A CORPUS-BASED STUDY OF THE FIGURE AND GROUND IN *SITTING, STANDING,* AND *LYING* CONSTRUCTIONS

JOHN NEWMAN

Massey University, Palmerston North, New Zealand

1. Introduction

Sitting, standing, and lying are common at-rest positions for humans and the verbs which refer to these positions can have a significant role to play in some languages in addition to the basic posture sense. The additional uses of these verbs include locational verbs not restricted to human subjects, auxiliary verbs indicating some posture or shape of the subject, auxiliary verbs with a tense or aspect function, and classifiers used with nouns (cf. Early 2000; Heine et al. 1993; Kuteva 1999; Newman ms; Serra Borneto 1996; van Oosten 1982; Watkins 1976). The potential of these verbs to develop figurative uses, as well their potential to develop into grammatical morphemes, mean that these verbs deserve close study.

The availability of large corpora of English invites a corpus-based study of these verbs in English, enabling the researcher to construct a profile of their usage. As with any corpus-based research, the results of such analysis are invaluable in helping lexicographers of English and others concerned with a naturalistic description of English obtain a full picture of the meaning and use of the words of the language. Additionally, there is the possibility that such usage-based analyses of English can reveal tendencies which help us better understand how we conceptualize human at-rest positions. The conceptualization of the human at-rest positions of sitting, standing, and lying is the starting point for processes of change into figurative and grammaticalized uses in languages. The more we understand about such conceptualization, the more we are likely to fathom these extensions of usage. I make no claim about the universality of the sitting, standing, and lying postures familiar to modern, Western societies,

though some form of these postures is likely to be found in all human societies. And certainly there is no claim that there should be one and only one way of conceptualizing such postures. The corpus-based analysis undertaken here brings into focus details of the conceptualization of these postures as revealed in a particular construction, but does not attempt to document the myriad of ways one might choose to construe at-rest positions in general. Even for English, there are countless alternative ways of portraying at-rest positions which do not rely upon the verbs *sit, stand*, or *lie*: *Dr. Jones can be found in the office at the end of the corridor; the duck is in the pond; Xena is astride the horse; the ship was berthed at the dock* etc.

The present study, then, has been undertaken with a view to contributing to our knowledge about the usage of *sit, stand*, and *lie* in English, not only on a descriptive level, but also by adding to our understanding of the cognitive principles at work in the data being examined.

2. The corpus

In this paper I report on the results obtained from interrogating the Bank of English corpus about usage of *sitting, standing*, and *lying*. The full Bank of English is approximately 360 million words comprising various genres, spoken and written, US and British. For this study, the subcorpus "brspoke" was selected. The brspoke subcorpus consists of transcribed informal, spoken British English. This subcorpus consists of approximately 20.2 million words, making it one of the largest, if not the largest, database of this single genre. The corpus was accessed on-line through the CobuildDirect software.[1] This software permits an extremely wide range of queries (tagged or untagged, inflected forms of a word, wild card matches, collocations etc.)

Obviously, any word search based on the forms *lie, lies, lying* could retrieve forms which are unrelated to the posture verbs, in particular forms of the verb *lie* 'tell a lie' and the noun *lie(s)*. A way was needed to eliminate such forms as far as possible without having to rely too much on manually editing them out of the resulting concordance. A way of achieving this fairly successfully was to limit the search to *sitting/standing/lying* immediately followed by a prepositional phrase (PP). The prepositional phrase is relatively unnatural following the 'tell a lie' *lie*. Restricting the verb form to the *-ing* form yielded a more manageable set of results than searching for all forms of the verbs, so that there were hundreds, rather than thousands, of lines to inspect. The *sitting/standing/lying* + PP search string produced over 1,000 hits of the type *She was sitting in the*

kitchen, I can see someone standing at the counter, She was always lying in bed etc. Each line of the resulting concordance was then individually checked to exclude unwanted uses, e.g., the 'telling lies' sense of lying, the nouns *sitting* and *standing*, the verb-particle constructions (e.g., *standing in for someone*) etc. This edited concordance constituted the database used for the present study of the figure and ground in such constructions. I use the term *figure* to refer to the subject or understood subject of the posture verb/participle and *ground* to refer to the object of the preposition. These terms are convenient as a way of focusing on the cognitive difference between the two entities, rather than the grammatical category.[2]

3. Overall frequencies of *sitting, standing*, and *lying*

We begin with a summary of the frequencies of the posture verbs/participles *sitting, standing*, and *lying* followed by a PP, shown in Table 1. The table also includes frequencies of some other posture words.

Table 1. Occurrences of *sitting/standing/lying* + PP

sitting + PP	682
standing + PP	241
lying + PP	114
leaning + PP	29
crouching + PP	2
kneeling + PP	1
squatting + PP	0

Clearly, *sitting, standing*, and *lying* are the most frequently occurring amongst this set of posture words, indicating a relatively privileged role for these words. Humans are not in the habit of leaning, crouching, crawling, kneeling etc. for long periods of time and the results in Table 1 reflect this experiential reality fairly directly. Squatting, on the other hand, is subject to some cross-cultural variation, with some cultures seeming to engage in this form of being stationary quite a lot. In the British culture(s) associated with "brspoke", however, it is presumably a relatively rare occurrence and the absence of *squatting* + PP altogether in the corpus reflects that.

The relative frequency of *sitting, standing*, and *lying* with respect to one another is also striking: *sitting* (682), *standing* (241), *lying* (114). *Sitting* is more

---

[1] A full description of the corpus-access tools available in the CobuildDirect software can be found at http://www.cobuild.collins.co.uk/cdguide/svenguide.html.

[2] Langacker (e.g., 1991: 19 ff.) has used *trajector* and *landmark* for these concepts as they apply in linguistics.

than twice as frequent as *standing* which in turn is more than twice as frequent as *lying*. The relatively low frequency of lying correlates with the relative few occasions we would normally enter into a lying position in any 24-hour cycle. Indeed, lying down to sleep at night is the only time most healthy adults actually lie down, compared with the many times during the day when adults need to be standing or sitting. As another quick check on the *sitting > standing > lying* scale of frequency, I searched "brspoke" for instances of *sit down*, *stand up*, and *lie down* (including the all the inflected forms of the verbs). These phrases are capable of occurring in some figurative usages (e.g., *stand up for one's rights*, *stand up to someone*), as well as occurring as nominals (e.g., *have a little sit down*). However, in the overwhelming majority of cases, the phrases refer to humans entering a posture or maintaining a posture and so they are convenient phrases to use for a simple check on relative frequencies of posture verbs. The relevant frequencies are *sit down* (1,039), *stand up* (495), and *lie down* (110). The relative order is identical to that found with the *sitting/standing/lying* + PP construction.

These results lend support to the decision to focus on 'sit', 'stand', and 'lie' verbs in a study of English at-rest positions. They are distinguished within the full set of at-rest positions by their higher frequencies. The distinctiveness of just these postures in the English data corresponds to a distinctiveness about these verbs in some other languages. For example, when posture verbs give rise to tense/aspect markers in language, it is the set 'sit', 'stand', and 'lie' which most often are the sources. Indeed, all three verbs may, as a set, participate in the extension to such markers, as in the Khoisan language Kxoé (cf. Heine et al. 1993: 139; Killian-Hatz ms.). In Kxoé, 'sit' gives rise to present tense particles (together with a 'sitting' or general locative meaning); 'stand' gives rise to a present tense particle (together with a 'standing' meaning); 'lie' gives rise to a present tense/habitual marker). In the Amerindian language Euchee (formerly called Yuchi), the 'sit', 'stand', and 'lie' morphemes have given rise to a three-way kind of gender system, in so far as they occur as articles with inanimate nouns, subclassifying the nouns into one of three noun classes (cf. Watkins 1976: 35-36). The relative order *sitting > standing > lying* may also throw some light on understanding why there appears to be an apparent preference for 'sit' and 'stand' as sources for grammaticalizations, compared with 'lie' (cf. Newman ms). That is, the results from English may point to a common cross-linguistic tendency in terms of frequency of occurrence of 'sit', 'stand' and 'lie', with the more frequent verbs being the favoured candidates for sources of grammaticalization.

4. The figure

It was obvious from a superficial inspection of the *sitting/standing/lying* + PP concordance that there were many instances of a human as the figure. To determine just what percentage of the figures were animate or human, the concordance was checked, line by line, to determine these features, as well as gender. The results are shown in Table 2. The "human" category was taken to include nouns referring to groups of people as with *crowd*, *Parliament*, *Board of Studies* etc.

Table 2. Properties of the figure in *sitting/standing/lying* constructions

	Total animate	Total human*	Unambiguous masc. subject	fem. subject
sitting	669/682 = 98% animate	661/682 = 96.9% human	82	51
standing	236/241 = 97.9% animate	235/241 = 97.5% human	29	9
lying	100/114 = 87.7% animate	96/114 = 84.2% human	11	2

The figure referred to a human in the overwhelming majority of instances, far higher than one might expect from perusing entries on *sit*, *stand*, and *lie* in a dictionary. In the case of *sitting* and *standing*, in fact, 96-98% of instances involve a human figure. It is *lying* which has the highest percentage of inanimate/non-human figures. It was not always possible to determine, just from an inspection of the line, whether the human figure referred to was male or female.[3] In the cases where I was able to unambiguously identify the figure as a male or female person, the male figures clearly outnumbered the female figures. Since the corpus is based on spoken English, there are many instances of first and second person pronouns where the gender was not able to be identified.

Though almost negligible in number, the non-human figures are interesting, with all the examples shown in the Appendix. The connections with human sitting, standing, and lying in these cases are varied. In some cases, the language is quite metaphorical requiring the listener/reader to actively (and imaginatively)

---

[3] The CobuildDirect software allows one to expand the line of the concordance to see the larger context. However, by the time I wished to view the larger context, I no longer had on-line access to the corpus. On-line access to the corpus comes at a price.

construct an anthropomorphic version of the figure, as in *and there's a lobster sitting in a chair holding the teleph(one), the caterpillar smoking sitting on top of the mushroom*. Here, the natural shapes of the lobster and caterpillar need to be mentally morphed into more human-like creatures, perhaps with little hands, legs crossed, and wearing spectacles (?). But even when there is no attempt to anthropomorphicize the figure, it seems quite irrelevant what the shape of the figure is in many cases: *bacteria (sitting), lobster (sitting), computers (sitting), cables (sitting), millions*, i.e. money *(sitting), trash (lying), paraphernalia (lying), stereo (lying)*. Cables, for example, are relatively long and thin, more like a human in a lying position, and yet *cable* occurs with *sitting*. Bacteria, whatever their shape under a microscope, are hard to picture as assuming anything like a human sitting position, but *bacteria* occurs with *sitting*. In these cases, the use of *sitting* and *lying* suggests a state of inactivity or lack of use, rather than the location of something resembling the outline of a human in the sitting position. *Standing* is different in that the connection with the image of a human standing vertical and balanced seems to be the basis of the extension. The inanimate figures are buildings (*Marks and Spencers, cottage, church*) or have a vertical orientation (*corn, toast*). In none of these cases is *standing* used to convey a sense of inactivity or non-use as found with *sitting* and *lying*.

Lying, used with animate, non-human figures, occurs four times, with *dogs, fox, chickens*, and *rat* as the figure. Three of these occasions also have the adjective *dead* in the line. Although the data is slim, a close association between animals in a lying position and being dead is evident.

5. The ground

Although it is the object of the preposition which I take to be the ground in the figure-ground contrast with the posture verbs, the preposition plays its part in helping to orientate the figure with respect to the ground. Some comments on these prepositions are therefore in order.

A wide array of prepositions occurs following the posture words, correlating with the frequency of occurrence of the verbs: the greatest variety of prepositions occurs with the most frequent posture word (*sitting*), with fewer prepositions following *standing,* and the least number of prepositions following *lying*. A selection of these prepositions and their frequencies are shown in Table 3. The frequencies represent the sum of the individual frequencies with the set of prepositions shown in each row.

Table 3. Frequencies of selected prepositions following *sitting/standing/lying*

	Freq. with *sitting*	Freq. with *standing*	Freq. with *lying*
in/on/at (the) front	30	15	0
behind, at the back	12	10	1
on	216	59	51
over, above, on top of	12	8	0
under, underneath, below	2	2	0

The table reveals preferences for certain spatial perspectives in orienting a figure with respect to a ground. In the case of *sitting* and *standing*, locating a figure in front of the ground is preferred to locating the figure behind the ground. The preferences are quite clear for these two posture words, but are not found with *lying*. In part, this may be a consequence of the low frequency of *lying* forms compared with the other posture words, making it impossible to detect any patterns. For all three posture words, locating a figure on top of the ground is preferred to locating the figure below the ground. The high frequency of *on* is strongly suggestive of this, but in many cases the *on* preposition does not really indicate an "on top of" relation: *sitting on the left side of her* and *we're sitting on buses* are examples of this from the concordance. Prepositions such as *over, above, on top of* are more indicative of a spatial "on top of" relation and constitute the natural contrast to *under, underneath, below*. With these prepositions, too, the "on top of" orientation of a figure is clearly preferred to an "under" orientation. With these less common prepositions, however, there are no examples at all with *lying* and so no preferences for one or the other of these orientations can not be established.

Turning attention to the object of the preposition, we find a clear preference for inanimate grounds (*sitting on the chair* type of example rather *than sitting near her*). The results of checking each line of the *sitting/standing/lying* + PP concordance are shown in Table 4, compared with the results for the figure, discussed above.

The preference for an inanimate ground is almost as strong as the opposite preference for an animate figure in these constructions. Although the English posture words are quintessentially "about" humans in spoken informal use, they relate humans to solid objects, for the most part. Obviously, we require some solid object in order for us to sit, stand, and lie; but we are also social creatures who are in the habit of being in the company of other humans (and pet animals!). Between these two ways of orienting ourselves – to solid objects vs. to other persons – the solid objects win out in the data examined.

Table 4. Properties of the figure and ground in *sitting/standing/lying* constructions

	Figure	Ground
sitting	661/682 = 96.9% human	612/682 = 89.7% inanimate
standing	235/241 = 97.5% human	212/241 = 87.5% inanimate
lying	96/114 = 84.2% human	112/114 = 98.2% inanimate

In order to highlight differences in collocation patterns, a set of nouns was chosen reflecting a variety of indoor and outdoor objects and frequencies of collocations were calculated.[4] These nouns are shown in Table 5, along with their frequencies of co-occurrence. The frequencies refer to frequencies of occurrence in the span between 2-6 words to the right of the -*ing* word. The highest percentage of occurrences is shown in bold. Obviously, this is an extremely small selection of nouns and the results from studying such collocations allow us only to make comparisons between the nouns of the set.

If we focus on the indoors set to start with, then we see a number of collocates which have natural, experientially based motivations: *chair* and *table* collocate more with *sitting* than *standing* or *lying*; *bed* collocates more with lying than *sitting* or *standing*. These results might be expected in light of the fact that these particular pieces of furniture are designed for use by humans in specific postures. Note that none of the indoor set nouns collocates with *standing* in a comparable way. We do not have furniture for standing to the same extent that we have furniture for sitting and lying. The closest one comes to such furniture is *counter*, *door*, *window*, and *sink*. Sitting and lying are commonly done for extended periods of time and we build furniture to cater for these habits. Standing, on the other hand, is not usually done for extended periods of time and we do not have furniture for this – except of course chairs which are available in order for people to avoid having to stand!

---

[4] The frequencies of collocation were obtained using the corpus software MonoConc Pro, searching the concordance of *sitting/standing/lying* + PP.

Table 5. Selected collocates on the right side of *sitting/standing/lying*

	sitting (n =682)	*standing* (n = 241)	*lying* (n = 114)
Indoors:			
office	**37 = 5.4%**	2 = 0.8%	1 = 0.8%
room	**27 = 3.9%**	2 = 0.8%	1 = 0.8%
chair	**32 = 4.7%**	0	0
table	**29 = 4.2%**	1 = 0.4%	3 = 2.6%
counter	2 = 0.3%	**2 = 0.8%**	0
door	3 = 0.3%	**7 = 2.9%**	0
window	1 = 0.1%	**2 = 0.8%**	0
sink	0	**2 = 0.8%**	0
floor	13 = 1.9%	1 = 0.4%	**15 = 13.1%**
bed	5 = 0.7%	1 = 0.4%	**10 = 8.7%**
Outdoors:			
tree	**3 = 0.3%**	0	0
gate	0	**1 = 0.4%**	0
road	1 = 0.1%	**4 = 1.6%**	1 = 0.8%
ground	1 = 0.1%	1 = 0.4%	**3 = 2.6%**
garden	5 = 0.7%	1 = 0.4%	**1 = 0.8%**
street	4 = 0.6%	0	**2 = 1.7%**
sky	0	0	0

To some extent, then, the preferred collocations seem to be experientially motivated, reflecting our common patterns of movement and rest. But not all the data can be explained away like that. Notice the frequencies of *office* (5.4%) and *room* (3.9%) compared with *chair* (4.7%) and *table* (4.2%), as collocates of *sitting*. Although the closest conceptual relationship would seem to hold between *chair* and *sitting* (*chair* = furniture designed for sitting), *office* collocates more frequently with *sitting* than does *chair*, and *room* is not far behind *chair* in its frequency. Room and office constitute a higher-level, or hyponymic, classification of entities, being entities which are built for human habitation, work etc. and typically have chairs as part of their furniture. So, there is a conceptual link between *room/office* and *sitting*, but it seems less direct than between *chair* and *sitting*. The preference for *room* as a collocate of *sitting* must have its basis in something other than conceptual association. I suggest that the reason relates to the role of communicativeness and informativeness of the speech act: we iden-

tify a ground which conveys the most relevant information. *Chair*, in a sense, is the least informative kind of ground to select with *sitting* since it is the default, almost ubiquitous ground (for British speakers).

Another interesting result in Table 5 is the frequency of *floor* as a collocate of *lying* (13.1% of all the *lying* forms). Not only is this a higher frequency than the collocation of *bed* and *lying* (8.7%), it is, in fact, the highest frequency of any of the collocations in the table. One might try to attribute this to the higher frequency of inanimate figures with *lying*, as commented upon above, but this would be mistaken. All the instances of the floor as a ground of *lying* occur with animate subjects. We can presume, I think, that the people being referred to in these dialogues spend more time in bed than on the floor in the course of their daily lives, which makes lying on the floor a relatively marked and unusual situation to be in here. It may be that the less common scene requires more comment.

Compared with the indoors set, the outdoors set of nouns occur with less frequency as collocates of the posture words. While this discrepancy can be observed for all three posture words, the difference is most marked in the case of *sitting*. *Tree* collocates with *sitting* more than with the other posture words, and yet this represents only 0.3% of the total *sitting* occurrences. Similarly, in the case of *lying*, none of the outdoor set collocates with a frequency approaching *bed* or *floor*. A comparison of *floor* and *ground* is revealing. They are comparable terms (representing a low, flat, solid base on which we may sit, stand, or lie), and yet *floor* has a much higher frequency of occurrence with *lying* than *ground*. As noted above, we have devised many items of indoor furniture for the purposes of sitting and lying, but fewer for standing (a bar for drinking, a counter for serving the public). And there is not such a dramatic difference between the patterns of collocation of *standing* with indoor nouns versus versus outdoor nouns. Here, a comparison of *door* (from the indoor set) and *gate* (from the outdoor set) is instructive. They are comparable in terms of the kind of function they play, except that with the former one enters an indoor space while in the case of the latter one enters an outdoor space. But *door* collocates with *standing* with a frequency of 2.9% while *gate* collocates with a frequency of 0.4%. The results reveal, therefore, a preference for *sitting* and *lying* (more so than *standing*) to collocate with nouns denoting parts of human habitats, houses, offices etc.

6. Conclusions

The corpus-based results reported on here have revealed ways in which the posture words *sitting*, *standing*, and *lying* are similar, as well as ways in which they differ amongst each other. They are the more frequent posture words, and they all occur overwhelmingly with a human figure and an inanimate ground. As well, the results here reveal differences between the words: *sitting* > *standing* > *lying*, the greatest frequency of inanimate figures with *lying*, and different patterning with collocates. The quantitative results obtained by means of the corpus tools in this study define more sharply theses similarities and differences.

The results are interesting in the ways in which they reflect or fail to reflect experiential and institutional realities, relating to our habits as humans. The relative frequency of *sitting* > *standing* > *lying* is a case in point. We do not usually enter into a lying position more than once or twice in any twenty-four hour period and, correlating with that, *sitting* and *standing* each has a higher frequency of occurrence than *lying*. Here, the relative frequency within the corpus appears to reflect relative frequency of an event in the external reality. Similarly, the collocation of some nouns with these posture words (e.g., *sitting* and *chair*; *lying* and *bed*) has an explanation in the nature of the furniture which we have created as the objects on which we sit and lie. The very existence of chairs and beds is bound to the purposes for which they are made. So, a relatively frequent collocation of *sitting* and *chair*, or *lying* and *bed*, would seem motivated by the nature of the objects concerned.

The text of spoken language, as with written language, is not simply a mirror of the experiential reality in which we participate as humans. We are able to conceptualize the world around us in alternative ways. Languages have routinized conceptualizations to provide certain default construction types as the favoured ones. But even as speakers of one and the same language, we have the means to view scenes differently, selecting or omitting some parts of the observed reality for encoding, imposing a particular figure-ground construal on a scene etc. The results form the present study suggest some of the cognitive principles which are appealed to when it comes to talking about sitting, standing, and lying. Collocation patterns reflect the experiential reality to some extent, but they also reveal certain preferences for figure-ground relations which are not "given" in reality. In the data examined here, for example, the noun *office* collocated more frequently with *sitting* than *chair*. We can presume that in most cases, sitting in an office involves sitting on a chair in that office – that's the way offices are designed. We tend to locate a sitting person with respect to the larger structural domain in preference to the chair being sat upon. This is not something we can predict from reflection on experiential reality alone.

APPENDIX

A.   *sitting* with hon-human animate subjects:

g I woke up and the cat was sitting on my chest and I could see s
ho knows what bacteria was sitting on the thing #   Yeah # <
poor little rabbit he's now sitting in the middle of the garden p
k erm and there's a lobster sitting in a chair holding the teleph
> It starts off with a frog sitting on a stone and he leaps out y
ther one was er the hen was sitting on eggs they send the hen awa
ets the caterpillar smoking sitting on top of the mushroom. As yo
F01 The small creature was sitting in your hair. Yeah well

1) *sitting* with inanimate subjects

a number of small computers sitting on a manager's desk or a nurs
ces and seeing the computer sitting in the corner of the room and
might have a network system sitting on my desk which brings WIMS
d me. And there's a cable sitting on that desk Yes. I've
top near the top bag it was sitting on top of the other ones. <F0
p 'cos of this bloody thing sitting in front of me here I don't k
an remember th erm being it sitting in a carriage I suppose I mus
ou said twenty quid's worth sitting on the counter going for my
h.   sitting a skeleton sitting in a rocking chair <ZGY> <FOX
 out two and a half still sitting in the bank. Mm.
. I an there was millions sitting in a bank account #   We'
 h is absolutely millions sitting in a bank account #   To
<ZGY> erm the book had been sitting in # his boss's drawer for th

B.   *standing* with non-human, animate subjects

here would be an old horse standing with a cart and they would co

1)   *standing* with inanimate subjects

Marks and Spencers is now standing in the middle of the road wi
osing and dignified church standing at the centre of the ample g
tage is there symbolically standing in its ruined state as an
[the preceding refers to *cottage*]
oks <ZF1> of <ZF0> of corn standing in the field which always th
       why is all the toast standing on its edge? Because it

C.   *lying* with non-human animate subjects

So they have the dogs lying beside them which of course <F
e house next door was a fox lying in the garden dead. So the fox
ur dead chickens that were lying outside the fox's lair?
here was a big rat dead rat lying in the lawn. And the house nex

1) *lying* with inanimate subjects

e stack of stuff. Real trash lying around the mountains. Quite
rug dealing erm paraphanalia lying around their flats their stree
s got about five or six just lying at home cos he doesn't drink.
 [the preceding refers to *bottles of drink*]
a Marxist would like to find lying behind Sen's analysis. What a
    s all right yeah. been lying in the supposedly friend's dra
ed round saw her saw the lid lying in the kerb he walked back pic
as in his basket. So it'd be lying in the out-patients for a week
 about the probability of it lying outside the interval. And I'm
 and there was a toothbrush lying on the table <ZGY>
nd the sick sheep's head was lying on a dictionary which had been
orning when I saw that thing lying on the carpet. Thought it can'
 you know a brand new stereo lying on the back seat or something
on't want things like that lying round the street. <ZGY>
t the probability of a value lying within the this interval here.

REFERENCES

Casad, Eugene H. (ed.)
    1996   *Cognitive linguistics in the redwoods: The expansion of a new paradigm in linguistics*. Berlin: Mouton de Gruyter.

Early, Robert
    1995   "Sit, stand, lie: Posture verbs and imperfectives", Paper presented at Second
            International Conference on Oceanic Linguistics, Suva, 3-7 July.
Heine, Bernd – Tom Güldemann – Christa Kilian-Hatz – Donald A. Lessau – Heinz Roberg –
    Mathias Schladt – Thomas Stolz
    1993   *Conceptual shift: A lexicon of grammaticalization processes in African languages.*
            Köln: Institut für Afrikanistik.
Killian-Hatz, Christa
    ms.   The grammatical evolution of posture verbs in Kxoe.
Kuteva, Tania A.
    1999   "On 'sit'/'stand'/'lie' auxiliation", *Linguistics* 37: 191-213.
Langacker, Ronald W.
    1991   *Concept, image, and symbol: The cognitive basis of grammar.* Berlin: Mouton de
            Gruyter.
Newman, John
    ms.   An overview of 'sit', 'stand', and 'lie'.
Serra Borneto, Carlo
    1996   "*Liegen* and *stehen* in German: A study in horizontality and verticality", in Eugene
            H. Casad (ed.), 459-505.
van Oosten, Jeanne
    1982   "Sitting, standing, and lying in Dutch: A cognitive approach to the distribution of the
            verbs *zitten*, *staan*, and *liggen*", in Jeanne van Oosten – Johan P. Snapper (eds.),
            137-160.
van Oosten, Jeanne – Johan P. Snapper (eds.)

    1982   *Dutch linguistics at Berkeley.* Berkeley: Dutch Studies Program, University of
            California at Berkeley.
Watkins, Laurel J.
    1976   "Position in grammar: Sit, stand, lie", *Kansas Working Papers in Linguistics* 1:
            16-41.