

The polysemic use of body-part terms in Dutch, German and English: a quantitative contrastive analysis

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ABSTRACT

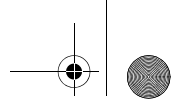
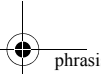
Linguists such as Svorou (1993), Chapell and McGregor (1996), Deignan and Potter (2003), Wierzbicka (2006) and Dingemanse (2009) show great interest in body-part terms as a research topic, in particular in the semantic extension of body-part lexemes into other semantic domains. Their research has sought to explain the frequent recurrence of body-part terms in widely divergent semantic fields and throughout languages that do not always share a common origin.

This paper examines the polysemic use of five body-part terms, head, eye, heart, hand and foot, and their Dutch and German translation equivalents (hence TEs). Through interlingual, contrastive research, these terms have been explored in their single use (1), and in idioms, fixed expressions and proverbs (2). Data was collated using both bilingual and explanatory dictionaries.

With regard to (1), we introduced two comparison categories for the various meanings of the terms in their single use, indicated with "0" (difference in meaning) and "1" (correspondence in meaning). The (dis)similarity in meaning between two of the three languages is expressed as a percentage.

As for (2), to analyse the idioms, fixed expressions and proverbs containing body-part terminology, four comparison categories were drawn up, indicated with "1" (use of the same body-part term), "2" (use of another body-part term), "3" (TE without body-part term) and "4" (no TE found). The sum of categories 1+2 has been expressed as a similarity percentage, whereas the sum of categories 3+4 denotes a dissimilarity percentage.

The results show that the highest degree of correspondence occurs between the use of body-part terms in Dutch and German, a resemblance that applies to their single use as well as to their use in idioms, fixed expressions and proverbs. For all five body parts examined in this study, the similarity percentage between Dutch and German is in excess of 50%. This shows a regularity in correspondence that outstrips the correspondence levels in the Dutch-English and German-English language pairs. German and English, in general, show the lowest correspondence, with only two of five cases showing a similarity percentage of more than 50%. The comparison between Dutch-English scores slightly higher, with three in each five cases showing more convergence than divergence.



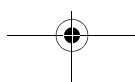
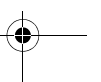
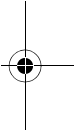
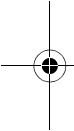
1. Aim

The questions this study addresses are the following:

1. to what extent do Dutch and German differ, or correspond, in the polysemic use of body-part terms?
2. to what extent do Dutch and English differ, or correspond, in the polysemic use of body-part terms?
3. to what extent do German and English differ, or correspond, in the polysemic use of body-part terms?

To answer these three questions, the different meanings of five body-part terms (*head*, *eye*, *heart*, *hand* and *foot*, along with their Dutch and German translation equivalents (hence TEs) have been studied in their single use (e.g. *the foot of a table*) as well as in the expressions in which these terms occur (e.g. *to stand on one's own feet*). German literature refers to these expressions as “somatismen”: “all idioms containing a body part as a component” (“Somatismen”: “alle Phraseologismen, die einen Körperteil als Komponente enthalten”) (Burger, 2010:92). The semantic field of the human body proves a very rich source to draw on when making abstract conceptions concrete: the metaphorical use of body-part terms occurs frequently. It is not only the different meanings of body-part terms, but also entire expressions in which they occur, that are often metaphors. It is widely recognized that body-part terms often appear in contexts other than the field of the human body and that this is a universal phenomenon (De Witte, 1948; Heine, 1997). This paper examines the (dis)similarities between Dutch, German and English in more detail, by gathering and comparing concrete data from explanatory, as well as bilingual, dictionaries and by making a quantitative analysis of the results.

In this paper, polysemy constitutes both metaphor and metonymy. Pethö (2001:13) defines conceptual metaphor as “a general cognitive strategy which involves the conceptualization of abstract or less familiar phenomena by recourse to something more concrete or familiar”. For example, the English expression *bury ones head in the sand* is an example of a metaphor. The concrete image of having one's head buried in sand shows considerable similarity with its figurative meaning, i.e. not wanting to see the truth or reality. Metonymy is a phenomenon where the name of one concept, which is strongly associated with another concept, is transferred to that other concept.



An example of metonymic use of a body-part term is the expression *count heads*, where a part of the human body is used to talk about a person as a whole (= pars pro toto). Another example is *hands needed*, where *hands* stands for ‘employees’.

2. Methodology

2.1. General

To keep our research within manageable confines, we focused on five body-part terms: *head*, *eye*, *heart*, *hand* and *foot*. We selected these five items on the basis of the amount of information found under the item in *Van Dale Groot Woordenboek hedendaags Nederlands* (2008). The Dutch entries *hoofd*, *oog*, *hart*, *hand* and *voet* are the most extensively described entries found amongst all entries for parts of the human body. Equally, Tiberius and Schoonheim (2014:25) list these terms amongst the seven most frequently used body-part terms in Dutch (in a list of 59 body-part terms).

To collect all the different meanings of these five body-part terms and the expressions in which they occur, we consulted both bilingual and explanatory dictionaries:

- *Van Dale Groot elektronisch woordenboek Duits-Nederlands* (2009)
- *Van Dale Groot elektronisch woordenboek Nederlands-Duits* (2009)
- *Van Dale Groot elektronisch woordenboek Nederlands-Engels* (2009)
- *Van Dale Groot elektronisch woordenboek Engels-Nederlands* (2009)
- *Van Dale Groot woordenboek hedendaags Nederlands* (2008)
- *Duden Deutsches Universalwörterbuch* (2011)
- *Longman Dictionary of English language and culture* (2005)
- *dict.cc, English-German Dictionary* (<http://www.dict.cc/>) (2012)

It should be noted that this research is only as reliable as the dictionaries consulted. Even though one may doubt whether, and to what extent, ‘different meanings’ in language(s) can be isolated (at all) and can thus be ‘counted’, we must emphasize the usefulness of lexicographic practice. Geeraerts (1989:233), for instance, states that “dictionaries remain a source for lexical-semantic research that is difficult to underestimate, not least because they are often the only large-scale vocabulary description that exists in any given language” (“dat woordenboeken een moeilijk te onderschatten bron

voor lexicaal-semantisch onderzoek blijven, niet in het minst omdat ze vaak de enige grootschalige woordenschatbeschrijving voor een taal zijn”).

2.2. *Single use*

To gain a clear overview that indicates which meanings are similar and which are different, all meanings of *head*, *eye*, *heart*, *hand* and *foot* and their TEs in Dutch and German that were found in the dictionaries mentioned under 2.1. were listed next to each other in a schedule. In order to gather quantitative results, we listed another three columns against the meanings, which compare Dutch with German, Dutch with English and English with German.

A similar meaning between two of the three languages is indicated with the number 1; if a meaning only appears in one of two languages, the number 0 can be found in the respective column. We then counted how many different meanings appeared in all three languages, in just two of the three languages and how many meanings were only present in one language. We also counted how many meanings correspond between Dutch and German, Dutch and English, and German and English, and how many meanings differ. These results are expressed in (dis)similarity percentages between two of the three languages. Tables 1 and 2 give an overview for the single use of *oog/Auge/eye*.

Table 1. Comparison of the meanings of *oog/Auge/eye*

	meanings of <i>oog</i>	meanings of <i>Auge</i>	meanings of <i>eye</i>
number of meanings	12	10	14
number of meanings only present in one language	0	0	4

Table 2. (Dis)similarity of the meanings of *oog/Auge/eye*

	Dutch- German	Dutch- English	German- English
similar meanings	10/12 = 83%	10/16 = 62,5%	8/16 = 50%
differing meanings	2/12 = 17%	6/16 = 37,5%	8/16 = 50%

2.3. Expressions

Used in a very broad sense, the term “expression” can be defined as a group of words which often occur together and assume a different meaning as a group than if they were used separately. Baker (1992) distinguishes idioms, fixed expressions and proverbs. However, they do have some features in common and are all defined as “frozen patterns of language which allow little or no variation in form” (Baker, 1992:47). Idioms “often carry meanings which cannot be deduced from their individual components” (Baker, 1992: 63). Unlike a fixed expression, an idiom is harder to be understood. Unlike idioms, fixed expressions (and proverbs) have more transparent meanings as they allow for temporal, or deictical, variation (e.g. *that is/was/will be over my/her/his head/their heads*). However, they still need to be considered a unit and are more than the sum of the meanings of the individual words they contain. A proverb is defined as “a short, well-known, supposedly wise saying usually in simple language” (*Longman Dictionary*, 2005).

The following examples illustrate the distinction between fixed expressions, idioms and proverbs:

- *that is above/over my head* (fixed expression)
- *head over heels* (idiom)
- *uneasy lies the head that wears a crown* (proverb)

In this paper, all three categories are included. For the sake of succinctness, we sometimes use the term “expression(s)” as an umbrella term.

With a view to gathering expressions which contain one of the five lexemes in Dutch, German and English, we consulted all the dictionaries mentioned under 2.1. and included them in a table, where the expression containing a body-part term in one of the three languages is placed against its TEs in the other two languages. To make a quantitative analysis of the (dis)similarity between the three languages, we added another three columns next to the expressions and their TEs: one column that compares a Dutch/German expression containing a body-part term with its German/Dutch TE, one that compares the Dutch/English expression with its English/Dutch TE and a last one that compares the English/German expression with its German/English TE.

To measure the (dis)similarity between the expressions containing a body-part term and their TEs in the two other languages, we distinguished four categories, each with their own set of four numbers:

(1) The expression containing a body-part term has a TE in the other language that contains the same body-part term. Example:

Table 3. A TE that contains the same body-part term, indicated with number 1

Expression in Dutch	German TE	English TE	Dutch-German	Dutch-English	German-English
Het is hem naar het hoofd gestegen.	Es ist ihm zu Kopf gestiegen.	It has gone to his head /has turned his head .	1	1	1

(1 = use of the same body-part term)

(2) The expression containing a body-part term has a TE in the other language that contains a different body-part term. Example:

Table 4. A TE that contains a different body-part term, indicated with number 2

Expression in Dutch	German TE	English TE	Dutch-German	Dutch-English	German-English
het hoofd buigen	Den Nacken beugen	bow one's head	2	1	2

(2 = use of another body-part term)

When the Dutch expression in table 4 is compared with the German expression, it is noticeable that the Dutch expression makes use of the lexeme *hoofd*, whereas German uses *Nacken* to convey (more or less) the same meaning. For this kind of difference, the number 2 is used. However, this number still denotes similarity rather than dissimilarity, as both languages make use of an expression containing a body-part term. A metonymic relationship can also be noticed here, since the neck is part of the head. Only numbers 3 and 4, which we will discuss below, will be regarded as categories expressing divergence between two languages.

(3) The expression containing a body-part term has a TE in the other language that does not contain a body-part term:

Table 5. A TE that does not contain a body-part term, indicated with number 3

Expression in Dutch	German TE	English TE	Dutch-German	Dutch-English	German-English
Met zijn hoofd in de wolken lopen.	Der Himmel hängt ihm voller Geigen/er schwebt in den Wolken.	Have one's head in the clouds.	3	1	3

(3 = TE without body-part term)

In this example, an expression with a body-part term in Dutch and English is present. However, the German TE does not contain any reference to the human body. Such a dissimilarity is indicated by the number 3. In the example above, the German TE is also a fixed expression rather than a regular translation. However, the number 3 is also used when only an explanatory translation is found.

(4) The last category is indicated with number 4, and occurs when no translation is found for a particular expression containing a body-part term:

Table 6. No TE was found, indicated with number 4

Expression in English	Dutch TE	German TE	English-Dutch	English-German	Dutch-German
Hew not too high lest the chips fall in your eye.	Die boven zijn hoofd kapt, vallen de spaanders in de ogen.	/	1	4	4

(4 = no TE found).

In this example, no TE was found in German in the dictionaries mentioned above. As a consequence, the English and Dutch expressions cannot be compared with the German translation, and therefore they receive number 4.

Before proceeding with a quantitative analysis of the 4 aforementioned categories, we first counted all the Dutch, German and English expressions that contain a body-part term together. Then we counted all the numbers, 1,

2, 3 and 4, in the three columns that compare Dutch with German, Dutch with English and German with English. Their total was translated into a percentage. These percentages indicate to what extent the three languages correspond in their use of body-part terms in expressions, and to what extent they differ. Table 7 gives an overview for *oog/Auge/eye*.

Table 7. (Dis)similarity of expressions with *oog/Auge/eye*

	Dutch-German	Dutch-English	German-English
number of expressions	208	213	206
(dis)similarity categories			
1. TE with the same body-part term	137/208 = 66%	100/213 = 47%	95/206 = 46%
2. TE with another body-part term	8/208 = 4%	20/213 = 9,4%	21/206 = 10%
3. TE without a body-part term	52/208 = 25%	73/213 = 34,2%	65/206 = 32%
4. no TE found	11/208 = 5%	20/213 = 9,4%	25/206 = 12%
1+2 similarity percentage	145/208 = 70%	120/213 = 56,4%	116/206 = 56%
3+4 dissimilarity percentage	63/208 = 30%	93/213 = 43,6%	90/206 = 44%

3. Results

3.1. Single use

3.1.1. *Hoofd/Haupt/head*

The comparison of the different meanings of the lexemes *hoofd/Haupt/head* show that there is more divergence in meanings than convergence between the three languages when it comes to these lexemes. One of the reasons is that *hoofd* and *Haupt* have fewer meanings than the English lexeme *head*, not least because Dutch and German have two lexemes to describe this body part, namely *hoofd* and *kop*, and *Haupt* and *Kopf*. *Kop* and *Kopf* are used in colloquial speech and have a higher number of meanings than *hoofd* and *Haupt*. The English language makes no such distinction.

To give due consideration to this discrepancy in Dutch and German, we first compared the English lexeme *head* with *hoofd* and *Haupt*, and then drew a second comparison between *head*, *kop* and *Kopf*.

We will first discuss the results of the comparison between *hoofd/Haupt/head*.

Table 8. Comparison of the meanings of *hoofd/Haupt/head*

	meanings of <i>hoofd</i>	meanings of <i>Haupt</i>	meanings of <i>head</i>
number of meanings	10	5	29
number of meanings only present in one language	0	1	19

In table 8 (and all tables up to, and including 19), the numbers in each language pair should be interpreted as follows. In English, there are a total of 29 meanings in table 8. The reason that we end up with a total of 30 meanings in the three languages, is because there is one meaning in German that has no counterpart in the other two languages. The rest of the meanings overlaps in Dutch and/or German, or only occurs in English.

As listed in table 8, English has 29 different meanings for *head*, whereas Dutch only has 10 different meanings and German comes last with only 5 meanings. The phenomenon of the English lexeme having a considerable higher number of meanings is not only the case with this body-part term, but can be extended to all the body-part terms studied in this paper. Moreover, English makes more use of body-part terms as verbs. In English, the verbs *to head*, *to eye*, *to heart*, *to hand* and *to foot* all exist. However, for the purposes of this paper, we did not take those verbs into consideration. We only included the meanings of nouns.

Only two meanings appear in all three languages: (1) “part of the human body”, and (2) “leader, superior”. There is one meaning only present in Dutch and German: “the main thing” (in compounds), e.g. *hoofdzaak*, *Hauptsache*, *main point/thing*.

The meanings only present in Dutch and English, are: (1) “seat of reason, will, talent, self-control”, (2) “a person”, (3) “the upper/highest part”, (4) “the front part”, (5) “in botany, ex. “head of lettuce”“ (English), “hoofdje” (flower head) (Dutch), (6) “main part, headwaters, source” and (7) “heading”. One meaning is only present in German and English: “a head of cattle”. There are 19 meanings of *head* that are not carried by the lexemes *Haupt* or *hoofd* (e.g. “a headache, hangover” or “junkie, addict”).

Table 9 compares the (dis)similarity of meanings in the three different languages:

Table 9. (Dis)similarity of the meanings of *hoofd/Haupt/head*

	Dutch-German	Dutch-English	German-English
similar meanings	3/12 = 25%	9/30 = 30%	3/31 = 10%
differing meanings	9/12 = 75%	21/30 = 70%	28/31 = 90%

The totals in table 9 suggest that there are 12 meanings that occur in Dutch and/or German. In Dutch, ‘head’ has 10 meanings, and just five in German. Yet, we do not reach a total of 15 meanings, because there are three that overlap. So we come to a total of 12 meanings, three of which occur both in Dutch and German and nine that occur in Dutch but not in German, or vice versa.

It is clear that the polysemic use of these three lexemes yields a higher degree of divergence than convergence. It must be noted, though, that, while the meaning between two languages might be similar, there can still be a considerable difference in use. For example, both in Dutch and German, *hoofd* and *Haupt* are used to describe a leading figure: *het hoofd van het gezin* is translated as *das Haupt der Familie*, which shows resemblance in the use of this body-part term to express a certain meaning, i.e. “a leader”. However, there is no similarity in all cases: *het hoofd van de school* is translated in German as *der Schulleiter* (more often than *das Schulhaupt*), or as *der Rektor*. This pattern of “divergence within convergence” appears in almost all similar meanings between two languages. We have only taken into account the general similarities or contrasts between the meanings of a body-part term, not the differences in very particular cases.

3.1.2. *Kop/Kopf/head*

When comparing the lexemes *kop/Kopf/head*, one is initially struck by a notable similarity in meanings between Dutch and German (75%). While the number of meanings of the lexeme *head* remains the same as listed above, the lexemes *kop* and *Kopf* have a notably higher number of meanings than *hoofd* and *Haupt*:

Table 10. Comparison of the meanings of *kop/Kopf/head*

	meanings of <i>kop</i>	meanings of <i>Kopf</i>	meanings of <i>head</i>
number of meanings	14	14	29
number of meanings only present in one language	1	0	15

The meanings covered by all three languages are: (1) “part of the body of an animal”, (2) “part of the human body”, (3) “reason, will, talent, self-control”, (4) “upper part”, (5) “front part”, (6) “(newspaper) headline, heading”, (7) “image”, (8) “person”, (9) “something with the form of a head”, (10) “recording-head, erasing-head”, and (11) “tip, far end”. There is one meaning only present in German and Dutch: “in industry, technology, ex. *geschnellter Kopf* (German), *gesnapte kop* (Dutch)”. There is one meaning only present in Dutch and English: “head (on beer)”. The meanings only present in German and English are: (1) “leader, superior”, and (2) “botany, ex. *der Kopf Salat* (German), *a head of lettuce* (English)”.

The one meaning of the Dutch lexeme *kop* that is not covered by one of the other languages is the meaning of *cup* in English, i.e. “household article to drink from”. Again, 15 meanings only appear in English (e.g. “headache, hangover” or “easy girl (slang)”).

Table 11. (Dis)similarity of the meanings of *kop/Kopf/head*

	Dutch-German	Dutch-English	German-English
similar meanings	12/16 = 75%	12/31 = 39%	13/30 = 43%
differing meanings	4/16 = 25%	19/31 = 61%	17/30 = 57%

The second and third columns in table 11 again show a higher percentage of differing meanings. However, the similarity between Dutch and German is high (75%). This similarity between Dutch and German will be borne out in the results below.

The total number of different meanings in all three languages with respect to the body part *head* amounts to 31, which is more than the total number of meanings of the four other body parts discussed in this paper.

3.1.3. *Oog/Auge/eye*

When examining the lexemes *oog/Auge/eye*, it is noticeable that the number of meanings in the three languages is quite similar:

Table 12. Comparison of the meanings of *oog/Auge/eye*

	meanings of <i>oog</i>	meanings of <i>Auge</i>	meanings of <i>eye</i>
number of meanings	12	10	14
number of meanings only present in one language	0	0	4

Once again, English has the highest number of meanings.

The meanings present in all three languages are: (1) “part of the human body”, (2) “with regard to the iris”, (3) “eyelid, area around the eye”, (4) “look, glance”, (5) “field of vision, range, scope”, (6) “in botany, ex. *the eye of a potato*”, (7) “with regard to peacocks, butterflies”, and (8) “in meteorology, ex. *the eye of a storm*”. Two meanings were found only in Dutch and German: (1) “of a dice”, and (2) “a droplet of fat”. The meanings only found in Dutch and English are: (1) “opening”, and (2) “with regard to garments”. The four meanings only present in English relate to: (1) “a detective”, (2) “the architecture around a window”, (3) “a hawsehole (shipping trade)”, and (4) “the wind direction (shipping trade)”.

The similarity percentage as listed in the schedule below, is more than, or equal to, 50%:

Table 13. (Dis)similarity of the meanings of *oog/Auge/eye*

	Dutch- German	Dutch- English	German- English
similar meanings	10/12 = 83%	10/16 = 62,5%	8/16 = 50%
differing meanings	2/12 = 17%	6/16 = 37,5%	8/16 = 50%

Again, the resemblance percentage is the highest between Dutch and German. The total number of all different meanings in the three languages is 16.

3.1.4. *Hart/Herz/heart*

The next lexemes that we compared are *hart/Herz/heart*. Interestingly, we observed a 100% match between the meanings in Dutch and German. There are, again, more meanings in English than in Dutch and German, and there is a higher convergence percentage than a divergence percentage in all three columns:

Table 14. Comparison of the meanings of *hart/Herz/heart*

	meanings of <i>hart</i>	meanings of <i>Herz</i>	meanings of <i>heart</i>
number of meanings	10	10	15
number of meanings only present in one language	0	0	5

Table 15. (Dis)similarity of the meanings of *hart/Herz/heart*

	Dutch- German	Dutch- English	German- English
similar meanings	10/10 = 100%	10/15 = 67%	10/15 = 67%
different meanings	0/10 = 0%	5/15 = 33%	5/15 = 33%

The meanings carried by all three languages are: (1) “a muscle”, (2) “the heart region”, (3) “feelings, spirit, mind”, (4) “disposition, friendship”, (5) “courage”, (6) “as food”, (7) “something heart-shaped”, (8) “middle, core, essence”, (9) “darling, sweetheart”, and (10) “card game”. The five meanings only present in English are: (1) “a brave, sturdy man”, (2) “the glans (of a penis) (*slang*)”, (3) “an erection, a hard-on (*slang*)”, (4) “mind, reason, thoughts, memories”, and (5) “fertility (of soil)”.

The total number of all different meanings in English, German and Dutch together amounts to 15 for this particular body-part term.

3.1.5. *Hand/Hand/hand*

The lexemes *hand/Hand/hand* show a considerable high number of meanings in total (27), which comes close to the 31 of the body part *head*. As in the case of *head*, this large number mainly reflects the number of meanings in English (25), which is considerably higher than the number of meanings in Dutch (16), or German for that matter (13):

Table 16. Comparison of the meanings of *hand/Hand/hand*

	meanings of <i>hand</i>	meanings of <i>Hand</i>	meanings of <i>hand</i>
number of meanings	16	13	25
number of meanings only present in one language	0	1	10

The meanings covered by all three languages are: (1) “part of the human body”, (2) “handwriting”, (3) “with regard to animals”, (4) “part of an instrument”, (5) “sports”, (6) “trade (owner)”, (7) “person (as source of information)”, (8) “help, support, assistance”, (9) “control, restraint”, (10) “agreement, consent (marriage), vow, word of honour, (trade) agreement”, and (11) “influence, intervention, contribution”. One meaning appears only in Dutch and German: “with regard to equestrian sports”. Four meanings were only found in Dutch and English: (1) “side (figurative)”, (2) “size”, (3) “a (card) player”, and (4) “index (book business)”. The meaning of *Hand* that was only found in German is: “a punch (boxing)”. The 10 meanings that are only carried by the lexeme *hand* in English are: (1) “a workman, sailor man, crewman”, (2) “a participant in an activity”, (3) “an expert, an artist”, (4) “a game turn (cards)”, (5) “a side, direction (not figurative)”, (6) “a bunch (of bananas), a bundle (of tobacco), five pieces (of oranges)”, (7) “a shoulder joint (of a pig)”, (8) “badminton”, (9) “craftsmanship, competence”, and (10) “applause, clapping, cheers”.

The resemblance percentage is over 50% when comparing Dutch-German and Dutch-English. However, in the last column (German-English), the divergence percentage prevails, which may be down to the low number of meanings in German (13):

Table 17. (Dis)similarity of the meanings of *hand/Hand/hand*

	Dutch- German	Dutch- English	German- English
similar meanings	12/17 = 70%	15/26 = 58%	11/27 = 40%
differing meanings	5/17 = 30%	11/26 = 42%	16/27 = 60%

3.1.6. *Voet/ Fuß/foot*

The last body-part term examined in this paper is *voet/Fuß/foot*. Again, the English term carries the largest number of meanings (14), and the similarity percentage of the column Dutch-German is the highest (75%).

Table 18. Comparison of the meanings of *voet/Fuß/foot*

	meanings of <i>voet</i>	meanings of <i>Fuß</i>	meanings of <i>foot</i>
number of meanings	11	10	14
number of meanings only present in one language	2	0	5

The meanings which appear in all three languages are: (1) “body part”, (2) “bottom part”, (3) “metrical foot”, (4) “part of a stocking”, (5) “organ from molluscs in order to move”, (6) “longitudinal measurement”, (7) “the foot of a bed”, and (8) “hindmost part, last part, tip, far end”. One meaning was only found in Dutch and German: “foundations, groundwork”. One meaning is only present in German and English: “leg/foot of a table”. The two meanings only present in Dutch are: (1) “a print, impression”, and (2) “a quarter of a piece of beef”. The 5 meanings only present in English are: (1) “a hair-root”, (2) “sediment”, (3) “crude sugar”, (4) “pace, walk”, and (5) “infantry”.

The similarity percentage between Dutch-German and German-English again exceeds 50%, with the dissimilarity percentage of the column Dutch-English dominating the results.

Table 19. (Dis)similarity of the meanings of *voet/Fuß/foot*

	Dutch- German	Dutch- English	German- English
similar meanings	9/12 = 75%	8/19 = 42%	9/17 = 53%
differing meanings	3/12 = 25%	11/19 = 58%	8/17 = 47%

The total number of meanings in all the three languages adds up to 17.

3.1.7. Conclusion

English body-part terms carry more meanings than their Dutch and German translation counterparts. The highest level of convergence between the meanings of body-part terms can be found between Dutch and German. The language pairs Dutch-English and German-English show more divergence in meanings than convergence, which might be attributable to the high number of meanings of a particular body-part term in English, which is, after all, a considerably more polysemic language than either Dutch or German.

3.2. Expressions

The second part of this paper focuses on expressions containing a body-part term. A general observation that can be made when studying the quantitative results of the comparison between Dutch-German, Dutch-English and German-English is the considerably high equivalence number in the Dutch-German column: the convergence percentage is over 50% for all the five body-part terms studied in this paper. These results are consistent with the results of the first part of this research, where single meanings, rather than expressions, were the subject of comparison. Indeed, the convergence percentage in the Dutch-German column, when comparing meanings, was also over 50% for all the five body-part terms examined.

When comparing expressions, we established that, compared to the other four body-part terms, the lexemes *hand/Hand/hand* are most often used in fixed expressions, idioms and proverbs: it takes the lead with 375 expressions found in the three languages together. *Head* follows with 253 expressions, *eye* with 229 expressions, *heart* with 171 expressions and *foot* comes last with 128 expressions. Sometimes, an expression with two different body-part terms is translated by an expression where one of the body-part terms differs, or with an expression in which both body-part terms differ.

3.2.1. *Hoofd, kop/Haupt, Kopf/head*

The first body-part terms in expressions we examined more closely were *hoofd, kop/Haupt, Kopf/head*. The results of the comparison between the three languages can be found in table 20.

Table 20. (Dis)similarity of expressions with *hoofd, kop/Haupt, Kopf/head*

	Dutch-German	Dutch-English	German-English
number of expressions	210	220	226
(dis)similarity categories			
1. TE with the same body-part term	96/210 = 46%	68/220 = 31%	57/226 = 25%
2. TE with another body-part term	27/210 = 13%	24/220 = 11%	27/226 = 12%
3. TE without a body-part term	82/210 = 39%	113/220 = 51%	113/226 = 50%
4. no TE found	5/210 = 2%	15/220 = 7%	29/226 = 13%
1+2 similarity percentage	123/210 = 59%	92/220 = 42%	84/226 = 37%
3+4 dissimilarity percentage	87/210 = 41%	128/220 = 58%	142/226 = 63%

The percentages in bold are the most important ones: the category (1+2) reflects the convergence percentage, as it indicates that there was a TE present in the other language that contained the same (1) or a different (2) body-part term. The category (3+4) represents the divergence percentage and indicates that there was no TE found in the other language that contained a body-part term (3), or that no translation was found at all (4).

As listed in this table, only Dutch and German have a similarity percentage higher than 50%. A possible reason for this may be that English makes more use of *mind* instead of *head*, whereas Dutch and German use the body-part term to express the concept “mind”. Another interesting observation is that category 1 has percentages under the 50% in all three columns, which means that there is also a considerable number of TEs which contain a different body-part term (category 2).

Dutch expressions containing *hoofd* or *kop* have been translated 20 times with an expression in German that contains another body-part term. Sometimes an expression with two different body-part terms is translated by an expression where one of the body-part terms differs, or with an expression in which both body-part terms differ. In both cases, the number 2 is indicated

in the respective column. Number 2 also appears when an expression containing only one body-part term is translated with an expression containing another body-part term. Table 21 shows some examples of these cases between the translation pair Dutch-German:

Table 21. Some TEs in German that make use of another body-part term than the German equivalent of *hoofd/kop* (category 2)

iemand of iets het hoofd bieden	etwas/jemandem die Stirn bieten
het hoofd buigen	den Nacken beugen
iemand de oren van het hoofd eten	Jemandem die Haare vom Kopf essen/fressen
een stijve/harde kop hebben	ein Dickschädel sein
op de kop af	Haargenau

From these results, it can be concluded that, when the body-part terms in the expressions differ, they are mostly replaced by part of a bigger body part, and only a small number of expressions contain a totally different body-part term.

However, 7 German expressions with *Kopf* and *Haupt* were found that have a TE in Dutch with another body-part term:

Table 22. Some TEs in Dutch that make use of another body-part term than the Dutch equivalent of *Haupt/Kopf* (category 2)

über jemand's Kopf hinweg	de hand met iets lichten
den Kopf unter dem Arm tragen	met één been in het graf staan
seinen Kopf retten	zijn huid redden
nicht auf den Kopf gefallen sein	niet op zijn achterhoofd gevallen zijn
jemandem etwas auf den Kopf zusagen	iemand iets ronduit/in zijn gezicht zeggen

Some examples, again, show a definite link between the body parts: in the case of the first example, *Haupt* and *kop* correspond and *teen* is a part of *Fuß*.

By way of conclusion, we can state that of these 27 expressions compared between Dutch and German containing the lexemes *hoofd*, *kop/Haupt*, *Kopf*, only 5 of them have a TE that has absolutely no connection with the body-part term(s) used in the other language. This is not a great number and, again, corroborates the similarity between Dutch and German in the use of body-part terms in expressions.

In the comparison of expressions between Dutch and English, 23 expressions have been found that belong to category 2, i.e. that make use of another body-part term in the TE. Some examples can be found in table 23.

Table 23. Some TEs in Dutch and English that make use of another body-part term than *hoofd/kop/head* (category 2)

een rood hoofd krijgen/een hoofd dat rood wordt van schaamte	have one's face turn/go red with shame
zich voor de kop schieten	blow one's brains out
met één been in het graf staan	to have one's foot in the grave
zich iets op de hals halen	bring on/upon one's head
met de haren erbij slepen	drag in by the head and shoulders

In few cases, one body-part term is translated with a body-part term in the other language that is not part of the respective body part, e.g. *haren* is replaced by *shoulders* in the last example. Assuming that the neck is also part of the head, we can speak of a metonymic relationship between the body-part terms in 21/23 cases.

In the column that compares German expressions with their English equivalents, 25 expressions containing *head/Kopf, Haupt* were found that were placed in category 2:

Table 24. Some TEs in German and English that make use of body-part terms other than *Haupt/Kopf/head* (category 2)

den Nacken beugen	bow one's head
Kopf hoch!	Chin up!
den Kopf unter dem Arm tragen	to have one's foot in the grave
seinen Kopf retten	save one's skin
sich etwas auf den Hals laden	bring on/upon one's head

There seem to be only six cases in which there is no metonymic relationship between the body-part terms in English and German.

Of the 75 cases that belong to category 2 with regard to the lexemes *head/Haupt, Kopf/hoofd, kop*, only 13/75 translation pairs make use of a body-part term that has no metonymic relationship with the body-part term in the other language, and 62/75 do have a metonymic relationship between the two body parts.

3.2.2. *Oog/Auge/eye*

The lexemes *oog/Auge/eye* reveal a similarity percentage over 50% in all three comparison columns. As with the body-part term *head*, the similarity

percentage in the column Dutch-German is the highest (70%), even though Dutch-English and German-English show more convergence, too:

Table 25. (Dis)similarity of expressions with *oog/Auge/eye*

	Dutch-German	Dutch-English	German-English
number of expressions	208	213	206
(dis)similarity categories			
1. TE with the same body-part term	137/208 = 66%	100/213 = 47%	95/206 = 46%
2. TE with another body-part term	8/208 = 4%	20/213 = 9,4%	21/206 = 10%
3. TE without body-part term	52/208 = 25%	73/213 = 34,2%	65/206 = 32%
4. no TE found	11/208 = 5%	20/213 = 9,4%	25/206 = 12%
1+2 similarity percentage	145/208 = 70%	120/213 = 56,4%	116/206 = 56%
3+4 dissimilarity percentage	63/208 = 30%	93/213 = 43,6%	90/206 = 44%

Category 1 shows a remarkably high percentage in the comparison between Dutch and German, whereas category 2 has a low percentage in the respective column. This seems to suggest that expressions containing *oog* in Dutch often have a TE with *Auge* in German, and not so much with another body-part term. Moreover, the last two columns also have a percentage in category 1 of nearly 50%. *Heart* and *eye* are the only body-part terms of the five discussed in this paper that have a convergence percentage of more than 50% in all three columns.

Again, there were cases in which expressions with *Auge/oog/eye* were translated with one or two other body-part terms in one of the two other languages (category 2). In the comparison between Dutch and German, 8 of these cases were found:

Table 26. Some TEs in Dutch and German that make use of another body-part term than *oog/Auge* (category 2)

een en al oog zijn	ganz Auge und Ohr sein
ik heb geen ogen in mijn nek/rug	Ich habe hinten keine Augen
iets onder ogen krijgen/zien	jemanden/etwas zu Gesicht bekommen
hoofd front!	Augen geradeaus!
mijn oogleden worden zwaar	Ich bekomme schwere Augen

Here again, we can speak of a metonymic relationship between the two body-part terms in the TEs, i.e. in the third example, *eyes* are a part of the *face*. While 3/8 of these expressions bear no resemblance when it comes to the use of body-part terms, 5/8 show convergence.

When comparing Dutch and English, 20 expressions were found that belong to category 2:

Table 27. Some TEs in Dutch and English that make use of a body-part term other than *oog/eye* (category 2)

oog in oog met iemand staan	come face to face with
iemand niet onder ogen durven komen	not dare to look someone in the face
tot over de oren	up to one's eyes/eyeballs
zonder een spier te vertrekken	without batting an eye/eyelid
iemand bij de neus nemen	wipe someone's eyes / pull the wool over someone's eyes

A remarkable observation is that in 7 cases, the Dutch *oog* is replaced by *face* in English.

In the comparison between German and English, 20 expressions belonging to category 2 have been found:

Table 28. Some TEs in German and English that make use of a body-part term other than *Auge/eye* (category 2)

jemandem Auge in Auge gegenüberstehen	come face to face with
jemandem ein Dorn im Auge sein	be a thorn in one's flesh/side
ganz Auge und Ohr sein	be all ears
jemandem unter die Augen kommen/treten	to look someone in the face
bis über beide Ohren	up to the/one's eyes/eyeballs

In 6 cases, the German *Auge* is translated by *face* in English, as was also the case between Dutch and English. In 15 cases, the English *eyes* has a German TE with *Gesicht*. 16/20 of these expressions do have one body-part term in common or have a TE that has a metonymic relationship with the body part used in the other language, i.e. being part of the head or face. By way of conclusion, 37/48 of the cases that belong to category 2 with respect to the lexemes *Auge/oog/eye* do have a metonymic relationship with each other or have at least one body-part term in common.

3.2.3. *Hart/Herz/heart*

The comparison of the lexemes *hart/Herz/heart* shows the highest convergence percentages in all three columns when compared with the four other body-part terms. Dutch, German and English are very similar in the polysemic use of these words in expressions; the body part *heart* seems to be a universal representative of human feelings, which cannot easily be represented by another body-part term. Evidence of this can be found in the low percentages in category 2.

Table 29. (Dis)similarity of expressions with *hart/Herz/heart*

	Dutch-German	Dutch-English	German-English
number of expressions	156	165	163
(dis)similarity categories			
1. TE with the same body-part term	103/156 = 66%	97/165 = 59%	94/163 = 58%
2. TE with another body-part term	13/156 = 8%	12/165 = 7%	9/163 = 5%
3. TE without a body-part term	37/156 = 24%	48/165 = 29%	47/163 = 29%
4. no TE found	3/156 = 2%	8/165 = 5%	13/163 = 8%
1+2 similarity percentage	116/156 = 74%	109/165 = 66%	103/163 = 63%
3+4 dissimilarity percentage	40/156 = 26%	56/165 = 34%	60/163 = 37%

Category 1 scores very high in all three columns, with percentages close to or more than 60%.

Some cases that belong to category 2 are listed in table 30, yielding the following comparison between Dutch and German:

Table 30. Some TEs in Dutch and German that make use of a body-part term other than *hart/Herz* (category 2)

het hart hoog dragen	den Kopf hoch tragen
met hart en ziel	mit Leib und Seele
iemand aan de tand voelen	Jemanden auf Herz und Nieren prüfen
uit het oog , uit het hart	aus den Augen , aus dem Sinn
het hart op de tong dragen	das Herz in der Hand tragen

In 6 cases, one of the two body-part terms still corresponds, and 7 of these 13 translation pairs do show more divergence than convergence in the use of body-part terms, i.e. have not one body-part term in common.

When comparing Dutch and English, the following expressions, amongst others, were found in category 2:

Table 31. Some TEs in Dutch and English that make use of a body-part term other than *hart/heart* (category 2)

het hart hoog dragen	to hold one's head high
zijn hart ligt hem op de tong	he wears his heart on his sleeve
in hart en nieren	in heart and soul
dat moet mij toch van het hart	I just have to get this off my chest
uit het hoofd leren	to learn by heart

Most have the body part *heart* in common but some lack a different body part in English that is present in Dutch. The first and last examples switch *hoofd* and *heart* between the two languages. This might be attributable to the fact that the head and heart are the most important body parts when it comes to processing experiences, i.e. feelings and thoughts are very closely interwoven.

In the last but one example, we can speak of a metonymic relationship between *heart* and *chest*, i.e. *heart* forming part of the *chest*. In 6/10 of these cases we can speak of similarity in the use of body-part terms.

In the comparison between German and English, 8 expression pairs were found that belong to category 2:

Table 32. Some TEs in German and English that make use of a body-part term other than *Herz/heart* (category 2)

er hat das Herz auf der Zunge	he wears his heart on his sleeve
alles auf die leichte Schulter nehmen	not take it to heart
ein Herz im Leibe haben	have a heart
das Herz in der Hand tragen	wear one's heart on one's sleeve
sich etwas in den Kopf setzen	To set one's heart on something

There is still a degree of convergence in 4/8 cases but more divergence in the other 4 cases.

To sum up, 16/31 of the expression pairs belonging to category 2 that contain the lexemes *hart/Herz/heart* either show convergence, i.e. one of the body parts corresponds with its TE or the body parts have a metonymic rela-

tionship, whereas 15/31 show more divergence between the use in body-part terminology.

3.2.4. *Hand/Hand/hand*

The comparison of the lexemes *hand/Hand/hand* in expressions proves that this body-part term is most used in fixed expressions, idioms and proverbs, compared to the other four body-part terms. In fact, it takes the lead with 375 expressions found in the three languages together. The reason for the frequent use of this body-part term in expressions is quite obvious: the hand is a very important part of the human body, as humans perform almost all their actions with them.

Table 33. (Dis)similarity of expressions with *hand/Hand/hand*

	Dutch-German	Dutch-English	German-English
number of expressions	323	343	336
(dis)similarity categories			
1. TE with the same body-part term	171/323 = 53%	146/343 = 43%	133/336 = 39%
2. TE with another body-part term	23/323 = 7%	32/343 = 9%	29/336 = 9%
3. TE without a body-part term	125/323 = 39%	159/343 = 46%	169/336 = 50%
4. no TE found	4/323 = 1%	6/343 = 2%	5/336 = 2%
1+2 similarity percentage	194/323 = 60%	178/343 = 52%	162/336 = 48%
3+4 dissimilarity percentage	129/323 = 40%	165/343 = 48%	174/336 = 52%

Again, the similarity percentage in the column Dutch-German is considerably high (60%) and the percentage of category 1 exceeds 50%. The comparison between Dutch and English also shows a higher convergence than divergence percentage, taking category 2 into account, but in the German-English column, the dissimilarity percentage takes the upper hand with 52%. The reason for more divergence between Dutch and English and German and English, compared to Dutch and German, is that English has the highest number of expressions containing this body-part term, and only a proportion of them are covered by equivalents in German and Dutch.

When comparing Dutch and German, 22 expressions were found to have a TE with another body-part term (category 2). Some examples are listed below:

Table 34. Some TEs in Dutch and German that make use of a body-part term other than *hand/Hand* (category 2)

zijn handen branden aan iets	sich die Finger verbrennen an einer Sache
zich met hand en tand verzetten	sich mit Händen und Füßen sträuben
de hand op de knip houden	den Daumen auf dem Portemonnaie/Geld haben, auf den Geldbeutel halten
voor de vuist weg	aus der Hand
lange vingers hebben	klebrige Hände haben

An interesting observation is that in 10 of these cases, *fingers* are replaced by *hands* or vice versa. In two other cases, *Hand* and *vuist*, and *hand* and *Daumen* are TEs. In these 12 cases, there is a metonymic relationship between the body parts in the two languages. Only 4 expressions show absolutely no convergence in the use of body-part terms, i.e. either they do not have one body part in common or the body parts in the TEs bear no metonymic resemblance. In 18/22 cases, there is a degree of similarity between the TEs in Dutch and German.

When comparing Dutch and English, 29 expression pairs were found that belong to category 2:

Table 35. Some TEs in Dutch and English that make use of a body-part term other than *hand/hand* (category 2)

zijn handen branden aan iets	burn one's fingers
zich met handen en voeten verzetten	defend oneself tooth and nail
voor iets zijn hand niet omdraaien	not lift a finger
iemand op de handen kijken	breathe down someone's neck
de hand in eigen boezem steken	search one's own heart

In 8 of these cases, *hand* is replaced by a body part that has a metonymic relationship with it, i.e. that is a part of it. *Finger*, *thumb* and *fist* appear in those TEs. In another 8 cases, one of the body-part terms is the same, one is different and one is missing altogether. In the last example, the English *heart* is translated with Dutch *boezem*, which also has a metonymic relationship with the former, i.e. the heart being part of the bosom. Only in 12/29 cases is *hand* replaced by a totally different body part in the TE, i.e. by *nose*, *face*,

tooth, neck, back, head, blood, tongue, hair, heart, mouth and knee. When another metaphor is used, there is no need to use the same body part. However, when a similar metaphor occurs, either one of the body parts invariably corresponds with its TE, or else a body part is used that has a metonymic relationship with its TE. In 17/29 cases, there is a degree of similarity between English and Dutch in the use of body-part terminology.

When comparing English and German, some of the following expressions belonging to category 2 were found:

Table 36. Some TEs in German and English that make use of a body-part term other than *Hand/hand* (category 2)

die H and nicht vor A ugen sehen können	not be able to see one's h and in front of one's f ace
sich mit H änden und F üßen sträuben	resist t ooth and n ail
eine grüne H and haben	have a green t humb, have green f ingers
keinen F inger krumm machen	not turn a h and
nicht einen F inger rühren	never do a h and's turn/not lift a finger

In 7 of these cases, one of two body parts agrees and the other is different or not present. In 11 cases, one body part is replaced by a body part that has a metonymic relationship with its TE in the other language, i.e. that forms a part of it. In 9/26 cases, there is no correspondence at all between the body-part terminology in English and German. In 17/26 cases, however, a degree of similarity can be noted.

In total, 52/77 expressions with the lexemes *hand/Hand/hand* belonging to category 2 still show convergence in the use of body-part terminology, whereas 25/77 differ widely.

3.2.5. *Voet/Fuß/foot*

The final lexemes studied and compared are *voet/Fuß/foot*. The similarity percentage between Dutch and German is over 50%, but in the two other cases, the divergence percentage is slightly higher. In the results of the five body-part terms discussed, there is a clear pattern of Dutch and German being more similar in the polysemic use of body-part terms, not only in fixed expressions but also in the different single meanings.

Compared to the other four body-part terms examined in this paper, there are fewer expressions that contain the body part *foot* (111) than those including *head*, *eye*, *heart* and *hand*.

Table 37. (Dis)similarity of expressions with *voet/Fuß/foot*

	Dutch-German	Dutch-English	German-English
number of expressions	111	120	110
(dis)similarity categories			
1. TE with the same body-part term	47/111 = 42%	33/120 = 27,5%	33/110 = 30%
2. TE with another body-part term	14/111 = 13%	21/120 = 17,5%	15/110 = 14%
3. TE without a body-part term	48/111 = 43%	64/120 = 53%	58/110 = 53%
4. no TE found	2/111 = 2%	2/120 = 2%	4/110 = 3%
1+2 similarity percentage	61/111 = 55%	54/120 = 45%	48/110 = 44%
3+4 dissimilarity percentage	50/111 = 45%	66/120 = 55%	62/110 = 56%

In category 2, the following expressions in German and Dutch were found, amongst others.

Table 38. Some TEs in Dutch and German that make use of a body-part term other than *voet/Fuß*

met iemands voeten spelen	jemanden an der Nase herumführen
dat hangt mijn voeten uit	das hängt mir zum Hals raus
zich voor iets de benen uit het lijf lopen	sich die Füße nach etwas ablaufen/wund laufen
iemand op de been helpen	jemandem auf die Füße helfen
op eigen benen staan	Auf eigenen Füße stehen

Strikingly, *leg* is translated by *feet* in almost all of these cases. This might well be due to the fact that the leg and foot can be regarded as one body part, i.e. the foot being at end of the leg. 12/14 of these body-part terms in the TEs do show a degree of similarity.

When comparing Dutch and English, some expressions were found to belong to category 2:

Table 39. Some TEs in Dutch and English that make use of a body-part term other than *voet/foot* (category 2)

met iemands voeten spelen	pull someone's leg
zich uit de voeten maken	take to one's heels /show a clean pair of heels
iemand iets voor de voeten gooien	throw/flip something in someone's face/teeth
zich op de been houden	keep on one's feet
op eigen benen beginnen te staan/kunnen staan	feel/find one's feet /stand on your own two feet

Again, *foot* in one language is often *leg* in the other (in 9/18 cases). Sometimes, *feet* and *legs* are replaced by *heels*, body parts that also have a metonymic relationship with each other. In as few as 6/18 cases, there is absolutely no convergence in body-part terminology between Dutch and German.

When comparing German and English, the following expressions were found that belong to category 2:

Table 40. Some TEs in German and English that make use of a body-part term other than *Fuß/foot* (category 2)

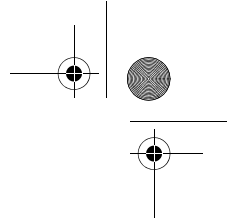
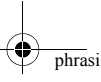
das Gesetz mit Füßen treten	fly in the face of the law
gespanntem/freundschaftlichem Fuße mit jemandem stehen	(not) see eye to eye with someone
noch gut zu Fuß sein	still be steady on one's legs
jemandem auf den Fuß treten	tread/step on someone's toes
wieder auf die Beine kommen	recover/regain one's feet

Again, there is often a metonymic relationship between the body parts in the TEs, i.e. *feet* are replaced by *legs*, *toes* and *heels*. In 8 cases, there is no correspondence between the body parts in the TEs. This is a higher number showing divergence compared with the German-Dutch and Dutch-English equivalents.

In total, 29/45 expressions belonging to category 2 that contain the lexemes *voet/Fuß/foot* show a degree of convergence, whereas 16/45 differ in the use of body-part terminology.

3.2.6. Conclusion

While German and Dutch correspond most in the use of body-part terminology in expressions, with a convergence percentage of more than 50% for



all five body-part terms, there is more convergence between Dutch-English and German-English. Indeed, convergence was found for 3 out of the 5 and for 2 out of the 5 body-part terms, respectively. An explanation for this can be found in the high number of meanings carried by English body-part terms, compared to Dutch and German.

4. Conclusions

The questions that we attempted to answer in this study were the following:

1. to what extent do Dutch and German differ, or correspond, in the polysemic use of body-part terms?
2. to what extent do Dutch and English differ, or correspond, in the polysemic use of body-part terms?
3. to what extent do German and English differ, or correspond, in the polysemic use of body-part terms?

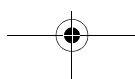
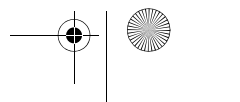
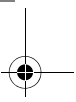
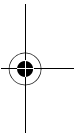
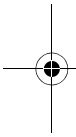
On the basis of the existing literature on this topic (De Witte, 1948; Heine, 1997; Dingemanse, 2008), it could be concluded that the polysemic use of body-part terms is a universal phenomenon. As such, we expected a certain degree of correspondence between the three languages studied in this paper. However, the extent of (dis)similarity between these three language pairs was not clear and will be discussed below.

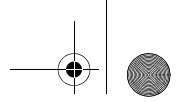
4.1. Single use

4.1.1. Comparison Dutch-German

A striking observation is the high level of similarity between German and Dutch in the single use of the five body-part terms. Only the meanings of *hoofd* and *Haupt* show more divergence than convergence (75% differing meanings against 25% similar meanings). This can be attributed to the low number of meanings of German *Haupt* (5) against the 10 meanings of Dutch *hoofd*. In German, *Kopf* is used more frequently than *kop* is in Dutch.

However, the other body-part terms show a similarity percentage of over 50%. In fact, the meanings of *hart* and *Herz* are a perfect match (100%).





The convergence in the use of body-part terminology is not only present in the single use of body-part terms, it can also be found in the use of body-part terms in expressions.

4.1.2. *Comparison Dutch-English*

The degree of convergence between Dutch and English is lower than that between Dutch and German. Only in three cases is the similarity percentage higher than the dissimilarity percentage, namely in the comparison between *oog* and *eye*, *hart* and *heart*, and *hand* and *hand*. In the three other cases, namely in the comparison between *hoofd* and *head*, *kop* and *head*, and *voet* and *foot*, the similarity percentage was below 50%.

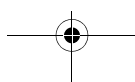
4.1.3. *Comparison German-English*

When comparing the meanings of the body-part terms between German and English, two cases were found in which the similarity percentage was over 50%, namely in the comparison between *Herz* and *heart*, and *Fuß* and *foot*. In the comparison between *Auge* and *eye*, the convergence and divergence percentages are equal (50%). In the comparison of the meanings of *Haupt* and *head*, *Kopf* and *head*, and *Hand* and *hand*, the dissimilarity percentage is over 50%.

4.1.4. *Single use: general conclusion*

It is noticeable that Dutch and German have the highest correspondence in meanings of the body-part terms studied in this paper. However, there are also differences in meanings, mainly due to the fact that Dutch carries slightly more meanings per body-part term than German (in the case of *hoofd*, *oog*, *hand* and *voet*).

When comparing the language pairs Dutch-English and German-English, there is more divergence than convergence. This may be attributable the considerably higher number of meanings found in English for a particular body-part term, compared to Dutch and German. In all six comparisons, the English body-part term has a higher number of meanings than its Dutch and German TEs. Moreover, English uses body-part terms as verbs, whereas Dutch and German do not. The verbs *to head*, *to eye*, *to heart*, *to hand* and *to*



foot all exist. The meanings of verbs have not been included for the purposes of this paper, due to space constraints, but it would nevertheless make an interesting area of research. In English, the polysemic use of body-part terms is very much present and English body-part terms are a very rich source for semantic extension.

4.2. Expressions

4.2.1. Comparison Dutch-German

There is a considerable correspondence in the use of body-part terminology in expressions between Dutch and German, as was the case with the meanings of the different body-part terms discussed in the previous paragraph. In all five “comparison cases”, Dutch and German have a similarity percentage of over 50% (categories 1+2). In three cases, the percentages of category 1 are even above 50%.

When we examine the results of category 2 more in more depth, it can be noted that in 4 of the 5 cases, the body-part term used in the other language has a metonymic relationship with its counterpart, or that at least one of two body-part terms is the same. Only when we compared expressions containing the body-part terms *hart* or *Herz* with their TEs, in most of the cases where a different term is used, we found that there was no relationship between the body part used in the other language and the Dutch *hart* or German *Herz*. This can be explained by the independent and unique place the heart occupies in human experiences: it is strongly associated with feelings and is, therefore, hard to replace by another body part. Human beings experience their feelings in their hearts, which makes the heart the most effective source for semantic extension into the field of emotions.

4.2.2. Comparison Dutch-English

The degree of similarity between Dutch and English is lower than that between Dutch and German. Only in three of the five comparison cases is the similarity percentage more than 50%, namely with *oog/eye*, *hart/heart*, and *hand/hand*. In the cases of *hoofd*, *kop* and *head*, and *voet* and *foot*, the dissimilarity percentage prevails. Only in one case is the percentage of category 1 over 50% (with *hart* and *heart*).

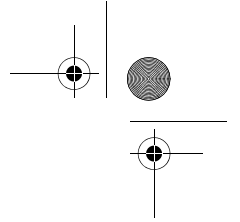
However, the results of category 2 corroborate the findings described earlier, namely that the use of another body-part term in the other language is not arbitrary, but that these body parts have a metonymic relationship with each other, or with at least one of the body-part terms. In all five cases, there is more similarity than dissimilarity between Dutch and English within category 2.

An explanation for a lower degree of convergence between Dutch and English, compared to Dutch and German, can be found in the huge number of meanings carried by these five body-part terms in English, which results in a higher number of expressions in which they occur. The number of meanings is positively related to the number of expressions in which they occur, because in the expressions, the body-part terms can assume different meanings as well. For example, in the English expressions *a change of heart* and *learn by heart*, *heart* is used in the sense of “mind”. In Dutch and German *hoofd* and *Kopf* are more often used to refer to the mind, which ultimately results in a lower number of expressions in Dutch and German with *hart* and *Herz*, respectively, as this additional meaning is not an isolated case. English tends to have a large number of meanings for one lexeme.

4.2.3. Comparison German-English

German and English differ most in the use of body-part terminology in expressions, compared to Dutch-German and Dutch-English. Only in two comparison cases, namely *Herz/heart* and *Auge/eye*, did the similarity percentage amount to over 50%. In the other cases, there is more divergence than convergence. Only in one case is the percentage of category 1 more than 50% (with *Herz/heart*). This is the same body-part term as mentioned above, where *hart* and *heart* were also the only body-part terms with a percentage of category 1 above 50%. An explanation for this has already been given, namely the close association between the heart and human emotions.

In category 2, we can again notice metonymic relationships between the different body-part terms, or a correspondence of at least one body-part term. Only in the case of *Fuß* and *voet* in category 2 can more dissimilarity be found, i.e. either the other body part used in German or English has absolutely no metonymic bearing with its counterpart, or the expressions do not even have one body part in common. This can, in some cases, be illustrated



by the use of a totally different metaphor in both languages, for example *show the cloven foot* in English as opposed to *sein wahres Gesicht zeigen* in German.

4.2.4. Expressions: general conclusion

First of all, it should be noted that this research is only as reliable as the dictionaries consulted. In some cases, an explanatory translation was found rather than a TE with a body-part term, even when such a TE does exist. This is especially the case when another body-part term is used in the other language, or when an expression is more common in one language than in the other. Further research into idiomatic translation is therefore crucial, since dictionaries tend to have an explanatory, rather than idiomatic, character and do not always list all TEs.

This study has shown that the highest degree of correspondence occurs between the use of body-part terms in Dutch and German, a resemblance that applies to both their single use and their use in idioms, fixed expressions and proverbs. For all five body parts studied in this article, the similarity percentage is in excess of 50% between Dutch and German. This shows a regularity in correspondence which is not the case when we compare the other language pairs Dutch-English and German-English. German and English generally showed the lowest degree of correspondence, with a similarity percentage of over 50% in only two out of the five cases. The comparison between Dutch-English scored slightly higher with three of five cases showing more convergence than divergence.

English carries most polysemic meanings for all five body-part terms, which could explain the lower degree of similarity between Dutch-English and German-English compared to Dutch-German, where the number of meanings for each particular body-part term is much closer together.

However, in the comparison of all three language pairs, it is clear that, when another body-part term is used in the other language, either it invariably has a metonymic relationship with its counterpart, or still retains at least one body part. This corroborated the assumption that the use of body-part terminology is not arbitrary, but that body parts mostly represent the same concepts across the language barriers.

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