HAPPINESS in English and German: A metaphorical-pattern analysis

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1 Introduction

Despite the continuing interest in metaphor on the one hand and a growing interest in corpus-based methods on the other, few studies have attempted to combine these two—presumably because metaphorical mappings by their very nature are not systematically associated with particular words and expressions and thus cannot be straightforwardly retrieved.

In this paper I demonstrate a corpus-based method of investigating metaphorical target domains and apply it to a contrastive analysis of metaphors associated with two English emotion words and their German translation equivalents: happiness and Glück, as well as joy and Freude. I show that there are item-specific and language-specific differences in the degree to which these words participate in particular metaphorical mappings.

2 Theoretical and Methodological Prerequisites

2.1 The Conceptual Theory of Metaphor

The conceptual theory of metaphor views individual metaphorical expressions as resulting from general mappings between a (typically concrete) source domain, and a (typically abstract) target domain (cf. Lakoff 1993: 208). Metaphor is not seen as a primarily linguistic phenomenon, but as a psychological phenomenon whereby our experience of physical domains
guides our understanding of abstract domains (cf. Lakoff 1993: 208). For example, the abstract domain TIME is understood in terms of the concrete domain SPACE via the TIME-AS-SPACE mapping, which may manifest itself differently in different languages but is likely to be near-universal (cf. Lakoff 1993: 224-5); in contrast, a mapping like TIME IS MONEY is restricted to cultures where money is used and has a central status.

Cognitive metaphor research has focused on uncovering large-scale mappings rather than an exhaustive description of the specific linguistic items instantiating these mappings in a particular language. Such studies are mostly based on introspective data or more or less systematically collected citations. This is not a major problem if the aim is to establish the existence of a particular mapping, but it runs into difficulties if the aim is the systematic characterization of a specific source or target domain or the comparison of its linguistic manifestations in different languages. First, it is difficult to decide whether the metaphors relevant to a particular target domain have been exhaustively charted; second, it is impossible to quantify the results in order to determine the importance of a given metaphor in a given language; third, it is difficult to determine a standard for crosslinguistic comparison.

### 2.2 A Corpus-Based Approach to Metaphor

For methodological reasons, the (orthographic) word plays a central role in corpus linguistics: as corpora are accessed via word forms, corpus-based studies typically take the word as a focal point around which observations are made and theories are built. At first glance, this does not make corpus linguistics an ideal research tool for the investigation of metaphor, as metaphorical mappings cannot be uniquely identified by particular words or formal properties. This is unproblematic for source-domain oriented studies (e.g. Barlow 1997, Deignan 1999), as metaphorical expressions necessarily contain words from the source domain, and can thus be identified exhaustively. For target-domain oriented studies this is impossible, as metaphorical expressions do not necessarily contain words from the target domain:

1. HAPPY IS UP: I am six feet off the ground, Thinking about her gives me a lift (Kövecses 1998, Lakoff and Johnson 1980).
2. HAPPINESS IS A LIQUID: She bubbled with joy, There was an outpouring of joy, What is your source of happiness?

The examples in (1a) do not contain any linguistic clues to HAPPINESS, and thus could not be retrieved automatically for a study of this target domain. In contrast, the examples in (1b) contain words from the target domain, joy and happiness, occurring in syntactic/semantic frames from the source domain LIQUID (bubble with NP, outpouring of NP, source of NP).
corpus search for a word like *happiness* allows us to identify all such frames (which I will refer to as *metaphorical patterns*, cf. Stefanowitsch, submitted) in which this word occurs. Metaphorical pattern analysis resolves most of the problems outlined above, and although it captures only those metaphors manifesting themselves as metaphorical patterns for specific lexical items, these metaphors are particularly interesting as they allow us to investigate systematically and exhaustively how specific concepts expressed by individual lexical items in specific languages interact with large-scale conceptual mappings found in many different languages.

3 Two Case Studies

One application of metaphorical pattern analysis is the investigation of culture- and language-specific differences between translation equivalents; the possibility is intriguing that words may interact with metaphorical mappings in language-specific ways.

Crosslinguistic corpus studies require comparable corpora. As no such corpora are readily available for English and German, I used news texts available via the web archives of ten German and ten American newspapers, whose web sites returned at least thirty hits for each of the relevant words using the search engine *Webcorp*. This yielded 983 hits for *happiness*, 863 for *joy*, 865 for *Güld*, and 1376 for *Freude*. To render the frequencies of individual metaphorical mappings discussed below immediately comparable, they were normalized relative to 1000 hits; statistical tests were performed using the original frequencies. The choice of news texts limits the scope of this study somewhat, but newspapers are a significant part of public discourse and are thus representative of the way in which a speech community publicly constructs its cultural models through language.

3.1 Culture-Specific Differences in the Intensity of Emotions

One way in which translation equivalents may differ is the way in which the nature of the concepts associated with them is conceptualized in the languages in question.

Goddard (1998: 94) claims that the English words *happy* and *happiness* have a ‘comparatively muted quality’ in comparison to their translation equivalents in other European languages, such as German *glücklich* and *Güld* and French *heureux* and *bonheur*; these ‘imply an intense but generalized and almost euphoric view of one’s own current existence’, more like English *joy*. German and French also have translation equivalents for *joy* (*Freude* and *joie*), which encode emotions that are intuitively more intense
than those encoded by Glück and bonheur in the same way that joy is more intense than happiness; Goddard’s claim is thus limited to differences between Glück/bonheur and happiness. If such differences exist, they might show up in the metaphorical mappings in which the words participate. Goddard implicitly suggests such a difference: ‘[s]peaking metaphorically, emotions such as Glück and bonheur fill a person to overflowing, leaving no room for any further desires or wishes’ (Goddard 1998: 93). This suggests that the degree to which an emotion concept participates in the EMOTION-AS-LIQUID mapping may correlate with the intensity of the corresponding emotion.

In order to test this hypothesis, I extracted all metaphorical patterns instantiating the metaphors EMOTION-AS-LIQUID and EXPERIENCER-AS-CONTAINER. We would expect these metaphors to be more frequent for joy than for happiness, and more frequent for Glück than for happiness. The total number of patterns instantiating these mappings is 32 (31) for happiness, 64 (55) for joy, 25 (22) for Glück, and 63 (86) for Freude. The within-language differences are highly significant, providing evidence for the hypothesis that the frequency of LIQUID metaphors correlates with the intensity of an emotion (Fisher exact, happiness vs. joy, p<0.001; Glück vs. Freude, p<0.001); but the between-language differences are not significant, providing initial evidence against the claim that Glück is more intense than happiness (happiness vs. Glück, p>0.1; joy vs. Freude, p>0.1).

However, a detailed analysis of the specific mappings instantiating the LIQUID and CONTAINER mappings yields a more complex picture. First, consider the examples in (2) and (3), which map the property of (im)purity from LIQUIDS to EMOTIONS (here and below, the overall normalized frequency of the patterns instantiating a mapping are given for each word, followed by the actual frequency and an exhaustive list of the patterns themselves; German examples are paraphrased as literally as possible rather than translated into idiomatic English):

(2) **E IS A PURE LIQUID**
   a. HAPPINESS 2 (3): pure NP<sub>e</sub>
   b. JOY 14 (12): pure NP<sub>e</sub>
   c. GLÜCK 2 (2): pur-NP<sub>e</sub> ‘pure E’, rein- NP<sub>e</sub> ‘pure E’
   d. FREUDE 19 (26): pur- NP<sub>e</sub> ‘pure E’, rein- NP<sub>e</sub> ‘pure E’, ungetrübt-NP<sub>e</sub> ‘uncontaminated E’

(3) **E IS AN IMPURE LIQUID**
   a. HAPPINESS 8 (8): NP<sub>e</sub> mixed together, mix of NP<sub>e</sub>, mixture of NP<sub>e</sub>, laced with NP<sub>e</sub>, drop in NP<sub>e</sub>
   b. JOY 3 (3): mixture of NP<sub>e</sub>
c.  GLÜCK 2 (2): nicht ungetrübt- NP\textsubscript{e} ‘not uncontaminated E’, Wermutstropfen in NP\textsubscript{e} ‘drop of vermouth in E’

d.  FREUDE 15 (20): trüben NP\textsubscript{e} ‘contaminated E’, nicht ungetrübt- NP\textsubscript{e} ‘not uncontaminated’, mischen REFL in NP\textsubscript{e} ‘mix into E’, getrübt- NP\textsubscript{e} ‘contaminated E’, Mischung aus NP\textsubscript{e} ‘mixture of E’

In the case of the mapping in (2), the within-language differences are significant (happiness vs. joy p<0.05; Glück vs. Freude p<0.001), but the across-language difference is not (happiness vs. Glück p>0.1); in the case of the mapping in (3), the within-language difference is significant for German but not for English, and the cross-language difference is not significant (happiness vs. joy, p>0.1; Glück vs. Freude, p<0.01; happiness vs. Glück p<0.1). In other words, joy and Freude are conceptualized as PURE LIQUIDS more frequently than happiness and joy; this fits in with the idea of an emotion that is so intense that it leaves no room for other emotions, but there is no difference between Glück and happiness with respect to this mapping.

Let us now turn to the metaphorical mappings most directly related to the distinction suggested by Goddard, THE EXPERIENCER OF AN EMOTION IS A CONTAINER, and AN EMOTION IS A LIQUID FILLING THE EXPERIENCER:

(4)  a.  HAPPINESS 9 (9): filled with NP\textsubscript{e}, open sb (up) to NP\textsubscript{e}, NP\textsubscript{e} enter heart, hold NP\textsubscript{e}, NP\textsubscript{e} be in sb, contain NP\textsubscript{e}, drain NP\textsubscript{e} out of sb

   b.  JOY 21 (18): fill sb with NP\textsubscript{e}, NP\textsubscript{e} fill sb, full of NP\textsubscript{e}, open sb (up) to NP\textsubscript{e}, hold NP\textsubscript{e}, contain NP\textsubscript{e}

   c.  GLÜCK 8 (7): voll(er) NP\textsubscript{e} ‘full of E’, fassen- NP\textsubscript{e} ‘hold E’, inner- NP\textsubscript{e} ‘inner E’

   d.  FREUDE 20 (28): voll(er) NP\textsubscript{e} ‘full of E’, erfüllen jmd mit NP\textsubscript{e} ‘fill person with E’, erfüllt mit NP\textsubscript{e} ‘filled with E’, fassen NP\textsubscript{e} ‘hold E’, inner- NP\textsubscript{e} ‘inner E’, NP\textsubscript{e} sein Inhalt ‘E be contents’, NP\textsubscript{e} aufnehmen ‘take up E’, NP\textsubscript{e} sein in ‘E be in’

Again, the within-language differences are significant, but the between-language differences are not (happiness vs. joy, p<0.05; happiness vs. Glück p>0.1; Glück vs. Freude, p<0.05), but a different picture emerges when we look at metaphorical patterns that conceptualize the experiencer of a very intense emotion as a container that is unable to contain a liquid:

(5)  a.  HAPPINESS 3 (3): bubble with NP\textsubscript{e}, uncontainable NP\textsubscript{e}, overflow with NP\textsubscript{e}

   b.  JOY 14 (12): burst with NP\textsubscript{e}, NP\textsubscript{e} burst through body, erupt NP\textsubscript{e}, overflow with NP\textsubscript{e}, bubble with NP\textsubscript{e}, surge of NP\textsubscript{e}, burst of NP\textsubscript{e}, explosion of NP\textsubscript{e}, explode with NP\textsubscript{e}
c. GLÜCK 8 (7): *platzzen vor NP_z* ‘burst with E’, *unfassbar- NP_e* ‘unhold-able E’, *NP_z übersprudeln* ‘E overflow’, *NP_e überschwemmen PERSON* 'E flood PERSON', *explodieren vor NP_e* ‘explode with E’
d. FREUDE 4 (6): *überschäumend- NP_z* ‘over-bubbling E’, *NP_z überschwemmen PERSON* ‘E flood PERSON’,

As expected, and as seen with the other mappings, this mapping is significantly more frequent with joy than with happiness (p<0.01), but unlike the case of the other mappings, it is actually more frequent with Glück than with Freude, although this difference does not reach significance (p=0.2). The direct comparison between happiness and Glück shows a statistical trend towards significance (p=0.12). These results may be interpreted as support for the claim that Glück denotes a more intense emotion than happiness: with respect to this pattern, it is very similar to Freude, while happiness is clearly very different from joy.

Finally, for completeness’ sake, consider (6), which shows the remaining patterns instantiating the EMOTION-AS-LIQUID mappings:

(6) OTHER METAPHORICAL PATTERNS
a. HAPPINESS 8 (8): source of NP_e, fountain of NP_e, sea of NP_e, thirst after NP_e, thirst for NP_e, NP_e come in small doses
b. JOY 9 (8): NP_e spring from, source of NP_e, NP_e well up, sweep away with NP_e, NP_e wash through PERSON, inject NP_e
c. GLÜCK 5 (4): *(ver-/zurück-)sinken in NP_e* ‘sink (back) into E’, *trunken vor NP_e* ‘drunk with E’, *NP_e sein Champagner* ‘E be champagne’
d. FREUDE 9 (13): *Quelle NP_e,GEN* ‘source of E’, *NP_e entspringen aus* ‘E spring from’, *schöpfen NP_e aus* ‘scoop E from’, *NP_e davontragen PERSON* ‘E carry away PERSON’, *NP_e verebben* ‘E ebb away’, *Pokal NP_e,GEN* ‘cup of E’, *Glas NP_e,GEN* ‘glass of E’

A full discussion of these patterns would reveal further interesting differences; note, for example, that joy and Freude but not happiness and Glück occur with expressions like sweep/carry away.

3.2 Attaining HAPPINESS in English and German

A second way in which translation equivalents may differ is the way in which speakers of a language conceptualize the relationship between the concept associated with these words and other concepts. In this section I will look at one such case, namely the metaphors associated with attaining the emotional state referred to by happiness, joy, Glück, and Freude, i.e. the relationship between BECOMING and EMOTIONS. There are two major metaphorical models: one where a person attempting to attain an emotional state
is conceptualized as moving toward an entity or location (referred to here as the QUEST model), and one where a person attaining an emotion is conceptualized as a receiver of an emotion (referred to as the TRANSFER model). These models are directly related to the dual nature of the general EVENT STRUCTURE metaphor, which either construes states/events as locations and changes as movements of participants relative to these locations (Lakoff and Johnson 1999: 179), or states/events as objects and changes as movements of these objects relative to participants (Lakoff and Johnson 1999: 196).

Let us begin with the QUEST model. The total number of patterns instantiating this model in the corpus is 158 (155) for happiness, 25 (22) for joy, 136 (118) for Glück, and 8 (11) for Freude. Thus the within-language difference is significant in both languages (happiness vs. joy, p<0.001; Glück vs. Freude, p<0.001), but the between-language difference is significant for joy vs. Freude (p<0.001), but only marginally so for happiness vs. Glück (p=0.11). Again, however, a closer look at more specific mappings reveals intriguing differences between the two languages.

First and most strikingly, there is a clear difference between English and German with respect to how the quest for the emotional state is conceptualized. In German the preferred mapping is the one shown in (7), where Glück is conceptualized as a static entity or location, and a person attempting to attain Glück is conceptualized as someone searching for this entity or location:

(7) TRYING TO ACHIEVE E IS SEARCHING FOR E
a. HAPPINESS 17 (17): look for NP_E, seek (out) NP_E, search (for) NP_E, in search of NP_E, quest for NP_E, seekers of NP_E
b. JOY 3 (3): look for NP_E, seek (out) NP_E, grop toward NP_E
c. GLÜCK 52 (45): Suche nach NP_E 'search for E', suchen NP_E 'search (for) E', buddeln nach NP_E 'dig for E'
d. FREUDE 0 (0)

In both languages, this mapping is marginal or absent for joy/Freude (note that the small difference between joy and Freude is not significant, p<0.1), but to some degree present for happiness/Glück (happiness vs. joy p<0.01; Glück vs. Freude, p<0.001); crucially, however, with respect to the latter, it is much more frequently found in German than in English (happiness vs. Glück, p<0.001).

The preferred mapping in English is one where happiness is seen as a moving entity, and a person attempting to attain happiness is seen as someone pursuing this entity:

(8) TRYING TO ATTAIN E IS PURSUING E
a. HAPPINESS 61 (60): pursuit of NP_E, pursue NP_E
Again, the mapping is absent for joy/Freude, thus the within-language difference is significant in both languages (happiness vs. joy, \(p<0.001\); Glück vs. Freude \(p<0.001\)); but with respect to happiness/Glück the mapping is much more frequent in English (happiness vs. Glück, \(p<0.001\)).

Note that the between-language difference with respect to the mappings in (7) and (8) is not absolute: both mappings are available in both languages. However, speakers of (American) English prefer the more active and dynamic PURSUIT mapping, while speakers of German prefer the less active and dynamic SEARCH mapping. This may be due to a general American ideology that sees individuals as responsible for their well-being, and favors an active, deliberate, ‘hands-on’ approach to attaining it.

A second striking difference concerns the actual attainment of an emotion, conceptualized as the end point of the quest; as FINDING an entity (consistent with the SEARCH model); or as CAPTURING an entity (consistent with the PURSUIT model). Consider, first, the FIND metaphor:

(9) ATTAINING E IS FINDING E

a. HAPPINESS 63 (62): find NP\(_{e}\), newfound NP\(_{e}\), (re)discover NP\(_{e}\), reach NP\(_{e}\)
b. JOY 18 [21]: find NP\(_{e}\), (re)discover NP\(_{e}\)
c. GLÜCK 21 (28): finden NP\(_{e}\), ‘find E’, entdecken NP\(_{e}\), ‘discover E’, 
   NP\(_{e}\), sein in Reichweite ‘E be within reach’, erreichen NP\(_{e}\), ‘reach E’
d. FREUDE 8 (11): finden NP\(_{e}\), ‘find E’, entdecken NP\(_{e}\), ‘discover E’

Here the within-language differences are highly significant, in that happiness/Glück occur with this mapping much more frequently than joy/Freude (happiness vs. joy, \(p<0.001\); Glück vs. Freude, \(p<0.001\)), but there is also a significant between-language difference in that this mapping is generally more frequent in English than in German (happiness vs. Glück, \(p<0.01\); joy vs. Freude, \(p<0.01\)). For the CAPTURE mapping, the same trend can be observed for the within-language difference, but the between-language difference is not significant (happiness vs. joy, \(p=0.15\); happiness vs. Glück, \(p>0.1\); joy vs. Freude, \(p>0.1\); Glück vs. Freude, \(p<0.05\)).

d. FREUDE 0 (0)

It is intriguing that the CAPTURE mapping is so infrequent even in English, where it would form a logical part of the PURSUIT mapping; I have no solution for this puzzle at present. Instead, let us consider why the FIND mapping is so much more frequent in English than in German. A hint may be supplied by the last mapping in the QUEST model, which views the process of attaining an emotion as a journey to a location:

\[(11) \text{THE PROCESS OF ATTAINING E IS A JOURNEY TO E}\]

a. HAPPINESS 13 (13): way to NPₑ, obstacle to NPₑ, guide to NPₑ, path to NPₑ, impediment to NPₑ, pathway to NPₑ, NPₑ be a goal

b. JOY 1 (1): way to NPₑ


d. FREUDE 0 (0)

Again, the mapping is almost or completely absent for joy and Freude, but significantly frequent for happiness and Glück (happiness vs. joy, p<0.01; Glück vs. Freude, p<0.001); more interestingly, however, it is much more frequent for Glück than for happiness (happiness vs. Glück, p<0.001). Thus it might be argued that speakers of (American) English simply place a higher emphasis on the endpoint of the quest, while speakers of German place a higher emphasis on the quest itself. Again, this may be due to a general American ideology that places high value on—and firmly believes in the possibility of-reaching one’s goals in life.

Let us now turn to the TRANSFER model. The total number of patterns instantiating this mapping is 100 (102) for happiness, 120 (139) for joy, 57 (66) for Glück, and 68 (49) for Freude. Here the within-language difference is significant for English (happiness vs. joy, p<0.01) but only marginally so for German (Glück vs. Freude, p=0.06); also, both between-language differences are significant (happiness vs. Glück, p<0.01; joy vs. Freude p<0.001). The TRANSFER model is significantly more frequent in English than in German, and significantly more frequent for joy than for happiness; it is also more frequent for Glück vs. Freude, but the difference is only
marginally significant. Let us now look at three more specific mappings within the transfer model, beginning with the giver’s perspective:

(12) (POSSIBLY) MAKING SOMEONE E IS (POSSIBLY) GIVING
SOMEONE E

a. HAPPINESS 68 (67): bringe NP$_E$, give NP$_E$, provide NP$_E$, gift of NP$_E$, 
giver of NP$_E$, send NP$_E$, add NP$_E$, take (away) NP$_E$, spread NP$_E$, 
share NP$_E$, grant NP$_E$, assure NP$_E$, offer NP$_E$

b. JOY 126 (109): bringe NP$_E$, give NP$_E$, take (away) NP$_E$, provide NP$_E$, 
bringer of NP$_E$, gift of NP$_E$, carry of NP$_E$, put NP$_E$ into, 
treat to NP$_E$, theft of NP$_E$, spread NP$_E$, share NP$_E$, allow NP$_E$, offer 
NP$_E$

c. GLÜCK 43 (37): bringen NP$_E$, ‘bring E’, (ab)geben NP$_E$, ‘give E’, 
(verb)schaffen NP$_E$, ‘provide E’, jmd. zu NP$_E$, verhelfen ‘help sb 
to E’, spenden NP$_E$, ‘bestow E on’, nehmen NP$_E$, ‘take (away) E’, 
betrügen Y um NP$_E$, ‘cheat Y out of E’, garantieren NP$_E$, ‘guarantee 
E’, versprechen NP$_E$, ‘promise E’, verheissen NP$_E$, ‘promise E’, Gar-
rant für NP$_E$, ‘guarantor of E’, NP$_E$ sein beschieden ‘E be granted’

d. FREUEDE 44 (61): bringen NP$_E$, ‘bring E’, teilen NP$_E$, ‘share E’, 
(ab)geben NP$_E$, ‘give E’, (verb)geben NP$_E$, ‘give (away) E’, ver-
mitteln NP$_E$, ‘supply E’, bescheren NP$_E$, ‘present (sb) with E’, ver-
breiten NP$_E$, ‘spread E’, für NP$_E$, sorgen ‘take care of E’, nehmen NP$_E$
 ‘take (away) E’, rauben NP$_E$, ‘rob sb of E’, bieten NP$_E$, ‘offer E’

We find the same proportions for this mapping that we find for the total 
number of expressions instantiating the model, except that the difference 
between Glück and Freude is not even marginally significant (happiness vs. 
joy, $p<0.001$; happiness vs. Glück, $p<0.05$; joy vs. Freude $p<0.001$; Glück 
vs. Freude $p>0.1$). When we take the receiver’s perspective, we find the 
reverse situation:

(13) (POSSIBLY) BECOMING E IS (POSSIBLY) RECEIVING E

a. HAPPINESS 11 (11): get NP$_E$, receive NP$_E$, accrue NP$_E$, gain NP$_E$, 
obtain NP$_E$, loss of NP$_E$, right to NP$_E$

b. JOY 10 (9): get NP$_E$, receive NP$_E$, gain NP$_E$, lose NP$_E$, deserve NP$_E$

c. GLÜCK 14 (12): empfangen NP$_E$, ‘receive E’, zurückholen NP$_E$
 ‘retrieve E’, NP$_E$ sein ein Lohn ‘E be a reward’, verdienen NP$_E$
lassen NP$_E$ ‘let E slip by’, Verzicht auf NP$_E$, ‘renunciation of E’, 
Anspruch auf NP$_E$, ‘claim to E’, Anrecht auf NP$_E$, ‘right to E’, um 
NP$_E$ bitten ‘ask for E’, NP$_E$ verlangen ‘request E’

d. FREUDE 5 (7): verlieren NP$_E$, ‘lose E’, teilhaben an NP$_E$, ‘partake 
in E’, NP$_E$ werden X zuteil ‘X receive E’, NP$_E$ fordern ‘request E’
Here none of the differences are significant except for Glück vs. Freude (happiness vs. joy, p>0.1; happiness vs. Glück, p>0.1; joy vs. Freude p=0.11; Glück vs. Freude, p<0.05). Finally, an intriguing difference emerges when we look at various mappings that conceptualize an emotion as a valuable good which may be bought (actually, most of the examples are in the negative, i.e., they are statements that happiness/Glück can not be bought):

(14) BECOMING E IS BUYING E AND OTHER COMMERCIAL METAPHORS
   a. HAPPINESS 23 (23): buy NP_E, NP_E be for sale, pay for NP_E, payoff in NP_E, buy one’s way to NP_E, NP_E be a shopping mall away, hard won NP_E, money be the end to NP_E, NP_E be a luxury, owe NP_E
   b. JOY 3 (3): buy NP_E, NP_E be a resource, NP_E be in short supply
   c. GLÜCK 9 (8): kaufen NP_E 'buy E', NP_E sein ein Wert 'E be valuable', NP_E sein teuer 'E be expensive', NP_E sein eine Ressource 'E be a resource', NP_E sein ein Gut 'E be valuable', verdanken NP_E 'owe E to sb'
   d. FREUDE 0 (0)

This mapping is vastly more frequent for happiness and Glück than for joy and Freude (happiness vs. joy, p<0.001; Glück vs. Freude, p<0.001), and, crucially, it is also much more frequent for happiness than for Glück (happiness vs. Glück, p<0.05; joy vs. Freude p=0.06). Clearly, then, happiness is much more frequently conceptualized in a commercial frame in (American) English than in German; the same trend emerges for the TRANSFER model as a whole.

Again, these differences suggest differences in the cultural ideologies underlying them; we could argue that speakers of American English are much more likely to understand the attainment of happiness in terms of a commercial transaction than Germans are in the case of Glück because commercial transactions play a more important role in contemporary American culture than in contemporary German culture, and because there is a stronger belief in the power of money in America.¹ This is intuitively plausible for someone familiar with the two cultures, although, like the

¹Of course, the present study cannot address the issue of whether the differences in the conceptualization of emotions found between speakers of German and American English are in fact limited to the domain of emotions, or whether they are part of a more widespread pattern. As one reviewer rightly pointed out, Americans may well use more commercial transaction metaphors in general, and in fact this would be expected if the explanation I propose here is on the right track. Detailed corpus studies of many different target domains are necessary before we can determine the degree to which a given metaphor in a given culture plays a central role in a particular domain as opposed to other domains.
other suggestions made in this section with respect to cultural models, it is to be taken as an initial hypothesis rather than solid claims. Further research is certainly necessary; in this context, a comparative study of the public discourses in different English-speaking cultures might be useful, as it would allow us to separate more clearly linguistic (and perhaps cognitive) factors from cultural ones.

4 Conclusion

The brief case studies presented in this paper have shown that a corpus-based study of target domains is possible if we move lexical items into the focus of our investigation. We can retrieve a large number of instances of a lexical item from a corpus and identify the metaphorical patterns that it occurs with. We can also quantify the importance of any given metaphorical pattern for a particular lexical item.

With respect to the emotion terms chosen here to exemplify the approach, I have shown that there are indeed language-specific differences concerning the way in (and the degree to) which translation equivalents in English and German participate in metaphorical mappings found in both languages. These differences may concern the way in which the nature of an emotion is conceptualized (e.g. regarding its intensity), or the role that an emotion plays (in relation to other concepts) in the culture in question (e.g. regarding beliefs about how it can or cannot be attained).

Metaphorical pattern analysis complements previous corpus-based research, which has focused exclusively on source domains. Although it is clearly restricted to a particular type of metaphorical expression it can contribute substantially to the investigation of central questions concerning metaphorical mappings, like the universality or language-specificity of metaphorical mappings. This issue has recently attracted renewed interest (cf. e.g. the contributions in Steen, to appear), and metaphorical pattern analysis is one of several empirical tools that may be used in addressing it.

Data Sources

**AMERICAN:** Boston Globe (boston.com/globe), Houston Chronicle (chron.com), Los Angeles Times (latimes.com), Newsday (newsday.com), New York Times (nytimes.com), San Francisco Bay Guardian (sfbg.com), San Francisco Examiner (examiner.com), Sun Sentinel (sun-sentinel.com), USA Today (usatoday.com), Washington Post (washingtonpost.com)

**GERMAN:** Berliner Morgenpost (morgenpost.berlin1.de), Frankfurter Allgemeine Zeitung (faz.net), Hamburger Abendblatt (abendblatt.de), Mannheimer Morgen (morgenweb.de), Ostsee Zeitung (ostsee-zeitung.de), Rhein Zeitung (rhein-
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