

Seven years later

The effect of spelling on interpretation *

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1. Introduction

The spelling of linking elements in Dutch compounds such as *boekenkast* ‘bookShelf’ and *slangenbeet* ‘snakeBite’ has been an issue since the introduction of an extensive set of rules in De Vries and Te Winkel (1884), the publication that received legal status in 1947 and offers the foundations of present-day Dutch orthography. Though most of De Vries and Te Winkel’s spelling system is still in force today, their spelling of linking elements no longer is. This aspect of Dutch spelling was changed in 1954 and in 1995, cf. the overview of words changed and not changed since 1884 in (1).

- (1) a. *Not changed:*
zonneshijn ‘sunshine’, gebarentaal ‘sign language’
- b. *Changed in 1954:*
vrouwebeeld > vrouwenbeeld ‘woman’s picture’
aspergenbed > aspergebed ‘asparagus field’
- c. *Changed in 1995:*
pannekoek > pannenkoek ‘pancake’
gedachtengang > gedachtegang ‘line of thoughts’
- d. *Changed twice:*
zotteklap > zottenklap > zotteklap ‘fool’s talk’
hondenhok > hondehok > hondenhok ‘doghouse’
bessensap > besseesap > bessensap ‘currant juice’

The spelling rules of 1884 were primarily based on plural meaning. In a compound with a modifier that lacks plural meaning, for instance *zonneshijn*, the linking schwa is written as *-e* because *zonne* refers to one sun only. In a

compound with a modifier that has plural meaning such as *gebarentaal* ‘language with signs’, the linking schwa is written as *-en*. This part of De Vries and Te Winkel’s rules applies to the examples (1a–d) except to words of the type *hondenhok* which followed a spelling rule based on pronunciation. In earlier stages of Dutch, linking schwa was followed by [n] in hiatus position, i.e. before [h] and before vowels. As the standard pronunciation of linking elements had become schwa in all phonological contexts, this rule was no longer part of the prescriptions of 1954.

The rules of 1954 specified that the linking *-en* should be used only when a plural interpretation of the modifier of the compound is inevitable. As *hond* and *bes* in *hondenhok* and *bessensap* (1d) are not necessarily plural, they should be written with *-e*. Moreover, when the modifier refers to human beings, cf. *vrouwebeeld* (1b) and *zotteklap* (1d), the linking element should be written with *-en*. A third change in 1954 is that rules only apply to words with a plural form ending in *-en* or *-n* and not to words such as *asperge* (1b), that take only a plural *-s* ending. In 1995, the rules based on semantic features such as ⟨+plural⟩ and ⟨+human⟩ have been replaced by morphological criteria, such that the linking element schwa should be written as *-en* after words that take plural *-en* but not plural *-s*. This created the changes in (1c), since *pannen* is the only plural form for *pan*, whereas the plural form of *gedachte* is either *gedachten* or *gedachtes*. Similarly, it reintroduced the old forms *hondenhok* and *bessensap* (1d). For reasons unclear to us, *zotteklap* (1d) regained its old spelling.

The new spelling rules reflect a change in the linguistic analysis of the linking schwa. The older system was based on the conviction that this schwa expressed plurality in compounds such as *gebarentaal* and *gedachtengang*, and that it expressed a meaningless old ending in compounds such as *zonneshijjn* and *pannekoek*. The new spelling system regards the schwa in all compounds as a meaningless linking phoneme that by convention is written in the same way as the plural suffix.

In 1996 we investigated the effect of writing the linking schwa as *-e* or *-en* on language processing (Schreuder et al. 1998) for two sets of words. The first set contained compounds such as *boekenkast*, boek+en+kast ‘bookcase’, with a modifier that has inevitably a plural interpretation. The second set contained compounds such as *slangenbeet*, slang+en+beet ‘snake bite’, that until then were written as *slangebeet* because its modifier has no plural interpretation. In experiments, we manipulated the presence of *-n* in both groups of words. A first experiment showed that perceptual identification was not affected by whether the linking schwa was realized as *-en* or *-e*. While changing the spelling of the vowel of the modifier of compounds severely affected their string familiarity and led to longer identification latencies, no such effect could be observed for changing the spelling of the linking schwa. A second experiment showed that changing the orthographic realization of the linking schwa from *-e* to *-en* in the

group of words formerly spelled without *-n* induced the activation of plural semantics. We concluded that writing the linking schwa in the orthographic form of the plural suffix led to the activation of plural meaning caused by the automatic parsing of the suffix *-en* and its interpretation as a plural marker. A third experiment showed that in the set of words for which the linking schwa is realized as *-en* both in the old and in the new spelling system (type *boekenkast*), leaving out *-n* has no effect. We hypothesized that these compounds, which traditionally are interpreted (and taught) to have plural interpretation for the modifier, have intrinsic plurals as their left-hand members and are stored in the mental lexicon as plurals. A final experiment, plurality rating, investigated speakers' intuitions concerning the plurality of the modifiers in Dutch compounds as a function of the presence or the absence of the *-n*. This experiment again showed the two sets of words to be different. Judgments for the set *slange(n)beet* were influenced by the presence or absence of *-n* more than judgments for the set *boeke(n)kast*. See below for details.

These experimental results support our hypothesis of a dual-route model of morphological processing as outlined by Schreuder and Baayen (1995) and Baayen et al. (1997). In this model, the parsing route and the direct access route operate in parallel. The stored meaning representation of compounds is invoked irrespective of the parsed elements, which explains the different response latencies and plurality ratings for forms with and without *-n* in both types of compounds.

The experiments also show that plural semantics is activated in the mental lexicon when the linking schwa is written as the plural suffix *-en*. We concluded that *-en* is not a meaningless phoneme. Rather, it is the plural suffix itself. We expected that plural interpretation of modifiers will eventually become commonplace for compounds with a linking schwa. In this way, the process of the functional reinterpretation of the schwa as a plural suffix instead of as a (meaningless) relic of the obsolete morphological system of medieval Dutch would be completed (Schreuder 1998: 568).

This paper presents the results of plurality rating experiments with the same word materials but new participants. These experiments took place in 2003, seven years after the original studies were conducted.

2. Plurality Rating: 1996 versus 2003

To see why a scale for plurality makes sense for the issue of determining the meaning of linking schwa, consider the compounds in (2):

- (2) *mierenhoop* 'anthill'
duiventil 'dovecote'
hondenhok 'doghouse'
slakkenhuis 'snail shell'

For anthill, it is fairly obvious that it houses many ants. Less pigeons but presumably more than one will be present in a dovecote. A doghouse could very well be owned by a single dog. But a snail shell definitely is owned by a single snail. The spelling of 1954 opted for the plural interpretation of *mierenhoop* and *duiventil*, but a singular interpretation of *hondenhok* and *slakkenhuis*. In our experiment, we investigated speakers' intuitions concerning plurality as a function of the presence or absence of *-n* in compounds such as *boekenkast* and *slangenbeet* that used to be written with or without *-n* on the basis of their plural or singular meaning.

There are two factors that might influence the plurality rating. The first is the presence or absence of the *-n*. The presence of *-n* will lead to higher plurality ratings for both word types. The second factor concerns the stored meaning of the compound, which, according to our findings in the experiments of 1996, contained the semantics of plurality for the modifier of words of the type *boekenkast* only. Hence, processing *boekenkast* or *boekekast* will activate plural semantics by the direct route. The parsing routes for *boekenkast* and *boekekast* will have the same effect, since they also lead to a mental representation in which plurality is stored. For *slangenbeet*, however, the stored semantic representation is one in which the modifier is viewed as a natural singular. Here, parsing the new form *slangenbeet* will affect plurality ratings, because *-en* signals plurality. We predict that this effect will be smaller in 2003 than in 1996, because the use of *-en* in spelling has changed the semantics of words of this type. Apart from this, we expect that *-en* will have less cue validity, because it is present in all compounds.

Participants. In 1996 and 2003, thirty-three resp. thirty-eight undergraduate students of Dutch linguistics at Radboud University participated. All were native speakers of Dutch.

Materials. Forty-eight compounds of the type *slangenbeet* were selected as experimental items, and 29 compounds of the type *boekenkast*, see appendix. Each of these compounds was presented in two forms: with and without the *-n*. A given participant saw 24 compounds of the type *slangenbeet* with the *-n* and 24 compounds without the *-n*. Similarly, each participant saw 15 compounds of the type *boekenkast* with the *-n* and 14 compounds without the *-n*. A participant was never exposed to spelling variants of the same compound.

Procedure. Participants were asked to rate on a 7-point scale their estimation of the plurality of the modifier of the compounds. A rating of 1 indicated "certainly

singular” and a rating of 7 “certainly plural”. The participants received explicit instructions to ignore spelling and spelling errors, and to concentrate purely on the semantics of the modifier.

Results and Discussion. Mean plurality ratings are presented in Table 1.

Table 1. Mean plurality ratings on a 7-point scale in 1996 and 2003. The examples *boeke(n)kast* represent compounds that used to be spelled with ⟨n⟩ in the former spelling. The examples *slange(n)beet* represent compounds that used to be spelled without ⟨n⟩.

1996		Compounds actually presented		Difference
		with <i>-en</i>	with <i>-e</i>	
Word type, based on former spelling	with <i>-en</i>	5.72 <i>boekenkast</i>	4.60 <i>boekekast</i>	1.12
	with <i>-e</i>	3.92 <i>slangenbeet</i>	2.35 <i>slangebeet</i>	1.57
2003		Compounds actually presented		Difference
		with <i>-en</i>	with <i>-e</i>	
Word type, based on former spelling	with <i>-en</i>	5.63 <i>boekenkast</i>	5.01 <i>boekekast</i>	0.62
	with <i>-e</i>	3.48 <i>slangenbeet</i>	2.89 <i>slangebeet</i>	0.59

In 1996, we observed that removal of the *-n* in *boekenkast* resulted in a smaller decrease in plurality (1.12) than dropping the *-n* from *slangenbeet* (1.57). This interaction was significant by participants as well as by items in an analysis of variance with spelling variants as within-item factor. Significant main effects of actual spelling and word type were also observed. See Schreuder (1998:566).

On the basis of the new rules for writing linking schwa and our hypothesis of a dual route model of morphological processing, we predicted that the autonomous parsing route for *slangenbeet* will have the effect that the modifier of these types of compounds will be considered plural. In other words: the fact that plural semantics is activated by spelling *-en* will lead to storage of plural meaning. We predicted that in due time, the linking schwa would become completely identical to the plural suffix. A comparison of the two experiments shows that in 2003 speakers’ intuitions have changed in the direction predicted. In general, participants judged the plurality of the modifiers to be higher than in 1996 (linear effect model with experiment as factor: $t(4725) = -4.4, p = 0.000$).

Our new experiment shows also that the plurality ratings for *boeke(n)kast* and *slange(n)beet* will not become similar, cf. the significant main effect of word type that is also present in the experiment performed in 2003 (linear mixed effect model with subject as error stratum; word type: $t(4725)=6.2$, $p<0.000$). The semantic difference on which De Vries and Te Winkel based their rule for the spelling of linking elements is still valid and it seems that this difference is robust.

A main effect of spelling is still present in 2003: $t(4725)=-24.4$, $p<0.000$. Interestingly, the plurality ratings for *slangenbeet* are lower and those for *slangebeet* are higher in 2003 ($t(4725)=2.2$, $p<0.03$) and the effect of manipulating the spelling of linking elements is smaller in both groups of words (for *boeke(n)kast* $1.12>0.62$ and for *slange(n)beet* $1.57>0.59$; $t(4725)=4.8$, $p=0.000$). These changes can be explained on the basis of the new spelling conventions as follows. The new rules are similar for all types of compounds, which leads to similar effects of the experimental manipulation. Because *-en* is conventionally the spelling of linking elements, it has less cue validity in the context of compounds. In other words, since language users no longer have the opportunity to express plurality in compounds, they assign less value to the presence or absence of *n*.

3. Plurality Rating: Heterogeneous *versus* homogeneous

One of the universals put forward to explain language behavior is the One Meaning One Form Principle that dates back to Wilhelm von Humboldt (1836), cf. Vennemann (1972:183) and Anttila (1972:181). In the Dutch linguistic community this universal has become known as Von Humboldt's Universal since the debate between Geert Koefoed, Jaap van Marle and Albert Sassen twenty years ago. Koefoed and Van Marle (1980) used Von Humboldt's Universal to explain language change, whereas Sassen (1981) doubted its usefulness, because polysemy and homophony are abundantly present in languages, and languages need flexibility rather than strict form-meaning relations. Our experiment offers the possibility to test this principle.

The One Meaning One Form Principle defines a reciprocal relation between meaning and form. In our study, we investigated the effect of form differences on meaning, for which the principle predicts that similarity of form will stimulate the language user to find meaning similarities, and that variation of form will stimulate the language user to find meaning differences. The fact that similarity of form leads to similarity of interpretation has been illustrated by the outcome of our experiments: when a linking schwa is written as a plural marker, plurality ratings are higher.

Our experiments thus far also showed that variation of form stimulates the language user to find meaning distinctions: the effect of leaving out *-n* in the

spelling is significant. Another question is whether the conceptual difference between the two types of words is autonomously present, irrespective of context. The differences in plurality ratings might decrease or disappear completely when form variation is no longer present. In order to answer this question we performed experiments with our list of compounds in two versions: either all linking elements were written with *-en* or they were written with *-e*.

Participants. Thirty-seven undergraduate students of Dutch linguistics at Radboud University participated. Eighteen participants received compounds written with linking *-en* and nineteen participants received compounds written with linking *-e*. All were native speakers of Dutch.

Materials and Procedure. Similar to the experiment of 1996.

Results and Discussion. Mean plurality ratings were calculated by participants and by items, as well as the mean difference scores for each word type, as shown in Table 2 “homogeneous”. For ease of comparison, the relevant part of Table 1 is copied under “heterogeneous”.

Table 2. Mean plurality ratings for heterogeneous or homogeneous stimuli in 2003. See for details Table 1, but observe that in the homogeneous setting one group of participants rated compounds actually presented with *-en* and another group of participants rated compounds with *-e*.

2003, heterogeneous		Compounds actually presented	
		with <i>-en</i>	with <i>-e</i>
Word type, based on former spelling	with <i>-en</i>	5.63 <i>boekenkast</i>	5.01 <i>boekekast</i>
	with <i>-e</i>	3.48 <i>slangenbeet</i>	2.89 <i>slangebeet</i>
2003, homogeneous		Compounds actually presented	
		all with <i>-en</i>	all with <i>-e</i>
Word type, based on former spelling	with <i>-en</i>	5.57 <i>boekenkast</i>	5.04 <i>boekekast</i>
	with <i>-e</i>	3.42 <i>slangenbeet</i>	3.10 <i>slangebeet</i>

A comparison of the data of both experiments shows that the pattern of results for the four cells in both experiments is the same ($F(2,5665)=2.2$, $p<0.11$). A detailed comparison of the rating patterns of each of the four cells of both experiments shows no differences. This experiment shows that the

meaning distinctions between the two groups of words that used to be spelled differently is robust. Even in a context in which the form suggests that all modifiers of the compounds are plural or all are singular, participants react in a similar way.

4. Family size

For the complete set of words in the experiments of Table 2, we investigated a number of covariates: frequencies and family sizes (Schreuder and Baayen 1997). Token frequencies of the compound, of the modifier and of the head are no predictors of plurality judgments (linear mixed effect model, compound frequency: $t(4658) = -0.77$, $p = 0.44$; modifier frequency: $t(4658) = -0.82$, $p = 0.41$ and head frequency: $t(4658) = -0.31$, $p = 0.75$), but there is an effect of family size of modifier and head.

A larger family size of the modifier correlates with a lower rating ($\beta = 0.15$, $t(4660) = -4.45$, $p = 0.000$). Our tentative explanation runs as follows. Modifiers with a large family size occur in a large number of morphological contexts. The chance for such modifiers to be used in contexts with different interpretations is higher and the user will be less certain about their meaning (cf. Moscoso 2003). Both plural and singular contexts will be available, which leads to vagueness, that translates in lower plurality ratings. (Examples may clarify this point. The family of *boek* consists of words such as *boekenkast*, *handboek*, *omboeken*, *boeking*, *boekje* etc. This family is larger than the family of *slang*, that includes *slangenbeet*, *slangenleer*, *tuinslang*, *slangetje* etc. Given a larger family, the contexts in which *boek* occurs are more diverse than the contexts in which *slang* occurs.)

Also, a correlation of the family size of the head was found, but only in words of the type *slangenbeet* ($\beta = -0.21$, $t(4660) = 5.62$, $p = 0.000$). When the family size of the head of these compounds is larger, plurality ratings for the modifiers are higher. The difference between words of the type *slangenbeet* and words of the type *boekenkast* can be explained on the basis of form-meaning relations, which are different for both types of words. In words such as *boekenkast* the linking schwa and the grapheme *en* are appropriate, but in words such as *slangenbeet* they are inappropriate, since the meaning of these modifiers is singular rather than plural. The context of the modifier (in our experiment: the head of the compound) is the only clue for the interpretation of the, questionable, plural form of the modifier. The influence of the head on the interpretation of the modifier hence will be more important in this type of compounds. Along the line of reasoning presented above, a larger family size leads to vagueness, in which case the influence of the head on the interpretation of the modifier will be less, and the information provided by the form of the

modifier will be more important. Given that this form suggests plurality, the ratings will be higher.

5. Conclusion

The experimental studies before and after Dutch spelling reform show that language behavior is influenced by visual patterns in writing and by spelling conventions. Spelling the linking element in compounds as *-e* or as *-en* affects plurality ratings both in the old and in the new spelling. The new spelling conventions however, lead to higher overall plurality ratings, a smaller effect of leaving out the *-n* and a similar effect of leaving out the *-n* in the two types of compounds included in the study (e.g. compounds such as *boekenkast* that used to be written with *-en* on the basis of the plural meaning of the modifier and compounds such as *slangenbeet* that used to be written with *-e* on the basis of the singular meaning of the modifier). In sum: writing *-n* has less cue validity in the new spelling. However, the difference in meaning on which the former difference of spelling was based, is still present, even in a context where all compounds are written with or without *n*.

Our experiments can be explained partly by the One Meaning One Form Principle. Similarity of form leads to similarity of interpretation: spelling the linking elements as plural endings leads to higher plurality ratings. It is not true, however, that the meaning distinctions on which the older spelling conventions were based completely disappeared, nor is it true that the interpretation of linking elements is influenced by a context in which all forms are presented with *-e* or all forms are presented with *-en*.

It turns out that language use is sensitive to spelling conventions, which may drift away from meaning, as is the case when alphabetic writing forces a categorical distinction for meaning oppositions such as number that are scalar rather than privative. We conclude that Bloomfield is both right and wrong when he claims that “Writing is not language, but merely a way of encoding language by means of visible marks” (1933:21). Writing is a way of encoding language. But it is not *merely* a way of encoding language, since language behavior can be changed by spelling reforms. The De Vries and Te Winkel spelling explicitly taught the language user to interpret the linking elements as plural markers in appropriate contexts, and the new spelling teaches the language user to rely on morphology, and not to use semantic distinctions. As shown by our experiments, both conventions affect interpretation. However, the meaning distinctions that formed the basis of the De Vries and Te Winkel spelling seem to remain intact.

Note

* We thank Jaap van Marle and Henk Schultink for helpful comments.

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Appendix

Words used and mean plurality ratings (resp. mean in 1996, heterogeneous or homogenous in 2003)

The type SLANGENBEET

bananenschil (banana peel) 2.92/2.16/2.11; bananeschil 1.50/1.74/2.47; beddengoed (bedclothes) 4.17/4.26/4.33; beddegoed 3.67/2.58/3.68; berenmuts (bearskin) 3.42/3.16/3.06; beremuts 1.42/2.32/2.58; bokkensprong (goat's jump) 4.17/2.42/2.89; bokkesprong 1.75/2.37/2.58; brillenglas (spectacle-glass) 3.42/3.68/3.17; brilleglas 1.75/2.16/2.83;

dennenboom (fir tree) 4.08/3.21/3.28; denneboom 1.67/3.21/3.84; druivensuiker (grape sugar) 5.58/5.53/5.17; druivesuiker 4.00/3.95/4.42; eikenhout (oak wood) 3.50/2.79/3.56; eikehout 2.33/3.16/2.89; flessenhals (bottle neck) 3.58/3.42/2.22; flessehals 1.17/2.16/2.47; ganzenveer (goose feather) 3.08/2.89/2.44; ganzeveer 1.25/2.16/2.74; geitenkaas (goat's cheese) 4.83/4.89/3.83; geitekaas 2.42/2.95/3.16; hanenkam (cock's comb) 2.17/2.68/2.44; hanekam 2.00/1.68/2.47; hartenwens (heart's desire) 3.00/2.84/3.11; hartewens 1.58/1.74/1.53; hazenlip (hare-lip) 2.33/2.21/2.39; hazelip 1.25/2.32/2.21; hertenleer (venison leather) 4.08/4.37/4.29; herteleer 2.58/2.89/2.89; hondenpoep (dog-dirt) 3.08/2.47/3.39; hondpoep 2.58/2.68/2.89; karrenspoor (cart track) 4.50/3.16/4.24; karrespoor 2.92/2.11/3.33; kattenkwaad (mischief) 4.58/3.21/3.61; kattedkwaad 2.33/3.11/3.32; kerkenraad (church council) 4.67/4.89/3.72; kerkeraad 3.00/2.68/3.53; kersenpit (cherry stone) 2.92/2.53/2.53; kersepit 1.67/2.05/2.47; kippenvel (hen skin) 4.08/3.63/3.56; kippevel 2.75/2.63/3.16; konijnenhok (rabbit hutch) 4.58/4.47/4.72; konijnehok 2.75/4.42/4.00; krullenbol (curly head) 6.75/6.21/5.28; krullebol 4.00/4.68/4.95; kurkentrekker (corkscrew) 4.58/4.26/4.44; kurketrekker 3.33/2.89/3.79; lampenkap (lampshade) 2.75/2.74/2.39; lampekup 1.50/1.84/2.53; leeuwendeel (lion's share) 4.00/3.63/3.59; leeuwedeel 1.92/2.68/2.84; mottenbal (mothball) 4.58/4.47/4.44; mottebal 4.17/3.37/4.21; notendop (nutshell) 2.50/2.53/3.41; notedop 1.50/1.79/2.21; ossenkop (ox head) 2.00/2.79/2.72; ossekop 1.58/1.68/2.42; paardenbloem (dandelion) 3.58/3.21/2.71; paardebloem 1.92/2.79/2.84; pannenkoek (pancake) 2.58/2.68/2.56; pannekoek 2.58/2.58/2.74; pennelikker (quill-driver) 3.33/4.84/4.00; pennelikker 2.08/3.11/3.05; pottenkijker (nosy) 4.43/3.95/3.72; pottekijker 2.75/3.05/4.05; ruggengraat (backbone) 2.33/2.89/2.56; ruggegraat 1.42/2.16/2.26; ruitewisser (screen wiper) 3.50/4.00/3.67; ruitewisser 2.17/2.74/4.47; schapenmelk (sheep's milk) 4.75/4.53/3.67; schapemelk 3.17/4.42/4.58; schroevendraaier (screwdriver) 5.33/5.16/4.82; schroevendraaier 4.00/4.32/4.37; slakkenhuis (snail shell) 3.08/2.68/3.00; slakkehuis 1.67/2.00/2.21; slangenbeet (snakebite) 2.67/2.58/2.24; slangebeet 1.42/2.05/2.68; speldenknop (pin's head) 3.67/2.53/2.39; speldeknoop 1.25/2.05/2.21; spinnenweb (spider's web) 3.00/2.84/3.22; spinneweb 1.50/2.16/2.84; vlaggenstok (flag-staff) 3.17/2.68/3.00; vlaggestok 1.42/2.00/2.42; vossenhol (fox hole) 5.58/4.95/4.61; vossehol 3.25/3.16/4.26; zielenpoot (pitiful person) 2.33/3.00/2.72; zielepoot 1.42/2.26/1.95; zwijnenstal (cesspit) 6.58/4.84/5.13; zwijnestal 2.50/4.21/4.05.

The type BOEKENKAST

bessenstruik (currant bush) 6.42/6.63/6.06; bessestruik 5.67/5.37/5.68; boekenrek (book rack) 6.75/6.58/6.50; boekerek 5.50/5.63/5.95; brievenbus (letter box) 6.17/5.79/5.89; brievebus 4.25/5.37/5.05; dierentuin (animal garden) 6.83/6.53/6.50; dierentuin 6.33/6.05/5.74; druiventros (bunch of grapes) 6.58/6.21/6.22; druivetros 4.83/5.89/5.11; duiventil (pigeon loft) 6.75/6.53/5.88; duivetil 5.58/5.42/6.00; erwtensoep (pea soup) 6.08/5.89/5.56; erwtesoep 4.42/5.42/5.39; gebarentaal (gesture language) 6.67/6.56/5.71; gebaretaal 5.92/4.84/5.42; gevarenzone (danger zone) 3.92/4.63/3.83; gevarezone 3.50/4.00/3.89; kaartenbak (card tray) 6.75/6.47/6.44; kaartebak 5.33/4.84/5.84; kleurenfoto (colour photograph) 5.25/4.95/5.67; kleurefoto 3.67/5.16/4.58; kolenschop (coal shovel) 5.83/6.05/5.28; koleschop 2.83/4.84/5.21; ladenkast (chest of drawers) 5.33/5.26/5.44; ladekast 4.58/4.84/4.79; lappenpop (ragdoll) 5.50/5.05/4.78; lappipop 3.33/3.74/4.05; lippenstift (lipstick) 3.33/3.95/5.06; lippestift 2.83/3.53/3.37; mierenhoop (ant hill) 7.00/6.53/6.06; mierehoop 5.92/5.94/6.05; plankenkoorts (stage fright) 5.08/4.21/4.18; plankekoorts 4.33/3.68/3.84; platenspeler (record player) 5.08/5.68/5.65; platespeler 4.00/4.84/5.00; rattenvanger (rat catcher) 5.50/5.32/6.11; rattevanger 6.25/5.67/5.42; rokkenjager (woman chaser) 5.33/5.37/5.22; rokkejager 4.17/4.00/4.74; rollenspel (role-play) 5.00/5.58/5.72; rollespel 4.92/5.05/5.21; schoenendoos (shoebox) 5.00/5.68/5.11;

schoenedoos 3.25/5.21/4.68; sterrenbeeld (constellation) 4.08/4.32/4.89; sterrebeeld 4.42/3.95/4.47; takkenbos (faggot) 6.00/6.47/5.44; takkebos 5.42/5.26/5.79; tandenstoker (toothpick) 6.00/5.37/5.00; tandestoker 2.75/4.74/4.79; tentenkamp (tents encampment) 6.42/6.37/6.06; tentekamp 4.42/5.89/5.63; toetsenbord (keyboard) 5.75/6.05/6.06; toetsebord 5.58/5.21/5.26; vlammenzee (sea of flames) 6.75/6.16/6.35; vlammezee 4.67/5.37/5.68; warenhuis (department store) 4.50/5.74/5.35; warehouse 4.58/4.84/4.63; wolkendek (cloud cover) 5.83/6.47/5.76; wolkedek 5.17/5.58/5.26; woordenstrijd (verbal combat) 6.25/5.26/6.06; woordstrijd 5.17/5.63/5.72; zakenleven (business life) 5.08/4.53/4.28; zakeleven 2.42/3.42/2.95.