | Std. Error | Wald | LC Inf. 95% | LC Sup. 95 % | Sig. |
| Intercept 1 | | Neutral | 1 | 2.68558 | 0.344510 | 60.7677 | 2.01035 | 3.36080 | 0.00000 |
| group | 1 | Neutral | 2 | -0.00456 | 0.474907 | 0.0001 | -0.93536 | 0.92624 | 0.99234 |
| group | 2 | Neutral | 3 | -0.47000 | 0.459468 | 1.0464 | 1.37054 | 0.43053 | 0.30634 |
| group | 3 | Neutral | 4 | 1.17515 | 0.793223 | 2.1948 | -0.37954 | 2.72984 | 0.13847 |
| group | 4 | Neutral | 5 | 0.00000 | | | | | |
| Intercept 2 | | Posture | 6 | 3.98279 | 0.336425 | 140.1522 | 3.32341 | 4.64217 | 0.00000 |
| group | 1 | Posture | 7 | -1.40258 | 0.469848 | 8.9112 | -2,32346 | -0,48169 | 0.00283 |
| group | 2 | Posture | 8 | -1.71411 | 0.452919 | 14.3231 | -2.60181 | -0.82640 | 0.00015 |
| group | 3 | Posture | 9 | 0.14434 | 0.788185 | 0.0335 | -1.40047 | 1.68915 | 0.85469 |

| | | | | estimat. | Std. Error | Wald | LC Inf. 95% | LC Sup. 95 % | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| group | 4 | Possessive | 14 | 2.112231 | 0.653225 | 10.45581 | 0.83193 | 3.39252 | 0.00122 |
| group | 2 | Possessive | 15 | 0.00000 | | | | | |
| Scale | | | | 1.00000 | 0.00000 | | 1.00000 | 1.00000 | |

74 —

| Effect | Verbs – parameter estimates<br>Distribution : multinomial<br>Link function : LOGIT | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Level Effect | Level Reponse | column | estimat. | Std. Error | Wald | LC Inf. 95% | LC Sup. 95 % | Sig. |
| Intercept 1 | | Neutral | 1 | 2.681022 | 0.326878 | 67.27115 | 2.04035 | 3.32169 | 0.0000 |
| group | 2 | Neutral | 2 | -0.465448 | 0.446401 | 1.08716 | -1.34038 | 0.40948 | 0.29710 |
| group | 3 | Neutral | 3 | 1.179708 | 0.785726 | 2.25427 | -0.36029 | 2.70970 | 0.13324 |
| group | 4 | Neutral | 4 | 0.004556 | 0.474907 | 0.00009 | -0.92624 | 0.93535 | 0.99234 |
| group | 1 | Neutral | 5 | 0.00000 | | | | | |
| Intercept 2 | | Posture | 6 | 2.580217 | 0.327987 | 61.88680 | 1.93737 | 3.22306 | 0.0000 |
| group | 2 | Posture | 7 | -0.311533 | 0.446688 | 0.48641 | -1.187702 | 0.56395 | 0.48553 |
| group | 3 | Posture | 8 | 1.546918 | 0.784621 | 3.88700 | 0.00909 | 3.08474 | 0.04866 |
| group | 4 | Posture | 9 | 1.402575 | 0.469848 | 8.91122 | 0.48169 | 2.32346 | 0.00283 |
| group | 1 | Posture | 10 | 0.00000 | | | | | |
| Intercept 3 | | Possessive | 11 | -0.510826 | 0.516398 | 0.97854 | -1.52295 | 0.50129 | 0.32256 |
| group | 2 | Possessive | 12 | -0.364643 | 0.741620 | 0.24175 | -1.81819 | 1.08890 | 0.62294 |
| group | 3 | Possessive | 13 | 3.036554 | 0.898141 | 11.43071 | 1.27623 | 4.79687 | 0.00072 |
| group | 4 | Possessive | 14 | 1.747588 | 0.640340 | 7.44829 | 0.49254 | 3.00263 | 0.00635 |
| group | 1 | Possessive | 15 | 0.00000 | | | | | |
| Scale | | | | 1.00000 | 0.00000 | | 1.00000 | 1.00000 | |

75 —

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## Notes

1 The authors would like to thank the two anonymous reviewers for their comments on the earlier version of this paper. Remaining inaccuracies are of course the responsibility of the authors.

2 See Newman 2002 or Lemmens 2002a, 2006 for some arguments on why this can be said to be the verbs' prototype.

3 For studies on L1 acquisition of location and placement verbs see among others by Chenu & Jisa 2006, Hickman 2007, Hickman & Hendriks 2006.

4 Independent evidence for the high frequency of the three posture verbs comes from the frequency lists of two Dutch corpora. In the frequency list of the PAROLE corpus (written Dutch, 1982-1998) there are 5,000 different lemmas; *staan* ranks 74 (1319.75 words per 1 mi.), *zitten* 118 (730.30 per 1 mi), *liggen* 124 (702.35 words per mi. In the frequency list of the Corpus Gesproken Nederlands (Spoken Dutch, 1998-2004) there are also about 5,000 lemmas; *zitten* ranks 63 (2674.41 words per mi.), *staan* 80 (1189.95 words per mi.) and *liggen* 141 (773,13 words per mi.). In other words, in both corpora, the verbs rank in the top 140 words (all syntactic categories confounded) and can thus be considered highly frequent.

5 Examples with a reference like this are taken from our corpus of oral picture descriptions (OPD); Du2F refers to the Francophone L2-learners, the first digit (*14*, in this case) identifies the speaker and the second digit refers to his/her level of proficiency (here *3*, or the highest level). Glosses will be word for word translations, which while not idiomatically correct English, will usually be sufficiently clear.

6 This verb has often become a true copula, whereas this is not (necessarily) so for posture verbs. Ameka & Levinson (2007) talk about 'dummy verbs' to refer to verbs such as *be* or *être*.

7 As we will detail below, the issue is more complicated, since the verb *zijn* is not always ungrammatical in a locative sentence (and thus the claim made by Gullberg 2009:231 that "the use of *zijn* in basic locative constructions is not appropriate in Dutch and is not found in native production" is too strong). For these two sentences, its use is nevertheless quite unidiomatic, as indicated by the * between brackets.

8 Quite unexpectedly, one metaphorical use of *staan* has been recorded in the learner data, where the learner refers to written/printed material (in this case, an illustration). This is a productive and well-entrenched usage pattern for Dutch *staan* which the learners seem to be fairly well aware of, as also revealed by the study in Lemmens & Perrez (2010). Though not primarily related to the localisation of objects or people as prompted by the experiment's design, this single case has not been left out of our global analysis, because it remains typical of the learner use of *staan*.

9 At this point, the data set comprises native speaker descriptions for English, Dutch and French and learner descriptions for Dutch (French L1) and English (French L1).

10 These two books are: (1) Ribas, T. P. Casademunt & R. Capdevila (1984) *Les botigues* ['The shops'], La Galera S.A. Editorial and (2) Ribas, T. P. Casademunt & R. Capdevila (1984) *La festa* ['The party], La Galera S.A. Editorial.

11 Many thanks to Maya Hickmann for suggesting this method to us. One of the anonymous reviewers correctly points out that full sentences like *The clothes are (lying) on the floor* are probably rare in spontaneous discourse as answers to *Where*-questions (in this case, *Where are the clothes?*) and wonders why this low frequency is relevant to this study. Several factors suggest it is not: first of all, for Dutch, the posture verbs are sufficiently high frequent also in spontaneous discourse (cf. the corpus frequencies given earlier); secondly, the fact of having "less spontaneous" full sentences is the same for all languages concerned; and finally, despite our double questions, all speakers (L1 and L2) still produced a considerable amount of short (i.e. elliptical) answers (Dutch L1: 6%; Dutch L2: 9%; French L1: 15%). Dutch L1 speakers produced the smallest number of such elliptical constructions, which indirectly confirms the high tendency to use a posture verb to express static location.

12 Some of them may have had some exercises at secondary school level, but these are on the whole fairly superficial.

13 Many thanks to our colleagues of the Dutch department at the ILT for generously granting us the privilege to use this test for our experiment. More information on this test can be found at http://www.itna.be/.

14 The acronym FLP is used to refer to the level of Foreign Language Proficiency of the learners: FLP1 refers to the least proficient learners, FLP2 to the intermediate learners and FLP3 to the most proficient learners.

15 Obviously, for each attestation, identifying meta-codes were also added, specifying speaker, picture, and a unique sentence identification.

16 We further distinguish three subcategories in this group: ATTACHMENT verbs (*stick*, *glue*, *attach*, etc.), CONFIGURATION verbs (e.g., *folded*, *draped*, *spread (out)* (one single entity horizontally extending)) and ARRANGEMENT verbs (e.g., *scattered*, *spread out* (in different locations). The term *disposition* has been taken over from Hickmann & Hendriks (2006); they do not, however, distinguish the same subtypes.

17 The figures for the errors due to the overuse of *zijn* ('be') in the context where *staan* should have been used follow the same pattern: 6 of the 18 cases concern the location of furniture.

18 The analysis in Lemmens (2002) revealed that the CONTAINMENT usage of *zitten* amounts to 45% of the uses in the corpus data of written native Dutch used in that study.

19 There is one occurrence of *is debout*, a lexical error where the learner uses the French expression *être debout* but with the Dutch copula *be* (*is* = 3rd pers. sg.); even if, strictly speaking, this is an error, it has been counted as a correct usage of *staan* since essentially the postural logic (the decision to use a '*staan*-expression') is correct.

20 The 104 posture verb errors presented in Table and Table in the previous section are thus only part of Table , i.e. the sum of posture verb confusion (97), posture verb overuse (4) and the 3 unclear cases (all concern unclear but clearly incorrect locative uses of *liggen*).

21 While the particle verb *aanhebben* (lit. 'have on') has a particle *aan* that can still be used in locative contexts (e.g., *aan de muur hangen* 'hang **on** the wall'), it has completely grammaticalised in this construction and is no longer to be considered as a locative coding.

22 Given the stimuli and the experiment set-up, the character-perspective mostly occurs in our data with human characters, but this is not a general constraint of Dutch where such alternation is perfectly possible with inanimates, especially with *zitten* 'sit' expressing a containment/contact relation. Consider, for example, *Er zit geen handvat aan deze wandelstok* (lit. 'there sits no handle to this cane') vs. *Deze wandelstok heeft geen handvat* (lit. 'this cane has no handle'). In English, the alternation would be, logically, with *be* vs. *have*.

23 It would for example be quite unusual to use *plaatsen* when one puts (i.e. lays) a paper on the table. Gullberg (2009) mentions *doen* as a dummy placement verb (sometimes used by English learners of Dutch in her study). This verb can indeed be used for placement events, cancelling out the object's orientation, but only if containment is at issue: *Doe de pen in de doos* ('do the pen in the box') is fine, but \**Doe de pen op de tafel* ('do the pen on the table') is not (cf. Lemmens 2006).

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## *Pour citer cet article*

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Paru dans *CogniTextes*, Volume 8 | 2012

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## *Droits d'auteur*