Adjectival constructions involving measure phrases in English and German

Abstract: This paper surveys the major English-German contrasts associated with the type *four metres long*. German makes use of an increased inventory of relevant collocations and favours the attributive position. English generally employs a larger set of less explicit structures. For instance, the English type can occur as an opaque noun phrase in contexts not matched by German, and the attributive use in German is regularly rendered by an English structure lacking an adjective. A special section explores the erroneous equation of examples like *meterdicke Mauern* and *metre-thick walls*.

1. Introduction

Presumably owing to the traditional literary orientation of second language acquisition, constructions involving measure phrases have been generally neglected in the teaching of English and German alike. In Germany, even advanced students of English tend to be unfamiliar with many facets of the range of constructions available with measure phrases. For instance, they usually are puzzled by the meanings of (1) or (2), they will wrongly equate (3a) with (3b), and they are likely to mistranslate (4a) and (5a) as (4b) and (5b), respectively.

(1) a. *a four-inch round pot*
   b. *The river is as wide as 80 m.*
(2) a. *The suitcase is 10 pounds heavy.*
   b. *The suitcase weighs 10 pounds / is 10 pounds in weight.*
(3) a. *Im Ganzen können wir 50 Leute unterbringen.*
   b. (*On the whole we can accommodate 50 people.*
(4) a. *meterdicke Mauern*
   b. (*metre-thick / yard-thick walls*

But German speakers of English are not alone in misinterpreting unfamiliar constructions involving numerals and measure phrases. In English translations of German books I have often come across serious errors distorting the meanings conveyed by the original. Consider, for instance:

(6) a. »*Ist der Abt noch da?«
   ... »*Nein, er ist sieben und vierzig gestorben; ... « (Böll)
   b. ... »*No. He died at forty seven; ... «
This paper concentrates on the type four metres long / vier Meter lang (as in [8a] but not in [3a]), which has been studied or at least touched upon in a succession of investigations (cf., e.g., Bierwisch 1967; Bolinger 1977; Dixon 1977; Ebert / Rohdenburg 1972; Eisenberg 1976; Givón 1977; Hale 1970; Kaiser 1979; Klein 1980; Klooster 1971, 1972; König 1971; Lehrer 1985; Quirk et al. 1972; Rusiecki 1985; Seuren 1978; Teller 1969). Even so, to date there is no extensive contrastive analysis of such expressions in English and German. Moreover, the available studies are remarkably incomplete in the coverage of relevant data, which has led to some serious theoretical inadequacies.

The purpose of the present paper is to provide a more detailed and comprehensive analysis of the phenomenon based to some extent on a large and random corpus of examples collected during the 1970s and 1980s. The data are drawn from a variety of written and spoken texts of English and German totalling about five million words. More recently, a large number of additional case studies have been carried out by means of electronic newspaper collections available on CD-ROM.

The theoretical orientation inspiring the contrastive analyses presented in this paper is provided by Hawkins’ (1986, 1988) so-called ‘explicitness thesis’. The thesis may be characterized by the following quotations:

Where the grammars of English and German contrast the surface forms (morphological and syntactic) of German are in a closer correspondence with their associated meanings. (Hawkins 1986, 121)

The drift in the history of English has clearly been towards the more extensive use of more limited formal means, with the resulting complexity between form and meaning. (Hawkins 1986, 129)

While these assumptions have been increasingly restricted in their ranges of application (cf., e.g., Rohdenburg 1990, 1992, 1998; Kortmann / Meyer 1992; König / Gast 2007), I still feel that the explicitness thesis continues to provide an illuminating standard of comparison for any contrastive description of English and German grammar.
2. Three semantic types featuring ‘standard’ measure phrases

The greater part of this paper deals with strings like four metres long / vier Meter lang, which no doubt constitute the oldest and still prototypical measure phrase + adjective constructions in English and German. In this section, an attempt will be made to informally characterize the type by contrasting it with two superficially similar structures. Our first task, however, is to identify and exclude from further consideration two kinds of peripheral phenomena not containing either ‘standard’ measure phrases or typical adjectives.

The standard measure phrase may here be defined as containing a term denoting either an explicit unit of measurement as in (10) or simply a cardinal number as in (11), which may potentially be expanded by the designation of the category of entities involved.

(10) The vehicle is four metres long.
(11) The army was 12,400 (men) strong.

These expressions have to be distinguished from degree terms combined with adjectives as in (12)-(14).

(12) The bottle is half full.
(13) You are 100% right.
(14) The job is still nine-tenths incomplete.

The semantics of such cases is highly variable. While example (12) does not entail (or logically imply) the corresponding sentence without the degree term, this kind of entailment certainly goes through in (13) and (14). In fact, the entailment relations are generally unstable in examples like these, depending on the kind of degree term and the adjective chosen. While German has similar structures to English, it may also employ more explicit prepositional phrases to render English degree terms (e.g. zu neun Zehntel unvollständig).

A further marginal area concerns constructions like those in (15)-(17), which Bolinger (1977) described as adverbial.

(15) The place is 50 km away.
(16) The circle is five yards across.
(17) The lake is two miles round (BrE) / around (AmE).

Comparable uses are also found in German. These adverbial elements tend to exhibit the following characteristics:

a) The measure phrase represents an obligatory constituent of the construction.

b) In addition, these items are usually found to collocate with far (or weit in German).

The usual German equivalent of away in (15), entfernt, is identified as adverbial on both accounts. A second alternative in German, weit, does not allow the measure
phrase to be omitted, either, in contexts such as (15) denoting a static relation between two entities. However, presumably for reasons to do with *horror aequi* (cf., e.g., Rohdenburg 2003a, 236ff.), it is incompatible with the intensifier *weit*. *Distant*, a relatively rare and literary equivalent of *away* in examples like (15), turns out to constitute a genuine borderline case:

(18)  
\begin{itemize}
  \item a. How far distant is the station?
  \item b. The station is (3 miles) distant.
  \item c. The station is a distant place.
\end{itemize}

In what follows, *distant* will be disregarded along with its equivalents *away*, *entfernt* and *weit*.

This leaves us, then, with adjectival constructions involving standard measure phrases. A closer analysis of the remaining cases in English shows that they fall into at least three general semantic types. In type I, represented by examples like (10) and to be explored in greater detail in later sections, the measure phrase typically designates any point on a given scale of measurement associated with the – gradable – adjective in question. In (10), for instance, the adjective is used in what is designated as the neutralized or unmarked sense: It may refer to the whole of the length scale, not just to the upper end which is long but also to the other parts of the scale which may be short. Accordingly, examples like this do not entail the corresponding construction without the measure phrase.\(^1\) Cases like (11) and their German counterparts should also be assigned to type I. Example (11) does not entail that the army was strong numerically, and, as is seen in (19), *strong* may even in this sense function as a gradable adjective in both predicative and attributive uses.

(19) *The delegation is (very) strong.* – *It is a very strong delegation.*

This brings us to the second type associated with (predicative) measure phrase + adjective combinations. The type is illustrated in examples (20) and (21), and a non-exhaustive list of further adjectives potentially occurring in relevant contexts is given in (22).

(20)  
\begin{itemize}
  \item a. The shot was two yards wide.
  \item b. The shot was wide by two yards.
\end{itemize}

(21)  
\begin{itemize}
  \item a. The watch was 10 minutes fast / slow.
  \item b. The watch was fast / slow by ten minutes.
\end{itemize}

(22) *early – late, heavy – light, overweight, (a foot) long, (a yard) high, (two) points low, (a year) young for school*

Generally speaking, these examples denote a deviation from some (pre-established or given) norm. The range of deviation is then indicated by the measure phrase

\(^1\) In addition to playful rule bending seen in examples (i) and (ii), German systematically deviates in a few cases from the basic pattern outlined here (cf. Section 3.1).

(i) *The Sharp Executive Calculator. Just 5 mm thin, with a full memory and fitted into a soft calfskin wallet.* (Scotcade)

(ii) *Nur ein Meter acht und fünfzig ist Ferdinand Greulich klein.* (ZDF)
in question. As is shown for (20a) and (21a), this interpretation could in most cases be made more explicit by means of the kind of logically equivalent construction provided in (20b) and (21b).\(^2\) There is no corresponding paraphrase relationship in examples of type I. Despite these differences, the first and second types share one semantic feature: The adjectives in both types are gradable ones. German does not possess a formally corresponding and semantically equivalent construction, and English examples of type II will have to be rendered by a large number of syntactic and lexical devices.

There is a third type associated with what looks superficially like the same syntactic frame and which is not found in German either:³

\[
\begin{align*}
(23) \quad & \text{She was seven months pregnant.} \\
(24) \quad & \text{The area is five feet square.} \\
& \quad (= \text{five feet long by five feet wide, but } \neq \text{five square feet})
\end{align*}
\]

As in the case of type II, the entailment concerning the omitted measure phrase does go through. Thus (24) entails that the area is square. There are two differences, though, between types II and III. First of all, type III contains ungradable adjectives. Moreover, since the measure phrase does not denote any deviation of some norm, it cannot be expressed by a \textit{by}-phrase.

We have to conclude, then, that Hawkins’ explicitness theory has received further support from the brief analysis presented so far. While there are three semantic types in English sharing the same syntactic frame, there appears to be only one in German.

3. The type \textit{four metres long}

3.1 Surveying the sets of adjectives used in English and German

Returning to type I as in \textit{four metres long}, we will begin by comparing the English and German inventories of the items available in predicative and/or attributive uses. An overview of the relevant adjectives (regularly) attested in English and German newspapers is given in lists (25) and (26).

\[
\begin{align*}
(25) \quad & \text{\textit{broad}, deep (line – 3 \{men\}), high (building – storeys), long (book –} \\
& \quad \text{pages, sentence – words, poem – lines, etc.), old, strong (numerical} \\
& \quad \text{strength), tall, thick, wide (road – lanes)}
\end{align*}
\]

\[
\begin{align*}
(26) \quad & \text{alt, breit, dick (Buch – Seiten), groß (height of human being etc., surface area, volume; Stadt – Einwohner, Gebäude – Zimmer, Schiff –}
\end{align*}
\]

\(^2\) Some of these cases (e.g. \textit{a year young for school}) can be viewed as elliptical for a corresponding construction containing \textit{too} (e.g. \textit{a year too young for school}; Ebert / Rohdenburg 1972, 118-9). Many of the long-established cases, however, involve subtle semantic differences between constructions with or without \textit{too} (e.g. \textit{five minutes \{too\} late/early}).

\(^3\) A third example may be provided by technical uses of \textit{mature} as in (i), which are occasionally met with in the medical literature:

\[
(i) \quad \text{The baby was 26 weeks mature.}
\]
While there are only nine items in English (including broad), the German inventory boasts as many as 17 (including wertvoll). Of the constructions regularly occurring in English, only very few cannot be matched by common formally corresponding equivalents in German. Exceptions include examples (27) and (28).

(27) The line was three men deep.
(28) The road is four lanes wide.

Allowing for such cases, the English set appears to be properly included within the German one.

As a result, German is much more versatile than English in this area. Compared with English, German constructions of type I cover a number of additional basic parameters/dimensions: weight, two- and three-dimensional size, temperature, speed, (slope) steepness, price, amount of money. With respect to the economy principle advanced by Klooster (1971, 1972) and Seuren (1978) the ideal state of affairs is one where neutral parameter verbs are not in competition with the measure phrase + adjective constructions under discussion. From this perspective, English turns out to be more economical than German insofar as it does not tolerate type I constructions involving dear/expensive and heavy alongside the parameter verbs cost (or be) and weigh. In German, both possibilities exist side by side.

While the English adjectives in (25) usually only cover one basic parameter/dimension, several German ones such as groß, dick, stark, hoch and schwer are used to refer to a great variety of aspects. Accordingly, and unlike English, German has evolved in a number of cases two, three or even four raving alternatives displaying subtle semantic nuances. Consider, for instance:

(29) a. eine 2 Meter dicke/starke/mächtige Mauer
    b. ein 200 Seiten langes/dickes/starkes Buch
    c. ein 30.000 Mark/Euro schwerer/großer/hoher Etat/Schuldenberg/Verlust
    d. ein 30 Meter weiter/langer Pass
    e. eine 200 Meter weite/breite Fahrrinne

With respect to temporal uses of long as in (i) Rusiecki (1985, 18) points out that such examples are rejected by many speakers.

(i) That conference was a week long.

If there is such a tendency (which I have been unable to confirm), it might also be due to the avoidance of a construction raving an established parameter verb (i.e. last/take).
As mentioned above, constructions of type I do not entail their counterparts lacking the measure phrase. While usually adhering to this pattern as well, German has in a few cases introduced marked/non-neutralized (gradable) adjectives, and it appears to be expanding the minority pattern. Two of the best established uses of this kind include the adjectives heiß and kalt. A fairly recent addition regularly met with in some newspapers (apparently less frequently in the taz) is provided by wertvoll, which supplies the attributive counterpart to the predicative use of (adverbial?) wert.

The typical adjective occurring in type I constructions is one which stands in a relationship of antonymy with a marked adjective denoting the lower end of the scale in question. In English, this basic pattern has been preserved with the exception of strong in (11), deep in (27), and some spatial uses of deep matched by German. In addition to stark referring to numerical strength, German has evolved a number of further uses which illustrate the new pattern lacking a marked antonym. A preliminary list of such cases is given in (30), where semantically inappropriate ‘antonyms’ have been asterisked or question-marked.

(30) a. ein 200 Seiten dickes Buch (?dünn)
   b. ein 200 Seiten starkes Buch (*schwach)
   c. eine 3 Meter mächtige Mauer (*schwach)
   d. ein 5 cm starkes Brett (*schwach)
   e. ein 500.000 Mark/Euro schwerer Etat (*leicht)
   f. ein 500.000 Mark/Euro hohes Defizit (?niedrig)
   g. ein 7 Meter weiter Sprung (*eng)
   h. eine 10 Grad steile Straße (?flach / eben)

Concerning the specification of the numerical strength in various sets of human beings, English – unlike German – usually dispenses with the explicit mention of the people involved. By contrast, and in line with tendencies inspired by political correctness, German is now introducing a number of alternatives to the established (uninflected) Mann (cf. also Table 5, row 5b).

While the German set of adjectives appears to be gaining new members, the English inventory has almost lost one in obsolescent broad. As far back as the 1960s, it was pointed out that, unlike wide, broad was not available in the relevant measure phrase construction (Ullmann 1962, 143; Teller 1969, 205). I have been unable to find any examples in a collection of American newspapers running to 844 million words. However, they do crop up occasionally in British English (cf. Table 2 below).
3.2 Comparing the syntactic uses in English and German

In both English and German, attributive uses of type I structures diverge in their morphological make-up from all other uses including predicative and postnominal ones. Compare:

(31) a. a 200-page-long book
b. The book is 200 pages long.
c. They only sell books less than 200 pages long.
   (tight postnominal use)
d. They published an amazing book, 50 pages long and full of pictures.
e. Over 200 pages long, it is an expensive book.

(32) a. ein 200 Seiten langes Buch
b. Das Buch ist 200 Seiten lang.
d. *Sie verkaufen nur Bücher weniger als 200 Seiten lang.
   (tight postnominal use)
e. Sie veröffentlichten ein erstaunliches Buch, 50 Seiten lang und voller Bilder.
f. Über 200 Seiten lang, ist es ein teures Buch.

In English, there is only a number contrast, which is usually neutralized in cases like (31a) (but not in [31b-e]).\(^5\) As is suggested by the general use of hyphens between numeral and unit noun as well as unit noun and adjective in both British and American English, the attributive use involves a closely integrated compound-like structure. In this respect, it resembles attributive noun structures like those in (33a). Notice that the morphological contrast between English and German found in (31a) and (32a) is preserved in (33a) and (33b).

(33) a. a 200-page book
b. ein 200-Seiten-Buch

In German, any plural inflections associated with measure nouns can never be omitted in examples like (32a), (32b-f) or (33b). However, the agreement marker on the adjective shows up only in attributive uses such as (32a). We have seen, then, that in English, the attributive structure is minimally inflected whereas in German it is maximally inflected.

It can be shown that the morphological contrast between attributive and other uses in English and German coincides with marked distributional contrasts between the two languages. To begin with, consider the analysis summarized in Table 1.

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\(^5\) Inflectional plurals are occasionally found in attributive uses with temporal unit nouns such as *year* and *month*, in particular in British English.
Table 1  The use of six English and German spatial adjectives (*deep, high, long, tall, thick, wide – breit, dick, groß, hoch, lang, tief*) associated with and following the phrases *three metre(s) / meter(s) / yard(s) or drei Meter* in *The Guardian* and the *taz*.\(^{a,b}\)

<table>
<thead>
<tr>
<th></th>
<th>I attributive</th>
<th>II predicative</th>
<th>III tight post-nominal use as in (21c) (excluding commas, hyphens, etc.)</th>
<th>IV other verbless uses as in (21d-e) loosely associated with an implied subject</th>
<th>V total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 g90-00</td>
<td>16 (40%)</td>
<td>8 (20%)</td>
<td>9 (22.5%)</td>
<td>7 (17.5%)</td>
<td>40</td>
</tr>
<tr>
<td>2 taz86-92</td>
<td>101 (82.1%)</td>
<td>15 (12.2%)</td>
<td>–</td>
<td>7 (5.7%)</td>
<td>123</td>
</tr>
</tbody>
</table>

\(^{a}\) The analysis disregards three examples in English, where the measure phrase + adjective combination is part of a prepositional phrase or is used in an object-like function (cf. Sections 5.1.1-5.1.3 below). There are similar exclusions in some of the later tables.

\(^{b}\) In addition to *sein* (9x) and *werden* (2x), the German category ‘predicative’ includes the verbs *wachsen* (1x) and *stehen* (3x).

The major difference is that the – minimally inflected – attributive type in English occurs far less frequently than the – maximally inflected – German one. We may also note, in passing, a very well-known fact: German has no direct counterpart of the ‘tight’ postnominal construction in English (cf. [31d] and [32d]).

A similar picture emerges in Table 2, which compares an additional number of functionally equivalent structures in the two languages. While there may be enormous differences in the distribution of attributive or other structures between the five cases analysed, the evidence leaves no doubt that in every single case there is a markedly stronger pull towards the attributive use in German.

This raises the question as to how an attributive structure in German is rendered in English if the corresponding attributive use is found to be unsuitable. The comparison of original texts in English and German with their authorized translations in the other language has revealed a minor and a major translation strategy. To some extent, as is seen in (34a-b), the attributive structure may correspond to the tight postnominal one.

(34)  a. *Äußerst variable Pflanze mit etwa 2 cm großen purpurrötlichen Blütenköpfen.* (Seidel/Eisenreich)

b. *An extremely variable plant, with purplish red flower-heads about 2 cm long.*
Table 2  The use of some functionally equivalent adjectival measure phrase constructions in English and German newspapers

<table>
<thead>
<tr>
<th></th>
<th>I attributive</th>
<th>II predicative</th>
<th>III others</th>
<th>IV total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>page + long</td>
<td>12 (4.8%)</td>
<td>168 (66.9%)</td>
<td>71 (28.3%)</td>
</tr>
<tr>
<td></td>
<td>Seite + lang</td>
<td>54 (63.5%)</td>
<td>27</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>storey + high</td>
<td>16 (9.2%)</td>
<td>54 (31.2%)</td>
<td>103 (59.5%)</td>
</tr>
<tr>
<td></td>
<td>Stock(werk)/Etage+boch</td>
<td>30</td>
<td>9 (13.4%)</td>
<td>28 (41.8%)</td>
</tr>
<tr>
<td>3</td>
<td>metre/meter/yard/+thick</td>
<td>5</td>
<td>4 (15.4%)</td>
<td>17 (65.4%)</td>
</tr>
<tr>
<td></td>
<td>Meter + dick</td>
<td>56 (78.9%)</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Meter/Kilometer+mächtig</td>
<td>5</td>
<td>–</td>
<td>3 (37.5%)</td>
</tr>
<tr>
<td>4</td>
<td>metre/meter/yard/mile+broad</td>
<td>–</td>
<td>2 (16.7%)</td>
<td>10 (83.3%)</td>
</tr>
<tr>
<td></td>
<td>three +metre/meter/yard+wide</td>
<td>3</td>
<td>1 (8.3%)</td>
<td>8 (66.7%)</td>
</tr>
<tr>
<td></td>
<td>drei Meter +breit</td>
<td>17</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>army (subject/head)+strong</td>
<td>107</td>
<td>8 (6.4%)</td>
<td>10 (8%)</td>
</tr>
<tr>
<td></td>
<td>Mann/ Personen/Frau(en)/Männer+stark</td>
<td>474</td>
<td>14</td>
<td>9 (1.8%)</td>
</tr>
</tbody>
</table>

a) The analyses are restricted to examples containing numerals higher than 1.
b) The analysis excludes a total of 34 language-specific examples, where the structure x Seiten lang modifies a predicate.
c) In addition to be and stand, the category 'predicative' includes the verbs rise (2x), soar (1x) and shoot up (1x).

Much more important is the kind of correspondence illustrated in (35)-(37).

(35)  a.  The Park Lane Hospital for the Dying was a sixty-storey tower of primrose tiles. (Huxley)
       b.  Die Moribundenklinik in der Schwanenallee war ein sechzig Stock hoher primelgelber Kachelturm.

(36)  a.  ... ihres 1,68 großen und 58 Kilogramm schweren Körpers ... (Knef)
       b.  ... of her five-foot-six-inch, 120-pound body ...

(37)  a.  The search is continuing for the 9000000 pound Tornado. (BBC)
       b.  Die Suche nach dem 36 Millionen teuren Flugzeug ...

While the English translation omits the adjective, the German rendering adds an appropriate one.

The assumption that English favours the less explicit adjectiveless structure in attributive position has been strikingly confirmed by the evidence in Table 3, which – like Table 1 – concentrates on spatial adjectives and entities.
Adjectival measure phrases in English and German

Table 3

<table>
<thead>
<tr>
<th></th>
<th>I attributive adjective</th>
<th>II attributive noun</th>
<th>III total</th>
<th>IV % attributive adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 g90-00</td>
<td>5 (long:3, thick, wide)</td>
<td>35</td>
<td>40</td>
<td>12.5%</td>
</tr>
<tr>
<td>2 taz86-97</td>
<td>41 (lang:28, breit:9, hoch:2, dick, tief)</td>
<td>–</td>
<td>41</td>
<td>100%</td>
</tr>
</tbody>
</table>

a) For obvious reasons, the German analysis has been confined to the noun *Kilometer*.
b) Examples involving a combination of two or more than two attributive structures have been excluded from consideration.

The more complex option happens to occur in all German instances. In English, by contrast, it is only used in a small minority of cases. It is obvious, then, that the English tendency to avoid type I structures in attributive position and its preference for closely integrated compound-like structures such as (33a) must be causally related.

Returning to Table 2, we observe in rows 1a-b an extraordinarily big gap in terms of attributive uses between English (*page + long*) and German (*Seiten + lang*). Here we would expect the adjectiveless type (33a) to make an even stronger showing than elsewhere. A quick look at the strings in (38) in a large database has clearly confirmed this expectation.

(38) a two(-) / three(-) / four(-) page x

Retrieving these strings in *The Guardian* for 1990-2000 we find a total of 420 instances of type (33a) and not a single one of the preferred German type including the adjective.

On the basis of the preceding observations, it might be hypothesized that the establishment of novel examples of type I structures proceeds in diametrically opposed ways. The attributive use would be the first to be established in German, but the last one in English. At any rate, we would expect the contrast to be sharpened in such cases. Comparing the data in Tables 4 and 5 we find that the hypothesis is generally confirmed: With respect to the attributive use, the gap between English and German has indeed been widened in both directions.

6 Note in this connection the acceptability contrast between (i) and (ii) observed though not accounted for in Kaiser (1979, 15).

Table 4  The use of relatively recent and/or less well established adjectival measure phrase combinations of type I as reflected in the \textit{taz} \textsuperscript{a)}

<table>
<thead>
<tr>
<th></th>
<th>I attributive</th>
<th>II predicative</th>
<th>III others</th>
<th>IV total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Seite + dick</td>
<td>168 (78.9%)</td>
<td>26 (12.2%)</td>
<td>19 (8.9%)</td>
<td>213</td>
</tr>
<tr>
<td>2 Einwohner + groß</td>
<td>19 (100%)</td>
<td>-</td>
<td>-</td>
<td>19</td>
</tr>
<tr>
<td>3 (Bruttoregister-) Tonne + groß</td>
<td>31 (100%)</td>
<td>-</td>
<td>-</td>
<td>31</td>
</tr>
<tr>
<td>4 Zimmer + groß</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5 Mark + groß</td>
<td>32 (91.6%)</td>
<td>3 (8.6%)</td>
<td>-</td>
<td>35</td>
</tr>
<tr>
<td>6 Mark + hoch</td>
<td>31 (86.1%)</td>
<td>5 (13.9%)</td>
<td>-</td>
<td>36</td>
</tr>
<tr>
<td>7 Mark + schwer</td>
<td>134 (87.0%)</td>
<td>16 (10.4%)</td>
<td>4 (2.6%)</td>
<td>154</td>
</tr>
<tr>
<td>8 PS + stark</td>
<td>48 (98.0%)</td>
<td>-</td>
<td>1 (2.0%)</td>
<td>49</td>
</tr>
<tr>
<td>9 Watt + stark</td>
<td>7 (87.5%)</td>
<td>1 (12.5%)</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>10 Seite + stark</td>
<td>63 (92.6%)</td>
<td>2 (12.5%)</td>
<td>3 (4.4%)</td>
<td>68</td>
</tr>
<tr>
<td>11 Mark + teuer</td>
<td>288 (97.3%)</td>
<td>4 (1.4%)</td>
<td>4 (1.4%)</td>
<td>296</td>
</tr>
<tr>
<td>12 Grad + steil</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>13 Mark + wertvoll</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>1-13 total</td>
<td>825 (90.3%)</td>
<td>57 (6.2%)</td>
<td>32 (3.5%)</td>
<td>914</td>
</tr>
</tbody>
</table>

\textsuperscript{a)} The expressions in rows 10 and 11 have been analyzed in the \textit{taz} for 1988-1989; all others are based on the \textit{taz} for 1986-1999.

While the more unusual and presumably more recent English combinations in Table 4 are – with the exception of \textit{page} + \textit{long} – not yet found in attributive position, this slot certainly constitutes the major point of entry for novel combinations in German. There are a number of cases which at this stage are used (almost) exclusively in attributive position.
### Table 5

Examples like the fifty(-)page(-)long brochure containing non-standardized units of measure and a numeral (higher than 1) or a quantifier in *The Guardian* for 1990-2000

<table>
<thead>
<tr>
<th></th>
<th>I attributive</th>
<th>II predicative</th>
<th>III tight post-nominal use</th>
<th>IV other uses loosely associated with an implied subject</th>
<th>V total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 lane + wide</td>
<td>−</td>
<td>6 (46.2%)</td>
<td>7 (53.8%)</td>
<td>−</td>
<td>13</td>
</tr>
<tr>
<td>2 column + wide</td>
<td>−</td>
<td>−</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3 name + long</td>
<td>−</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4 block + long</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5 line + long</td>
<td>−</td>
<td>15 (68.2%)</td>
<td>1 (4.5%)</td>
<td>6 (27.3%)</td>
<td>22</td>
</tr>
<tr>
<td>6 word + long</td>
<td>−</td>
<td>44 (73.3%)</td>
<td>9 (15%)</td>
<td>7 (11.7%)</td>
<td>60</td>
</tr>
<tr>
<td>7 sentence + long</td>
<td>−</td>
<td>5 (83.3%)</td>
<td>−</td>
<td>1 (16.7%)</td>
<td>6</td>
</tr>
<tr>
<td>8 letter + long</td>
<td>−</td>
<td>6 (50%)</td>
<td>1 (8.3%)</td>
<td>5 (41.7%)</td>
<td>12</td>
</tr>
<tr>
<td>9 syllable + long</td>
<td>−</td>
<td>1</td>
<td>−</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10 page + long</td>
<td>12 (4.8%)</td>
<td>168 (66.9%)</td>
<td>21 (8.4%)</td>
<td>50 (19.9%)</td>
<td>251</td>
</tr>
<tr>
<td>11 floor + high</td>
<td>−</td>
<td>5 (33.3%)</td>
<td>5 (33.3%)</td>
<td>5 (33.3%)</td>
<td>15</td>
</tr>
<tr>
<td>1-11 total</td>
<td>12 (3.1%)</td>
<td>251 (64.7%)</td>
<td>47 (12.1%)</td>
<td>78 (20.1%)</td>
<td>388</td>
</tr>
</tbody>
</table>

This area provides further evidence concerning the rivalry between parameter verbs and constructions of type I. Compare the options in (39) and the analysis shown in Table 6 on page 228.

(39) a. *eine 150000 Einwohner zählende/große Stadt*

b. *Die Stadt zählt 150000 Einwohner / ist 150000 Einwohner groß.*

The data suggest that far from avoiding the function of the parameter verb, the adjective structure seems to follow in its wake. Moreover, it is quite possible that participial structures as in (39a) may have encouraged the preference for attributive uses of the adjectival alternative.

### 4. The type *the year-long struggle*

So far, we have concentrated on examples like *four metres long* that include a numeral (or a functionally similar quantifier like *several*). This section focuses on related structures not containing any numerals.
Table 6  The rivalry between the parameter verb *zählen* and the corresponding type I construction involving *groß* in the *taz* for 1986-1999

<table>
<thead>
<tr>
<th>1 Einwohner + zählen</th>
<th>I attributive</th>
<th>II predicative</th>
<th>III others</th>
<th>IV total</th>
</tr>
</thead>
<tbody>
<tr>
<td>482</td>
<td>118</td>
<td>–</td>
<td>–</td>
<td>600</td>
</tr>
<tr>
<td>(present participle)</td>
<td>(finite verb)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2 Einwohner + groß (sein) | 19 | – | – | 19 |

In the type *four metres long*, the numeral *one* is usually replaced in other than attributive uses by a form it shares with the indefinite article. In attributive uses, however, the ‘reduced’ numeral, which occurs in a determiner position and looks like a determiner, has to be omitted across the board:7,8

(40)  *the/their/this/a (*a) year-long struggle*

German, by contrast, does not permit the (unreduced) numeral to be dropped. Compare (40) and (41):

(41)  *der/ihr/dieser/ein ein Jahr lange(r) Kampf*

In comparison with examples containing higher numerals, cases such as (41) are relatively rare. However, German does possess a commonly used and extremely productive compound-like structure superficially resembling the English type in (40):

(42)  *der jahrelange Kampf*  ‘the struggle lasting (many) years’

Semantically, there is a clear-cut contrast between expressions like (40) and (42): Example (40) – like (41) – refers to just one year, but (42) has a plural interpretation. The feature ‘plural’ is also present in cases like *meterlange* (*Wurzeln*), where the unit noun carries no plural inflection. This suggests that the inflection in expressions like (42) is a genuine plural marker rather than a mere formative signalling compound status. In more recent times, English has evolved a type semantically equivalent to (42), whose plural interpretation is explicitly signalled by the plural suffix.

(43)  *the years-long struggle*

This gives us for both English and German a functionally equivalent pair of expressions involving a singular-plural contrast in the unit of measure. Crucially, however, the distribution of the singular or plural cases shows a striking divergence between English and German. Consider the evidence relating to five pairs of expressions in Tables 7-9.

7  The rule extends to fractions lower than 1 as in (i):

(i)  *the/a (*a) quarter-mile-long race*

8  According to one recent estimate, the more explicit variant containing *one* occurs in less than 5% of all relevant cases.
### Table 7  The attributive types der ein Jahr lange Kampf and der jahrelange Kampf in the *taz*

<table>
<thead>
<tr>
<th></th>
<th>I solid</th>
<th>II juxtaposed</th>
<th>III Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ein Jahr lange(n/m/r)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>jahrelange(n/m/r)</td>
<td>1340</td>
<td>–</td>
</tr>
<tr>
<td>2</td>
<td>ein(en) Kilometer lange(m/n/r)</td>
<td>–</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>kilometerlange(m/n/r)</td>
<td>153</td>
<td>–</td>
</tr>
<tr>
<td>a</td>
<td>eine Seite lange(n/m/r)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Seitenlange(m/n/r)</td>
<td>38</td>
<td>–</td>
</tr>
<tr>
<td>4</td>
<td>ein Jahrzehnt lange(m/n/r)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>jahrzehntelange(m/n/r)</td>
<td>444</td>
<td>–</td>
</tr>
<tr>
<td>5</td>
<td>ein Jahrhundert alte(m/n/r)</td>
<td>–</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>jahrhundert(e)alte(m/n/r)</td>
<td>329 (323/6)</td>
<td>53</td>
</tr>
</tbody>
</table>

a) The expressions in rows 3a-b have been analyzed in the *taz* for 1993-1999, those in rows 5a-b in the *taz* for 1986-1997; all others are based on the *taz* for 1993-1997.

### Table 8 The attributive types the year(-)long struggle and the years(-)long struggle in *The Guardian* for 1990-2000

<table>
<thead>
<tr>
<th></th>
<th>I solid</th>
<th>II hyphenated</th>
<th>III juxtaposed</th>
<th>IV total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A year-long</td>
<td>6 (0.5%)</td>
<td>1134 (97.5%)</td>
<td>23 (2.0%)</td>
</tr>
<tr>
<td></td>
<td>B years-long</td>
<td>–</td>
<td>7 (77.8%)</td>
<td>2 (22.2%)</td>
</tr>
<tr>
<td>2</td>
<td>A mile-long</td>
<td>–</td>
<td>189 (99.5%)</td>
<td>1 (0.5%)</td>
</tr>
<tr>
<td></td>
<td>B miles-long</td>
<td>–</td>
<td>2</td>
<td>–</td>
</tr>
<tr>
<td>3</td>
<td>A page-long</td>
<td>–</td>
<td>19</td>
<td>1 (5%)</td>
</tr>
<tr>
<td></td>
<td>B pages-long</td>
<td>–</td>
<td>2</td>
<td>–</td>
</tr>
<tr>
<td>4</td>
<td>a decade-long</td>
<td>–</td>
<td>161 (95.3%)</td>
<td>8 (4.7%)</td>
</tr>
<tr>
<td></td>
<td>b decades-long</td>
<td>–</td>
<td>47</td>
<td>–</td>
</tr>
<tr>
<td>5</td>
<td>a century-old</td>
<td>–</td>
<td>215 (99.1%)</td>
<td>2 (0.9%)</td>
</tr>
<tr>
<td></td>
<td>b centuries-old</td>
<td>–</td>
<td>351 (93.9%)</td>
<td>23 (6.1%)</td>
</tr>
</tbody>
</table>

a) In ten cases, an apostrophe replaces the hyphen.
Table 9  The attributive types the year(-)long struggle and the years(-)long struggle in the Los Angeles Times for 1992-1999 or The New York Times for 2001

<table>
<thead>
<tr>
<th></th>
<th>I solid</th>
<th>II hyphenated</th>
<th>III juxtaposed</th>
<th>IV total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>182 (94.8%)</td>
<td>9 (4.7%)</td>
<td>1 (0.5%)</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>5 (31.3%)</td>
<td>11 (68.8%)</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>a</td>
<td>39 (7.1%)</td>
<td>512 (92.9%)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>-</td>
<td>43</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>a</td>
<td>-</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>a</td>
<td>9 (1.1%)</td>
<td>791 (98.9%)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>1 (0.2%)</td>
<td>429 (99.8%)</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>a</td>
<td>-</td>
<td>686</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>-</td>
<td>827 (99.8%)</td>
<td>2 (10.2%)</td>
</tr>
</tbody>
</table>

a) The New York Times for 2001 is used only with year(s)-long in rows 1a-b.

In German, the singular type shown in (41) is very rare, while the compound plural version in (42) is extremely common. In English, we usually find a reversal of this situation: The singular type invariably is quite common and, with most unit nouns, far more frequent than the plural counterpart. In view of these frequency contrasts, it can be predicted that German and English speaking people alike will tend to wrongly equate the English singular version as in (40) with the German plural one in (42). The following list of erroneous renderings in authorized translations shows that this is indeed the case (cf. also [9a-b]).

(44)  a. Damit war das jahrhundertealte Duell zwischen Tibet und China wieder eröffnet. (Harrer)
    b. Thus the century-old quarrel between China and Tibet broke out again.

(45)  a. … da gruben nun die Archäologen, legten im Innern der größten Pyramide (…) kilometerweite Labyrinthgänge bloß! (Ceram)
    b. The excavators disclosed labyrinthine passages five eights of a mile long.

(46)  a. …, Wedel mit meterlangen Blättern, … (Frisch)
    b. …, fronds with yard-long leaves, …

(47)  a. Night-long studies have recently shown, … (Gay Gaer Luce)
    b. Nächtelange Beobachtungen haben kürzlich gezeigt, …

(48)  a. … as the dark cloud of blood had settled and dispersed in the mile-deep sea. (Hemingway)
    b. …, als die dunkle Blutwolke sich gesetzt und in der meilentiefen See verteilt hatte.
No doubt, the association between the plural structure in German with the English singular one is encouraged by the fact that neither contains a numeral.

Finally, a few remarks on the spelling of these expressions as shown in Tables 7-9: German generally distinguishes clearly between the phrasal structure involving a singular unit noun and the compound-like plural structure. In the former case, the three constituents (numeral + unit noun + adjective) are invariably represented as separate words. In the latter, the plural unit noun and the adjective are – with the occasional exception of Jahrhunderte alte (m/n/r) – written solid. In English, the compound-like status of both singular- and plural-oriented structures is reflected in the massive preference for hyphenated forms. The two regional varieties diverge, however, in the use of the two minority spellings, where the two constituents are written solid or juxtaposed as two words. American English, which hardly ever features any juxtaposed forms, shows a remarkable tendency to use forms written solid in the case of singular unit nouns. British English, by contrast, still shies away from forms written solid and, surprisingly enough, uses the juxtaposed spelling variant clearly more frequently than American English.

5. Language-specific syntactic uses in English

Previous work dealing with the type four metres long in English has been confined to predicative, postnominal, and attributive constructions. As a result, a large number of syntactic possibilities have been neglected which have no formally corresponding equivalent in German. These include several kinds of prepositional phrases as well as object-like uses. In the following, an overview of such cases will be presented. However, we will not be able to explore the enormous range of equivalents available in German.

5.1 Prepositional phrases

5.1.1 Verb-dependent prepositions

We start by surveying those cases where the choice of the preposition is dependent on the individual verb chosen. The verbs involved may be classified into four groups.

Group 1 includes transitive verbs of measuring, estimating and calculating associated with at, which is occasionally replaced by as:

(49) The tree was measured at 2 yards tall. (VOA)
(50) The crowd was estimated at more than 20000 strong. (BBC)

Group 2 consists of intransitive verbs which typically denote the transition of the subject referent to a state described by a to-phrase. Some of the more frequently used verbs are listed in (51).

(51) amount to, extend (to), get to, grow (to), open to, rise (to), spread (to)
The type is illustrated in (52)-(53).

(52) Unfortunately, the end segments normally break off the rattle when it gets to six or seven segments long … (Stidworthy)
(53) Spreading to 10 ins wide the plants cover themselves with small double flowers. (Dobies Seeds)

Group 3 represents the transitive counterpart of group 2. Consider, for instance:

(54) Roll out the Danish pastry to about 1/4-inch thick and … (Bates)
(55) If no new long whippy shoots have developed, retain old ones and prune side growths to 7.5 cm (3 in) long. (Living)

Group 4 includes the verbs of variation vary and range. Apart from to, they may be associated with from, between and around:

(56) Elephant shrews range from about 7 inches to 23 inches long, … (Boorer)
(57) The bed varies between 6 and 12 feet (2-4 m) thick, … (Watson / Sissons)
(58) The lake varies / ranges around 4 miles wide.

5.1.2 Modifiers of noun phrases

The type four metres long may also be introduced by the preposition of in examples such as the following:

(59) Animals less than two months old did not return from 250 metres, yet those of nine months or more than a year old returned from 300 metres in 10 to 15 minutes. (Carthy)
(60) The uppermost storey consists of trees of 130-160 ft high, … (Lawson)

In (59) and (60) this construction functions as a modifier of a noun phrase. As is apparent from example (59), the of-phrase is in competition with the tight postnominal structure. Over the last few centuries, such of-phrases have been largely replaced by the more economical postnominal structure.\(^9\)

5.1.3 Other verb-independent prepositional phrases

There are many other kinds of prepositional phrases compatible with the type four metres long. Typically, they constitute free adjuncts introduced by the prepositions at, by, from and until. The category is illustrated in examples (61) and (62).

(61) At seven feet long, it is the king of the otter family. (The Guardian)

---

\(^9\) Pace Schibsbye’s (\(^{1970}, 296\) statement that of is always optional in examples like (59) and (60) there are a few environments where the preposition cannot be dropped (Rohdenburg 2003b, 271-2).
An average baby will be ready to abandon the fifth feed by about four months old. (Leach)

5.2 Object-like constructions

Sections 5.1.1-5.1.3 have drawn attention to various prepositional phrases where the structure four metres long replaces more explicit NPs of the form a length of four metres. Intriguingly, the string numeral + unit of measure + adjective functions as a noun phrase without possessing a proper nominal head. A similar rivalry between transparent and opaque noun phrases is found in connection with the verbs listed in (63).

aggregate, approach (to), attain (to), average, exceed, measure, near, reach (to)\textsuperscript{10}

These verbs govern complements that resemble direct objects in various respects:\textsuperscript{11}

The Columbia Plateau basalts average 1000 m thick and in places are over 1500 m. (Ollier)

Their tower blocks – … – reach eight, nine and even 10 storeys high. (g90)

Although heavy-bodied, leaf-nosed snakes rarely exceed fifteen inches long. (Stidworthy)

6. Conclusion

Comparing the type four metres long / vier Meter lang in English and German, we have seen that the English inventory of possible combinations is very much smaller than the German one and as good as properly included within it. While German generally favours the attributive position, in particular with novel and unusual collocations, the reverse is true of English. In English, the avoidance of the type four metres long in attributive position is largely compensated for by the use of two alternatives, tight postnominal constructions and, above all, less explicit attributive structures lacking the adjective (e.g. a 20-page report). Concerning English expressions not containing a numeral, it is found that equivalent structures in German are rare where the English ones are very common and the other way round. This encourages the mistaken equation of expressions like meterdicke Mauern and walls a yard thick or the mile-deep sea and die meilentiefe See. The investigation concludes with a survey of constructions specific to English where the type four metres long functions as an ‘opaque’ noun phrase.

We have found plenty of evidence supporting Hawkins’ explicitness theory in this area. In addition to the phenomena just mentioned where English uses

\textsuperscript{10} The variants including the preposition to are generally regarded as obsolescent or even obsolete.

\textsuperscript{11} For further discussion of such complements see Allerton (1982, 84ff.).
more opaque and less explicit structures or is less expressive, there are several others that deserve to be pointed out again:

- the general absence of degree terms introduced by a preposition as in German (Section 2)
- the use of the same syntactic frame found in the type *four metres long* for two other semantic types (Section 2)
- the omission of *too* in collocations like *a year young for school* (Section 2, Note 2)
- the usual rendering of German expressions like *200 Mann/Personen* (etc.) *stark* by means of *200 strong* (Section 3.1)
- the avoidance of expressions like *100 pounds heavy* and *100 pounds dear/expensive* alongside the use of the parameter verbs *weigh* and *cost/be* (Section 3.1)
- the neutralization of the number contrast with attributive examples like *the four-metre-long car* and *the twenty-page report* (Section 3.2)
- the omission of the reduced numeral in expressions like *the (%a) mile-deep sea* (Section 4)

By contrast, there are only two – far from unambiguous – phenomena where German might at a pinch be said to be less explicit/more opaque:

- the use of many collocations where the parameter adjective has no clear antonym (Section 3.2)
- the use of marked adjectives (*heiß, kalt*) alongside the usual unmarked ones (Section 3.1)

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Works cited


