

# Discourse functions of antonymy: A cross-linguistic investigation of Swedish and English

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## Abstract

Jones (2002) identified several discourse functions of antonymy, each of which is loosely associated with a number of contrastive constructions in written English. Subsequent work (Jones, 2006; Jones and Murphy, 2005; Murphy and Jones, 2008) demonstrated that these functions are found in other modalities/registers of English, albeit with some differences in distribution. This article takes a first step in exploring discourse functions of antonymy in a language other than English. Because binary contrast has the potential to interact in different ways with the values and thought patterns of different cultures, we hypothesized that other languages differ from English in the ways in which antonyms are used in discourse.

In this study of antonyms in Swedish, translational near-equivalents of pairs used by Jones were searched in the Swedish Parole corpus, and more than 4300 instances of co-occurring antonyms were found and analyzed in their sentential contexts. While the same range of antonym discourse functions is found in English and Swedish, the proportions of those functions differ significantly between the two languages. This paper both describes their functions (and the form of the functions) in Swedish and reflects on the similarities and differences with English. We ascribe some of the differences to the idiomaticity of certain componential expressions and discuss the possibility that certain cultural values affect some categories.

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## 1. Introduction

To a greater degree than other paradigmatically related words, members of antonym pairs tend to co-occur in discourse (e.g. Justeson and Katz, 1991, 1992; Fellbaum, 1995; Willners, 2001). Systematic study of *why* antonyms co-occur has only recently begun, with Jones (2002) providing a number of functional categories of antonym co-occurrence within English newspaper sentences, and applying this further to English adult speech (Jones, 2006) and English child speech and child-directed speech (Jones and Murphy, 2005; Murphy and Jones, 2008). However, there are reasons to wonder whether different cultures may use antonyms in different ways. For instance, in Confucian philosophical systems, binary contrasts are seen to be in an eternal cycle of reversal, such that what was *yin* will one day be *yang* and vice versa (see Chan, 1967), whereas in western traditions, the incompatibility between categories

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such as *black* and *white* is generally seen as permanent and irreconcilable. Even among European cultures, there are marked variations in approaches to conflict and difference, raising the question of whether such differences may be reflected in the ways in which antonyms are used in the discourses of those cultures. For example, one of the hallmarks of Swedish society is its *lagom* culture—i.e. the valuing of moderation and consensus, rather than extremes and conflict. Since antonyms generally represent extremes, the possibility exists that ‘*lagom* values’ encourage different trends in antonym use in Sweden as compared to Britain.

The present study thus takes a first step in the cross-cultural study of antonym co-occurrence, starting with Swedish and English. We do this by replicating the methodology used in Jones (2002) in an investigation of a corpus of written Swedish. In the following section, we introduce the functional categories identified in Jones (2002) and subsequent works. In section 3, we describe how Jones’ methodology was adjusted for application to Swedish. Section 4 reports the overall trends in antonym function categorization and identifies the contrastive constructions that serve those functions in Swedish. Section 5 looks more closely at particular sets of antonym pairs and how they affect the overall statistics and identifies the main differences between Swedish and English antonym use. Section 6 discusses linguistic conventionalization and cultural values as possible sources of these differences. In the conclusion, we discuss the implications of our findings and identify several directions for further research.

## 2. Functional categories of antonymy

While semanticists have long classified antonym relations on the basis of their logical properties (contradiction, contrariety, converseness—e.g. Lyons, 1977; Cruse, 1986), only more recently has attention turned to how antonyms are used in discourse. Jones (2002) provided the first systematic account of antonym functions in discourse by searching for sentential co-occurrences of 56 antonym pairs in a corpus composed of eight years of the British newspaper *The Independent*. Using a sample of 3000 of the resulting sentences, he categorized the antonym co-occurrences according to the functional relations between the members of the pair in each sentence and noted a number of partially lexicalized constructions in which antonym pairs often co-occur. He concluded that the majority (over 77% in his corpus) of English antonym pairs realize one of two major functions and identified a number of minor functions that account for most of the remainder of antonym co-occurrences.

Because we are taking as our starting point the comparison of Swedish data with Jones’ findings for English, we employ Jones’ categories. These are purely functional categories; that is, although instances of these categories are often expressed using particular lexico-grammatical frames, they are not defined by them. So, while many examples of ‘Coordinated antonymy’ include instances of the *X and Y* frame, it is not the occurrence of antonyms within that frame that make them ‘Coordinated antonymy’, but the semantic/functional relation between the antonyms. (Thus the use of a capital C in Coordinated to mark a functional category rather than a grammatical description.) Indeed, the string *hot and cold* might be used for a number of the functions described below, including Coordinated, Distinguished, Comparative and Simultaneous.

The first of Jones’ two major categories involves the use of an antonym pair in order to create or highlight a secondary contrast within the sentence/discourse. Jones (2002) called this function **Ancillary** antonymy, and 38.7% of his sample could be described in this way. In the examples in (1), the antonym pair in bold represents the pair that Jones had searched for, termed the ‘A pair’, and the italicized elements, or the ‘B pair’, are in a contrast relation that has been highlighted by their co-occurrence with the A-pair, typically in a parallel syntactic structure. (Examples have been abbreviated from Jones, 2002 so that only relevant clauses are included.)

- (1) a. I **love** to *cook* but **hate** *doing the dishes*.  
 b. Archer was a formal, eccentric man, **long** on *acquaintances* and **short** on *friends*.

The second major antonym function, accounting for 38.4% of Jones’ English sample is **Coordinated** antonymy, in which the distinction between the two opposites is neutralized. The sentences in (2) exemplify such neutralization. For example, in (2b) the constituent propositions ‘we may succeed’ and ‘we may fail’ are understood to have the same plausibility.

- (2) a. He played numerous cameo roles both on the **large** and the **small** screen.  
 b. We may **succeed**, we may **fail**—but we will at least give it a whirl.

The neutralization of contrast in Coordinated antonymy is usually effected by means of a coordinated construction (hence Jones' name for the category), but, as noted above, not all cases of antonyms in coordinated constructions count toward Jones' 'Coordinated' category, and not all cases of Coordinated antonymy involve a conjunction.

The minor categories that Jones identified each accounted for between 0.8 and 6.8% of his data, presented here in order of frequency. **Comparative** antonymy involves measuring one antonym against the other, as in (3):

- (3) a. [S]ome living composers are more **dead** than **alive**.  
b. All fat, **unsaturated** no less than **saturated**, is fattening.

The **Distinguished** function calls attention to the inherent distinction between the members of the antonym pair, as in (4).

- (4) a. [H]e still doesn't know the difference between **right** and **wrong**.  
b. You'll struggle to find a better delineation of the no-man's land between **love** and **hate**.

**Transitional** antonymy expresses a movement or change from one location, activity or state to another, as in (5).

- (5) a. Inflation is a tax which redistributes wealth to the **sophisticated** from the **unsophisticated**.  
b. Economic **optimism** has given way to economic **pessimism**.

The **Negated** antonymy function emphasizes one member of the antonym pair by using it with the negation of the other member, as in (6).

- (6) a. However, the citizen pays for public services to work **well**, not **badly**.  
b. Instead of thinking **short** term, it was time to start thinking **long** term.

The **Extreme** function is like the Coordinated function in neutralizing differences between the two antonyms, but unlike the Coordinated function it unites the extremes of a scale. So while Coordinated instances apply to the entirety of a semantic scale, extreme cases unite the edges of the scale, but exclude the middle. For instance, (7b) must be understood as meaning that the writer is feeling something on the 'fear' scale, but that the extremities of that scale are united in not being what the writer is feeling.

- (7) a. For thousands of years in Britain, food had to be either very **cold** or very **hot**, but now they are accepting warm salads.  
b. I am not completely **afraid** and not completely **unafraid**.

Compare this to the Coordinated example in (8), in which *young and old alike* can be understood to mean 'anyone of any age'.

- (8) These qualities all made him sought after by **young** and **old** alike.

Jones' last minor category is the **Idiomatic** category, in which he counted any instances of antonym co-occurrence "that would be recognised as a familiar idiom, proverb or cliché" (Jones, 2002:93). This includes English idioms like *the long and the short of it*, *teach an old dog new tricks* and *[to] agree to disagree*.

In Jones' 2002 study, 96.5% of the antonym co-occurrences in the sample could be described as belonging to one of the above major or minor categories. This left 3.5% that Jones characterized as **Residual** cases: instances in which the members of the pair were clearly intended to contrast with one another, but which did not fit into one of the aforementioned categories. Among the Residual cases, Jones was able to identify additional antonym functions, albeit ones for which there were few examples in his corpus. These are introduced as necessary in later sections.

In further investigations of spoken corpora using Jones' categories (Jones and Murphy, 2005; Jones, 2006; Murphy and Jones, 2008), an additional category, **Interrogative** antonymy, has been identified and described. The Interrogative function involves the forcing of a choice between the two members of the antonym pair.

While Interrogative antonyms are typically in coordinated frames like *X or Y?*, the discourse function is quite different from Coordinated antonymy, as indicated in the below examples from the CHILDES database (from Murphy and Jones, 2008). Coordinated antonymy indicates unification of the opposed items, as in (9), where the speaker indicates that there is no important difference between *inside* and *outside* for the wearer of the shoes.

(9) shoes that you can wear **outside** or **inside**

In contrast, the Interrogative framework, as in (10), is truly disjunctive, in that the answer of the question must be one or the other of the antonyms.

(10) Is she a **good** mommy or a **bad** mommy?

It has been argued (e.g. by Murphy, 2003) that all of Jones' major and minor functions are not strictly of the same taxonomic level. In particular, the Ancillary category does not address how the members of the antonymous A-pair relate to each other in the context, but rather focuses on how the antonyms' relation allows for a secondary contrast. This means that instances of antonym co-occurrence that are categorized as Ancillary may also belong to a second subcategory. So, for example, (11) is classified by Jones (2002:46) as a case of Ancillary antonymy, in that *private/public* are used to support the opposition of *need* and *greed*. But it might also be sub-classified as an instance of Negated antonymy, since one member of the pair has been asserted while the other member has been negated.

(11) It is meeting **public** *need*, not **private** *greed*.

Similarly, as Jones notes (2002:94), examples in the Idiomatic category can generally be classified in other terms as well. For example, the relation between *long* and *short* in *the long and the short of it* fits the criteria for Coordinated antonymy. Jones classified set phrases such as these separately so that the figures for other categories would not be distorted by repeated use of an idiom.

In this paper, we follow Jones' practices in classifying examples into these categories so that our findings for Swedish are as comparable as possible with existing findings for English.

We also set out to identify the lexico-grammatical frames that are typical of these functional categories in Swedish. As mentioned above, while there is a strong correlation between certain functional categories and certain lexico-grammatical frames (as discussed by Jones, 2002 and Murphy, 2006), categorization of antonym co-occurrences in terms of function are made on functional-semantic criteria, rather than grammatical criteria. Murphy (2006) argues that the lexico-grammatical frames that are often employed for these antonym functions represent constructions in the sense of Fillmore and Kay (1995). That is, the lexico-grammatical frames are the form part of a form-meaning unit, and each frame is associated with a particular contrastive meaning. (In some cases, the frames are polysemous, and are associated with a range of meanings—one or more of which might be contrastive in nature.) Murphy argues that the frames themselves carry contrastive meaning. The contrastive nature of these constructions means that they easily accommodate conventionalized antonym pairs (which Murphy, 2006 argues are non-contiguous lexical items, or constructions, as well). In this paper (as in Jones, 2002), we use co-occurrence of conventionalized antonyms as a means to identify contrastive constructions.

### 3. Methodology

We have attempted to replicate Jones' study of discourse functions of English antonyms using a Swedish data set. However, differences in the languages and the corpora necessitated some variations in the methodology between the two studies, as discussed in the subsections below.

#### 3.1. The English data

For the English study, Jones used a test set of 56 word pairs that he judged to be well-known, conventional antonyms. They were not balanced across word class, morphological complexity, word length or frequency ranking, but were selected to be representative of the antonym relation. He extracted all instances of these antonyms

co-occurring in sentences from a British newspaper corpus of 280 million words. He limited the analysis to a sample of 3000 sentences, approximately every 30th sentence extracted, and adjusted it so that no more than 60% of the sentences involved adjectival antonym pairs, in order to ensure that there were sufficient noun, verb and adverb pairs within the sample.

### 3.2. The Swedish data

Jones' 56 antonym pairs were translated into Swedish by two native speakers. The resulting Swedish antonym list is presented in Table 1.

The translation process was complex, as it was at times difficult to find a corresponding word pair in Swedish that had the same meanings, register, word class and approximately the same frequency rank. While the English study searched word forms without regard for word class (in the first instance), decisions had to be made as to which word class the Swedish translations should be, since a word form that has more than one word class in English will not necessarily be translatable as a single word form in another language. Table 1 indicates the word class decisions that were made for the Swedish translations. Morphological antonyms in the English set are not necessarily morphological antonyms in the Swedish translation; for example, *correct/incorrect* were translated as *korrekt/felaktig*, rather than *korrekt/inkorrekt* since the former is the more conventionalized pairing in Swedish. Possible effects of translational non-equivalence are reviewed in section 5.

### 3.3. Corpus

The Swedish antonym pairs were searched for in the Swedish Parole corpus, available through Språkbanken.<sup>1</sup> Swedish Parole consists of slightly more than 19 million words from novels, newspapers, journals and web text produced between 1976 and 1996.

### 3.4. Data extraction

Using the software available through Språkbanken, all instances of sentential co-occurrence of the Swedish antonym pairs in Table 1 were extracted from the corpus and entered into a database. There were, however, some differences in the Swedish and English searches that deserve mention here.

In his English study, Jones used the base forms of words as his search strings, thus leaving out forms with inflectional suffixes. Swedish, however, is in some ways morphologically richer than English; for example, Swedish has gender/number agreement in adjectives. For verbs, Jones' search of base forms was enough to include both untensed and many present tense forms, while in Swedish these take different suffixes. In order to gather sufficient data, the Swedish searches were performed using a final wildcard character (\*) on each search term in order to extract all inflectional forms of the words. For example, the search string 'kall\*' was used to cover not only the common-gender form *kall* 'cold' but also the neuter *kallt*, the plural *kalla*, the comparative *kallare* and superlative *kallast*. In the case of verbs, the wildcard meant that we retrieved all tensed and untensed forms; in the case of nouns, singular and plural, indefinite and definite forms were extracted. Irregular inflectional variations were separately searched, such as the suppletive plural form of *liten* 'little', *små*. While Jones' study did not include suffixed forms, it included equivalent expressions without suffixation—for instance comparatives marked by *more* and superlatives marked by *most*. We thus saw no principled reason to exclude from our study adjective or adverb pairs in which one or both were inflected for comparative or superlative, such as in (12).

- (12) *Kolya är en film som är lätt att se, men förmodligen svårare att minnas.*  
'Kolya is a film that is **easy** to watch, but perhaps **more difficult** to remember.'

The wildcards also meant that compound words beginning with a search term were extracted. Because compounds are more readily devised in Swedish than in English, we included Swedish compounded forms in just those cases where the English translation would have been two words, as in (13).

<sup>1</sup> Available at <http://spraakbanken.gu.se/parole/>. Last accessed for this research 11 December 2007.

Table 1  
English and Swedish search terms.

English		Swedish		
Word1	Word2	Word1	Word2	Word class
active	passive	aktiv	passiv	ADJ
advantage	disadvantage	fördel	nackdel	N
agree	disagree	enig	oenig	ADJ
alive	dead	levande	död	ADJ
attack	defend	angripa	försvara	V
bad	good	dålig	bra	ADJ
badly	well	illa	väl	ADV
begin	end	börja	sluta	V
boom	recession	högkonjunktur	lågkonjunktur	N
cold	hot	kall	varm	ADJ
confirm	deny	bekräfta	förneka	V
correct	incorrect	korrekt	felaktig	ADJ
difficult	easy	svår	lätt	ADJ
directly	indirectly	direkt	indirekt	ADV
discourage	encourage	avskräcka	uppmuntra	V
dishonest	honest	oärlig	ärlig	ADJ
disprove	prove	motbevisa	bevisa	V
drunk	sober	full	nykter	ADJ
dry	wet	torr	blöt	ADJ
explicitly	implicitly	explicit	implicit	ADJ
fact	fiction	verklighet	dikt	N
fail	succeed	misslyckas	lyckas	V
failure	success	misslyckande	framgång	N
false	true	falsk	sann	ADJ
fast	slow	snabb	långsam	ADJ
female	male	kvinnlig	manlig	ADJ
feminine	masculine	feminin	maskulin	ADJ
gay	straight	homosexuell	heterosexuell	ADJ
guilt	innocence	skuld	oskuld	N
happy	sad	glad	ledsen	ADJ
hard	soft	hård	mjuk	ADJ
hate	love	hata	älska	V
heavy	light	tung	lätt	ADJ
high	low	hög	låg	ADJ
illegal	legal	olaglig	laglig	ADJ
large	small	stor	liten	ADJ
long	short	lång	kort	ADJ
lose	win	förlora	vinna	V
major	minor	större	mindre	ADJ
married	unmarried	gift	ogift	ADJ
new	old	ny	gammal	ADJ
officially	unofficially	officiellt	inofficiellt	ADV
old	young	gammal	ung	ADJ
optimism	pessimism	optimism	pessimism	N
optimistic	pessimistic	optimistisk	pessimistisk	ADJ
peace	war	fred	krig	N
permanent	temporary	permanent	tillfällig	ADJ
poor	rich	fattig	rik	ADJ
private	public	privat	offentlig	ADJ
privately	publicly	privat	offentligt	ADV
punishment	reward	straff	belöning	N
quickly	slowly	snabbt	långsamt	ADV
right	wrong	rätt	fel	ADJ
rightly	wrongly	riktigt	oriktigt	ADV
rural	urban	lantlig	urban	ADJ
strength	weakness	styrka	svaghet	N

- (13) **höginkomsttagare/låginkomsttagare**  
 ‘high earner’ ‘low earner’

During the data analysis, we discarded any antonym pairs that did not conform to the word class that we intended to search for, since such examples generally did not match up with the word classes of the English search words. These included forms with derivational suffixes and adverbial forms that were homonymous with search adjectives (and vice versa).

Since the Swedish Parole corpus is considerably smaller than the English corpus used by Jones (2002), we did not sample the data.

### 3.5. Categorization of discourse functions

All extracted sentences were separately coded by at least two of the authors: a native speaker of Swedish and an experienced coder with L2 knowledge of Swedish, following the dual-coding method used in Jones and Murphy (2005) and Murphy and Jones (2008). Sentences in which the word pair was not used contrastively were discounted. Sentences that the coders treated identically were automatically added to the database. Where the two coders disagreed, the sentences were revisited by the coders and the other authors (another native speaker of Swedish and another experienced coder), with the usual outcome being an easy agreement that one of the initial codings was incorrect. In cases in which the disagreement was not easily settled, the sentences were marked as Residual if the coders felt that the pair was being used contrastively or discounted if at least one coder felt that the pair was not used for antonymic effect in the sentence.

### 3.6. Analysis and comparison

In total, 4366 examples of sententially co-occurring Swedish antonyms were coded for discourse function. Of these, 82% involved adjectival antonyms, 10% verbs, 6% nouns and 2% adverbs. In statistical comparisons of the Swedish and English data, we have taken into account differences in the raw numbers of hits by antonym pair. Pairs that were found fewer than five times in the Swedish data were not included in the statistical analysis, both because statistical analysis on such small numbers would be unreliable and because the failure to find many examples of these antonyms in Swedish indicates that the pairs are not sufficiently similar to the English pairs in terms of their entrenchment as conventionalized antonyms.

## 4. Discourse functions in Swedish and English

Table 2 presents the raw frequencies and proportional distribution of the discourse functions in the Swedish data. Fig. 1 presents the Swedish proportions alongside the distributions for the eight top categories for English in Jones (2002). The results for English and Swedish are significantly different overall according to Pearson’s chi-square analysis ( $p < 0.001$ ).

Table 2  
 Distribution of discourse-functional categories in the Swedish data.

Category	Frequency	Percent
Ancillary	1956	44.8
Coordinated	1109	25.4
Comparative	277	6.3
Distinguished	175	4.0
Transitional	172	3.9
Negated	54	1.2
Interrogative	52	1.2
Idiom	36	0.8
Extreme	19	0.4
Other/Residual	516	11.8
Total	4366	100.0

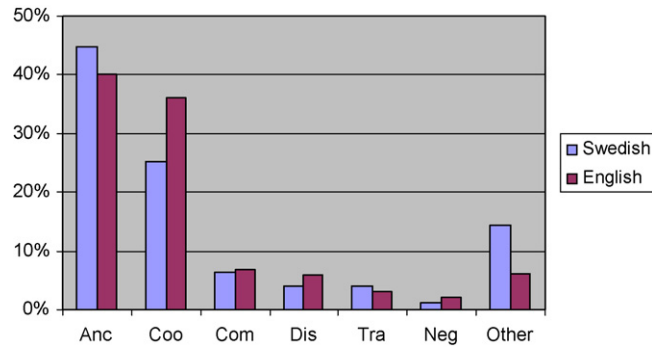


Fig. 1. Distribution of discourse functions in Swedish and English.

Ancillary and Coordinated are the most common discourse functions in both languages. However, Swedish shows a larger proportion of Ancillaries than English does, while Coordinated antonyms are proportionally greater in English than in Swedish. Another general difference is that far more examples were classified as Residual (i.e. not representing one of the identified discourse functions) in Swedish than in English.

The minor categories differ among the two languages, both in the ranking of the categories and in the identity of groups of functionally similar examples deemed ‘large enough’ to qualify as non-residual, according to Jones’ (2002) threshold. Table 3 shows the top eight categories for Swedish and English. The remainder of this section reports on the top eight categories in Swedish and identifies Swedish lexico-grammatical frames that are associated with these functions.

#### 4.1. Major categories

The two functions that Jones (2002) identified as ‘major’ categories in English are the two major categories in Swedish as well: Ancillary and Coordinated. These two categories account for more than 70% of the data in both languages.

##### 4.1.1. Ancillary

Ancillary antonymy is the most common category in both languages. However, Ancillaries were significantly (standardized residual >1.96) more common in the Swedish data (44.8%) than in Jones’ English study (38.7%).

As discussed in section 2, Ancillaries are unlike other categories in that they are not associated with particular partially-lexicalized frames, although they are often marked by morpho-syntactic parallelism (which may in itself be a contrastive construction—see Murphy, 2006), as illustrated in (14), often with ellipsis, as in (15). In sentences like (16), we see phonological wordplay in the secondary contrast (*rösta* ‘to vote’ and *rusta* ‘to arm’). In each example, the antonyms that we searched for (the Ancillary A-pair) are marked in bold, and the secondary contrast (the B-pair) is italicized.

Table 3  
Top eight discourse functions of antonym pairs within sentences.

Swedish		English	
Category	Percent	Category	Percent
Ancillary	44.8	Ancillary	38.7
Coordinated	25.4	Coordinated	38.4
Comparative	6.3	Comparative	6.8
Distinguished	4.0	Distinguished	5.4
Transitional	3.9	Transitional	3.0
Simultaneous	2.1	Negated	2.1
Association	1.8	Extreme	1.3
Negated	1.2	Idiom	0.8



- (14) Kvällen **började** så bra för Johan och **slutade** så illa.  
‘The evening **started** so well for Johan and **ended** so badly.’
- (15) Läraren är **aktiv** och eleven **passiv**.  
‘The teacher is **active** and the student **passive**.’
- (16) Den som **röstar** för **fred** måste tyvärr **rusta** för **krig** och försvar, sa Acek Bergkvist.  
‘Those who **vote** for **peace** must unfortunately **arm** for **war** and defence, says Acek Bergkvist.’

In these ways, Swedish use of Ancillary antonymy is recognizably similar to the English use described by Jones.

#### 4.1.2. Coordinated

Coordinated antonymy ranks second in both languages, but accounts for a significantly (standardized residual >1.96) greater proportion in English (38.4%) than Swedish (25.4%). Jones (2002) noted several lexico-syntactic frames that are associated with the Coordinated category in English, such as *both X and Y*, *either X or Y*, and *X and Y alike*. Similar constructions are found in Swedish, as illustrated by (17)–(23).

- (17) *X och Y* ‘X and Y’  
Vilka **fördelar** och **nackdelar** har ljusbehandling?  
‘Which **advantages** and **disadvantages** does light treatment have?’
- (18) *både X och Y* ‘both X and Y’  
Vi måste lära oss att både **hata** och **älska** här i livet  
‘We must learn to both **hate** and **love** here in life’
- (19) *X eller Y* ‘X or Y’  
**Bra** eller **dåligt**, sämre blev det inte.  
‘**Good** or **bad**, it was not worse.’
- (20) *antingen X eller Y* ‘either X or Y’  
antingen de är **sanna** eller **falska**  
‘either they are **true** or **false**’
- (21) *varken X eller Y* ‘neither X nor Y’  
EMU blir i valrörelsen en rent perifer fråga, som man varken **vinner** eller **förlorar** väljare på.  
‘EMU becomes in the election campaign a purely peripheral question, which one neither **wins** or **loses** voters with.’
- (22) *X som Y* ‘X as Y’  
Alla — **gammal** som **ung** — snackar skit om den.  
‘All — **old** and **young** — talk shit about them.’
- (23) *såväl X som Y* ‘so well X as Y’  
Hon är androgynen som bejaktar såväl sin **kvinnliga** som **manliga** sida.  
‘She is [an] androgynous [person] who recognizes her **female** as well as **male** side.’

In the vast majority of cases, Coordinated antonymy is expressed through one of these eight constructions, including realizations of the constructions that involve coordination of larger constituents in which antonyms X and Y are found, as in the sentential coordination in (24).

- (24) Det finns **dåligt** och det finns **bra**.  
‘There is **bad** and there is **good**.’

As in English (Jones, 2002:72–73), Coordinated antonyms can be joined by punctuation alone, such as the comma in (25). The word *också* ('also') within a sentence can also facilitate a Coordinated antonymy interpretation, as in (26).

- (25) Inte spelar det någon roll om man är **lång, kort, gammal, ung** eller om man inte har på sig det senaste i klädväg.  
'It doesn't matter at all if one is **tall, short, old, young** or if one doesn't wear the latest fashions.'
- (26) Jag hatar att träffa **nya** människor, **gamla** också, när jag känner mej så här sopig.  
'I hate to meet **new** people, **old** also, when I feel this useless.'

#### 4.2. Minor categories

As discussed in section 2, Jones' 'minor' categories accounted for between 0.8 and 6.8% of his 2002 data, and the Interrogative function was given 'minor' function status in subsequent studies of spoken English. In addition, Jones identified some antonym functions among the Residual cases, each of which was found in fewer than twenty of 3000 sentences analysed in his study, and thus not designated as a 'minor category'. In coding the Swedish data, we used all of the functions Jones had identified, including those Residual subcategories. Two of the categories that did not meet Jones' threshold for 'minor' status in English were found in 'minor' percentages in the Swedish data, and two of Jones' minor categories in English, Idiomatic and Extreme, were not found in large numbers in the Swedish data. Below, we discuss in turn the minor categories found in Swedish and the contrastive constructions associated with them.

##### 4.2.1. Comparative

Comparatives are about as common in Swedish (6.3%) as they are in English (6.8%) (standardized residual <1.96). These include sentences in which the things/situations described by the antonyms are evaluated as being different or similar in some way, as illustrated by (27) and (28), respectively.

- (27) Och det fungerar mycket bättre om bilden är **sann** än om den är **falsk**.  
'And it works much better if the picture is **true** than if it is **false**.'
- (28) Steve Forbes korta politikerkarriär **slutade** lika abrupt som den **började**.  
'Steve Forbes' short political career **ended** as abruptly as it **began**.'

These examples compare two situations that are described by two antonyms—for example the beginning of a career and the end of a career. Examples like the above involve comparative morphology in the form of comparative adjectives or words like *lika* 'similarly', *så* 'so, as', *än* 'than' and so forth. However the positioning of the antonyms with respect to the comparative forms varies considerably, and so few lexico-grammatical frames stand out as being particularly associated with this function. One frame that does stand out involves a verb of comparison, *att överväga* 'to outweigh', as in (29).

- (29) *X överväger Y* 'X outweighs Y'  
**Fördelarna** med klorering överväger **nackdelarna**.  
'The **advantages** of chlorination outweigh the **disadvantages**.'

In contrast to the above examples, other Comparatives do not compare two things/situations, but compare the appropriateness of the antonyms for describing the situation. The construction *mer X än Y*, cousin to the English contrastive construction *more X than Y*, is a key way of expressing such comparisons, as in (30).

- (30) *mer X än Y* 'more X than Y'  
Men efter pausen kom Mats Olsson **mer fel** än **rätt**.  
'But after the break Mats Olsson went more **wrong** than **right**.'

#### 4.2.2. Distinguished

As in English, Distinguished antonymy follows Comparative antonymy in the ranking of minor categories, though there are significantly more (standardized residual >1.96) in English (5.4%) than in Swedish (4.0%). The following constructions are associated with Distinguished antonymy according to our Swedish data:

- (31) *skillnad mellan X och Y* ‘difference between X and Y’  
Hon vill tona ner skillnaderna mellan **manligt** och **kvinnligt** sätt att studera.  
‘She wants to tone down the differences between **male** and **female** ways of studying.’
- (32) *gräns mellan X och Y* ‘boundary between X and Y’  
Var går gränsen mellan **offentligt** och **privat**?  
‘Where is the boundary between **public** and **private**?’
- (33) *gap mellan X och Y* ‘gap between X and Y’  
På så sätt ökas ständigt gapet mellan **bra** och **dåliga** skolor.  
‘In that way the gap between **good** and **bad** schools constantly increases.’
- (34) *klyfta mellan X och Y* ‘rift between X and Y’  
De nämner inte heller att detta leder till växande klyftor mellan **fattiga** och **rika**.  
‘They don’t mention either that that leads to growing rifts between **poor** and **rich**.’
- (35) *kontrast mellan X och Y* ‘contrast between X and Y’  
Samma kontrast mellan **skuld** och **oskuld** finns i den 33-årige A M Moskvitins målning av den giftspyende cellulosafabriken vid Bajkalsjön.  
‘The same contrast between **guilt** and **innocence** is found in the 33-year-old A M Moskvitin’s painting of the poison-spewing cellulose factory on Lake Bajkal.’
- (36) *att skilja mellan X och Y* ‘to distinguish between X and Y’  
På savannen skiljer man mellan **varm** och **kall** eld.  
‘On the savannah one distinguishes between **hot** and **cold** fire.’

These constructions are striking in their similarity to the English Distinguished constructions identified by Jones (2002).

#### 4.2.3. Transitional

Transitional antonymy accounts for 3.9% of the Swedish data and 3.0% of the English, giving no significant difference (standardized residual >1.96) between the two languages for this function. In Swedish, Transitionals are often marked by the verbs *att bli* (‘to become’) and *att vända till* (‘to turn into’), as illustrated below.

- (37) *X blir Y* ‘X becomes Y’  
**Gammalt** blir **nytt**  
‘**Old** becomes **new**’
- (38) *X vänd(er/as) till Y* ‘X changes/is changed to Y’  
Mental träning blev ett sätt att vända **misslyckande** till **framgång**.  
‘Mental training became one way to change **failure** into **success**.’

A range of other verbs indicating change were also found in Transitional sentences, including *att pendla* ‘to swing’, *att ersätta* ‘to replace’, *att byta* ‘to change’ and *att gå till/över* ‘to go to/over’. Most often, the two antonyms occur on either side of the verb, in subject and object position. This contrasts with the situation in English, for which Jones

found *from X to Y*, often following verbs like *to turn* or *to change*, to be the most common lexico-grammatical frame for Transitional antonymy.

#### 4.2.4. Simultaneous

So far, the list of the top five functions is the same for English and Swedish, but from this point the ranking of minor categories in the two languages diverges. Whereas the sixth most common function in English is Negated (2.1%), in Swedish it is Simultaneous antonymy at 2.1% of the total. This function was noted by Jones (2002) but accounted for only a handful of sentences in his English corpus, and so they were consigned to Residual status.

The Simultaneous function occurs where two opposite descriptions are simultaneously true of the same situation, as in (39)–(41).

- (39) Hon såg både **glad** och **ledsen** ut på en gång  
‘She looked both **happy** and **sad** at the same time’
- (40) Bergagården är något man både **hatar** och **älskar**  
‘Bergagården is something that one both **hates** and **loves**’
- (41) ...hans röst var kraftig och **hård**, men ändå **mjuk** och smygande...  
‘...his voice was powerful and **hard**, but yet **soft** and sneaking...’

These examples differ from the superficially similar Coordinated category in that a single thing is claimed to have two seemingly incompatible properties (e.g. a voice being both hard and soft) or doing seemingly incompatible things at the same time (e.g. hating and loving Bergagården). In Coordinated antonymy, this is not the case, as (17)–(23) above demonstrate. For example, in (22)’s *Alla – gammal som ung* ‘all – old as well as young’, no person is being described as both old and young at the same time.

#### 4.2.5. Association

The next category in the Swedish ranking is another that was barely found in Jones’ (2002) English data. The Association function can be thought of as the converse of the Distinguished function—rather than marking the difference between the two opposites, it marks a relation between them, often a coming-together of the opposites. This category is characterized by a number of common constructions, as illustrated in the below examples, and accounts for 1.8% of the Swedish data.

- (42) *att blanda X och Y; X och Y blandas* ‘to blend X and Y’; ‘X and Y are blended’  
**Högt** och **lågt** blandas  
‘**High** and **low** are blended’
- (43) *blandning av/mellan X och Y* ‘blend of/between X and Y’  
Italien kommer med en spännande blandning av **nytt** och **gammalt**.  
‘Italy brings an exciting blend of **new** and **old**.’
- (44) *balans mellan X och Y* ‘balance between X and Y’  
Den balans man får mellan **kall** och **varm** luft ...  
‘The balance one gets between **cold** and **hot** air ...’
- (45) *samverkan mellan X och Y* ‘collaboration between X and Y’  
... en samverkan mellan **privat** och **offentlig** vård  
‘... a collaboration between **private** and **public** healthcare’

Like Simultaneous antonymy, Association antonymy has superficial similarities to Coordinated antonymy, but we follow Jones in classifying it separately, as the companion category to Distinguished antonymy.

#### 4.2.6. *Negated*

The last of the minor categories in Swedish is the Negated category, ranked sixth (2.1%) in English and eighth (1.2%) in Swedish. There is no significant difference (standardized residual <1.96) between the two languages for this category. The contrastive constructions that stand out among the Negated data are equivalent in the two languages:

- (46) *X, inte Y* ‘X, not Y’  
Den uttrycker ett **misslyckande**, inte en **framgång**.  
‘It expresses a **failure**, not a **success**.’
- (47) *inte X utan Y* ‘not X but Y’  
Problemet inom högskolorna är inte den **snabba** utan den **långsammare** gruppen.  
‘The problem in the university colleges is not the **fast** but the **slower** group.’
- (48) *X och inte Y* ‘X and not Y’  
Undantag bör i framtiden göras **tillfälliga** och inte, som i exempelvis Danmarks fall, **permanenta**.  
‘Exceptions should in the future be made **temporary** and not, as for example Denmark’s case, **permanent**.’

#### 4.3. *Other categories and residual sentences*

Three categories classified as ‘minor’ in English were less common than the categories discussed above. In addition, a large number of sentences were deemed to be uncategorizable.

##### 4.3.1. *Minor categories in English*

Both the Extreme and Idiom categories were found in very small numbers in Swedish. Extreme accounted for 0.4% of the Swedish data versus 1.3% in English, which is statistically significant (standardized residual >1.96). With such a small number, no lexico-grammatical frames were identified as emblematic of this discourse function. Idioms, at 0.7% in Swedish and 0.8% in English, were not significantly different (standardized residual <1.96). Many of the Swedish examples were titles, for example of films. These were counted as idiomatic so that their repeated mention would not affect any other category.

The Interrogative category, introduced as a minor category in the studies on spoken English (Jones and Murphy, 2005; Jones, 2006), accounted for a small number of sentences (1.2%) in Swedish Parole versus 5.3% in spoken adult English (Jones, 2006). This confirms (cf. Jones, 2006; Murphy and Jones, 2008) that Interrogative is a more prominent category in interactional uses of language, such as conversation, in which questions can serve to request immediate answers.

##### 4.3.2. *Residual sentences*

In the Swedish data, 11.8% of the sentences did not fit into Jones’ (2002) top eight ranked categories, as compared to 3.4% in English. If we remove from this number the percentages of Simultaneous and Association, which were not in the top eight for English but were for Swedish, the percentage of Swedish residuals goes down to 7.7%. This figure includes sentences that suit no existing category and sentences for which a discourse function could be identified, but the function was found in extremely small numbers. The Residual data were also examined for new patterns of antonym co-occurrence, as discussed below.

Many of the Residual sentences were felt to be truly uncategorizable. Nevertheless, the coders agreed that these sentences, including those in the following examples, used the antonyms in a contrastive way and therefore should be included in the data set.

- (49) Han kunde inte **sluta** när det en gång **börjat**.  
‘He could not **end** once it **began**.’
- (50) I hennes vävar står mörkt mot ljus, **hårda** former mot **mjuka**.  
‘In her fabrics, dark stands beside light, **hard** forms beside **soft**.’

- (51) **Ordkriget om fredsprocessen i Mellanöstern fortgår oförminskat.**  
 ‘The word **war** about the **peace** process in the Middle East continues undiminished.’

The Swedish data included examples of all of the Residual subcategories that Jones (2002) identified: Simultaneous and Association (discussed in section 5.2), Specification (e.g. *three hot and two cold drinks*), Conflict (e.g. *the clash between rich and poor*), Unity (e.g. *questions of good and evil*), Oblique Stroke (e.g. *love/hate relationship*) and Equivalence (*the rural version of the urban folk-myth*). (See Jones, 2002:95–101 for further description.) Except for Simultaneous and Association, the numbers for these other subcategories were extremely small, as they were in English; see Table 4. For example, Jones (2002) created the ‘Oblique stroke’ category for examples in which two opposites are joined by a slash, as in *a love/hate relationship*, since such examples did not clearly fit into any of the other categories. We found six such examples in the Swedish data, some of which used a dash (-) instead of a stroke (/). All of these examples, like (52), linked *manlig* ‘male’ and *kvinnlig* ‘female’:

- (52) **Biskop Krister Stendahl frågade hur mormonerna ser på manligt-kvinnligt och svarta inom samfundet.**  
 ‘Bishop Krister Stendahl asked how the Mormons look at **male-female** and blacks within the communion.’

Having determined that all of Jones’ (sub)categories could be found in the Swedish data, we turned to looking for new categories within the Residual sentence group. Most striking was the large number of sentences that contained the compound *nygammal*, meaning ‘new and old at the same time’. This often refers to something or someone returning into a previously-held position, as in (53). It can also refer to a new thing containing old ‘parts’ such as in the headline in example (54).

- (53) **Inför den allsvenska fotbollsstarten höll IFK Norrköpings nygamle guldtränare (1989) Kent Karlsson en låg profil.**  
 ‘Before the start of the Swedish national football league Norrköping’s **new-old** gold coach (1989) Kent Karlsson held a low profile.’
- (54) **Nygammal dans till musik av Curt Kenneths**  
 ‘**New-old** dance to music by Curt Kenneth’s’

Because these examples indicate something that is new and old ‘at the same time’, they might be considered a type of Simultaneous antonymy. But because it appears that *nygammal* is a lexicalized adjective, we felt that it would be misleading to count it within the Simultaneous category when comparing it to English, which has no such lexicalized compound. We therefore assigned these the label **Compound**, although this subcategory does not seem to be productive since all 112 examples were *nygammal*. This is 2.6% of the total antonym co-occurrences in the Parole data

Table 4  
 Distribution of Residual subcategories in the Swedish data.

Subcategory	Frequency	Percent
Compound	112	21.7
Simultaneous	93	18.0
Other	85	16.5
Associative	76	14.8
Specification	49	9.5
Transitive	32	6.2
Conflict	25	4.9
Unity	15	2.9
Synonym	14	2.5
Oblique stroke	11	2.1
Equivalence	2	0.4
Total	516	100.0

(21.9% of the Residual sentences), and thus goes some way toward explaining the difference in the Residual numbers in English and Swedish.

Looking for further possible categories among the Residuals, we noted examples in which the opposites were subject and object of the same verb, as in (55)–(58).

- (55) **Stora** köper **små**  
‘**Big** buys **little**’
- (56) Det **gamla** möter det **nya**  
‘The **old** meets the **new**’
- (57) I korthet betyder det att ett lock av **varm** luft täcker **kall** luft.  
‘In short, it means that a lid of **hot** air covers **cold** air.’
- (58) Endast en **fattig** kan förstå en **rik** just i det här fallet.  
‘Only a **poor** [person] can understand a **rich** [person] just in this case.’

Other examples with a subject-object form fit semantically into existing functional categories, such as Comparative (see (29)), and were categorized as such. Classifying the Residual ‘transitive’ examples as a semantic/functional category on their own is not viable, since the semantic relations between the antonyms in these cases do not form a clear pattern; some examples, such as (55) involve an agent–patient relation in which one opposite acts upon the other, whereas others, such as (58), are more stative in nature. As indicated in Table 4, only 6.3% of the Residual sentences fit into this subject-object pattern, labelled Transitive.

Another tiny subcategory was labelled ‘Synonym’. This referred to cases in which one opposite was negated to provide a near-synonym for the other. While such examples may be superficially similar to the Negated category above, they do not serve to emphasize one opposite by negating the other. Instead, they highlight the gradability of the scale on which the antonyms lie, as in (59) and (60).

- (59) Strategin för att **lyckas**, eller åtminstone inte **misslyckas**, i EU-valet är uppenbarligen att täta det befarade läckaget till partierna som representerar EU-motståndet.  
‘The strategy to **succeed**, or at least not **fail**, in the EU vote is obviously to seal the feared leakage to the parties that represent EU-opposition.’
- (60) Fast jag tror att ni **älskar** Jung fortfarande därför att ni inte tillåter er **hata** honom.  
‘Though I think that you still **love** Jung because you don’t allow yourselves to **hate** him.’

## 5. Differences across languages within word pairs

Because the Swedish search terms were translated from Jones’ English antonym list, they included some pairs that had much lower pair-frequency in Swedish than in English. Word pairs that co-occurred fewer than five times were not included in the word-by-word 0 analysis. This excluded 15 of the word pairs in the test set. A further 15 word pairs did not differ significantly in their distribution across languages. Those pairs are listed in Table 5.

The distribution of discourse functions differed significantly across language for the remaining 24 word pairs. These are listed in Table 6. Below we outline some trends among these pairs and possible explanations for the differences.

### 5.1. Translational non-equivalence

In at least five cases—four adjective pairs and one verb pair—translational non-equivalence could be at the root of the differences. Among the adjectives, English *long* was translated as *lång* (which can also be translated as ‘tall’), but it could also be translated *länge* ‘long (in time)’. The main difference between *lång/kort* and *long/short* is the prevalence of Ancillary examples (over 60%) in English compared to 19% Coordinated, while in Swedish the Ancillary and Coordinated numbers are nearly even. This seems to be due to the English idiom *long on X, short on Y*, in which X/Y serve as the Ancillary B-pair. No such construction is available in Swedish.

Table 5  
Word pairs excluded from pair-by-pair analysis.

Pairs that do not differ significantly	
aktiv/passiv	active/passive
direkt/indirekt	directly/indirectly
fred/krig	peace/war
gift/ogift	married/unmarried
hård/mjuk	hard/soft
hög/låg	high/low
högkonjunktur/lågkonjunktur	boom/recession
levande/död	alive/dead
permanent/tillfällig	permanent/temporary
privat/offentlig	private/public
snabb/långsam	fast/slow
straff/belöning	punishment/reward
styrka/svaghet	strength/weakness
svår/lätt	difficult/easy
tung/lätt	heavy/light
Pairs with insufficient Swedish data	
avskräcka/uppmuntra	'discourage/encourage'
bevisa/motbevisa	'prove/disprove'
enig/oenig	'agree/disagree'
explicit/implicit	'explicitly/implicitly'
full/nykter	'drunk/sober'
illa/väl	'badly/well'
korrekt/felaktig	'correct/incorrect'
laglig/olaglig	'legal/illegal'
lantlig/urban	'rural/urban'
officiellt/inofficiellt	'officially/unofficially'
optimistisk/pessimistisk	'optimistic/pessimistic'
riktigt/oriktigt	'rightly/wrongly'
skuld/oskuld	'guilt/innocence'
torr/blöt	'dry/wet'
ärlig/oärlig	'honest/dishonest'

In the field of multidimensional size, English has a more complex set of basic terminology than Swedish. Thus, Swedish *stor* has two equally good translations in *big* and *large*, and *liten* could be translated as *little* or *small*, but only *large* and *small* were searched in the English corpus. Similarly, we treated *kall* and *varm* as the translations for *cold* and *hot*, but they can also translate as *cool* and *warm*, depending on the context. The main difference for the size and temperature pairs was a reversal of Ancillary and Coordinated proportions—with English having 20–30% more Coordinated and Swedish around 20% more Ancillary. This is a common pattern, which is explored further below.

The English pair *major/minor* was translated as *större/mindre*. While *större* and *mindre* are used as non-gradable adjectives like *major/minor*, they are also used as gradable adjectives, since they are the comparative forms of *stor* 'large' and *liten* 'small'. Thus the English and Swedish data sets for these terms cover overlapping but distinct semantic territories. The main difference between these two pairs is that English uses these in Distinguished or Transitional functions fairly often (12 and 15%), and Swedish does not. The difference in the Distinguished category is probably influenced by the semantic difference between the pairs; constructions such as *the difference between major and minor players* involve the absolute (non-gradable) interpretation. The Transitional use of *major/minor* in English raises the question of idiomaticity, and is discussed further below.

Finally among the adjective translation problems, the Swedish data for *ny/gammal* 'new/old' are skewed by the large number of occurrences of the compound *nygammal* (as discussed in section 4.3), which has no lexicalized correspondent in English.

Among the verbs, *hatalälska* and *hatel/love* differed in that nominal as well as verbal uses of *hate* and *love* were analyzed in Jones' study, but nominal forms of 'hate' and 'love' were not searched for in Swedish. The main difference between Swedish and English in this case is that the 15% of the Swedish cases are in the Simultaneous category and 15% are Residual, while in English 6% are Residual and none Simultaneous.



Table 6  
Word pairs with significantly different distribution of discourse-functional categories across languages.

English	Swedish
advantage/disadvantage	fördel/nackdel
bad/good	dålig/bra
begin/end	börja/sluta
cold/hot	kall/varm
confirm/deny	bekräfta/förneka
fact/fiction	verklighet/dikt
fail/succeed	misslyckas/lyckas
failure/success	misslyckande/framgång
false/true	falsk/sann
female/male	kvinnlig/manlig
feminine/masculine	feminin/maskulin
gay/straight	homosexuell/heterosexuell
happy/sad	glad/ledsen
hate/love	hata/älska
large/small	stor/liten
long/short	lång/kort
lose/win	förlora/vinna
major/minor	större/mindre
old/young	gammal/ung
poor/rich	fattig/rik
quickly/slowly	snabbt/långsamt
right/wrong	rätt/fel
new/old	ny/gammal
privately/publicly	privat/offentligt

## 5.2. Key differences in the Swedish and English distributions

Throughout the course of this paper, we have cautiously pointed out the ways in which methodological issues may have affected our results. However, when examining the results word pair by word pair, several trends emerged that present bona fide differences between Swedish and English in the use of these antonym pairs. In this section, we outline the types of differences found for the pairs that show a statistically significant difference, leading to conclusions regarding idiomaticity in antonym use.

### 5.2.1. Difference 1: Reversal of Coordinated and Ancillary proportions

Of the 24 pairs that showed significant differences across languages, 11 had far greater proportions of Coordinated examples in English than in Swedish and more Ancillary examples in Swedish. All of the pairs that fit this pattern are verbs or adjectives: ‘begin/end’, ‘lose/win’, ‘fail/succeed’, ‘old/young’, ‘cold/hot’, ‘heterosexual/homosexual’, ‘female/male’, ‘long/short’, ‘new/old’, ‘right/wrong’, ‘large/small’. These contributed to the overall picture (see Fig. 1) in which the proportions of Ancillary and Coordinated uses are nearly equal in English, but Coordinated lags far behind Ancillary in Swedish. Only one pair, ‘true/false’, shows the opposite trend of more Coordinated and fewer Ancillary uses in Swedish.

Looking at an extreme example within this set, the distribution for Swedish *förlora/vinna* was 71.4% Ancillary, 11.4% Coordinated, while the English equivalent *win/lose* was 46.6% Ancillary and 43.1% Coordinated. Among the English Coordinated examples were instances of *win or lose* as in *Win or lose, money will be going to good causes*. While this was not counted as an idiom in Jones’ study, an equivalent use of *förlora/vinna* is not possible in Swedish. This raises the question of whether simple coordination of certain antonyms should be considered idiomatic for particular languages. We return to this point below.

### 5.2.2. Difference 2: Prominence of Simultaneous category in Swedish

Significantly more examples of Simultaneous antonymy occur in the Swedish data than in the English. A closer look at the data reveals that this category is not evenly distributed among antonym pairs. Simultaneous examples were found for 19 of the 53 Swedish pairs (versus three of 56 English pairs). For some of these Swedish pairs, the

Simultaneous category accounted for particularly large proportions of the data. Among the 24 pairs that significantly differ from English overall are *glad/ledsen* ‘happy/sad’ (27.8% Simultaneous), *hata/älska* ‘hate/love’ (14.7%), *falsk/sann* ‘false/true’ (10.5%), *rätt/fel* ‘right/wrong’ (8.0%), *fördell/nackdel* ‘advantage/disadvantage’ (4.9%). None of the equivalent English pairs in the Jones (2002) data had a single Simultaneous example. Of the pairs whose distributional patterns did not significantly differ in the overall statistical analysis, sizable proportions of Simultaneous data were found for *styrka/svaghet* (18.2%) and its English equivalent *strength/weakness* (11.4%). In fact, the four Simultaneous sentences for *strength/weakness* amount to half of the Simultaneous sentences in the English data set.

Thus, we see that Simultaneous antonymy tends to be associated with particular antonym pairs, and that the range of antonyms that are used with this function seems to be greater in Swedish than in English. Semantically, the antonym pairs attracted to the Simultaneous function involve positive/negative valuations. (Other evaluative pairs not listed above have smaller proportions of Simultaneous examples—e.g. *braldålig* ‘good/bad’: 1.7%.)

### 5.2.3. Difference 3: Peaks in other minor categories

For some pairs, the English and Swedish figures differ due to the prominence of a particular minor category or the relegation of more Swedish examples to the Residual data. In these cases the major categories (Ancillary, Coordinated) are in similar proportions/ranks in the two languages, but the departures in minor categories add up to a significant difference. In contrast to the Simultaneous category, for which a larger pattern is observed, these cases are more idiosyncratic. *Fattig/rik* ‘poor/rich’, *gammallung* ‘old/young’ and *privat/offentligt* ‘privately/publicly’ all had greater proportions of Distinguished examples than their English equivalents, and *kvinnlig/manlig* ‘female/male’ had more Distinguished and more Comparative than in English. We note that all of these pairs relate to social categories that might play different roles in the social systems of the two nations, and will not pursue the explanation of these differences any further.

### 5.2.4. Difference 4: Prominence of identifiable idioms

In both studies, coders used the Idiomatic category very little. Differences in the proportions of sentences in the Idiomatic category clearly affected the comparison of the two languages for only one antonym pair: while English has the idiom *to blow/run hot and cold*, Swedish has no equivalent with *kall/varm*. However, while the idiomaticity of certain phrases was not recognized when viewed on a sentence-by-sentence basis within a particular language, it became clearer when the data were reviewed together, indicating a greater effect of idioms in creating cross-linguistic differences.

For example, ten times as many *dikt/verklighet* examples as *fiction/fact* examples were classified as Comparative. The Swedish examples were variations on the theme of ‘truth is stranger than fiction’, while the English search-term *fact* does not occur in the equivalent English idiom. Five times as many *fördell/nackdel* examples as *advantage/disadvantage* examples were Comparative, generally in variations on the phrase *fördelarna överväger nackdelarna* ‘the advantages outweigh the disadvantages’. Meanwhile, English has nearly six times as many Transitional examples for *major/minor* than Swedish has for *störrel/mindre*, which is probably influenced by a well-known Cole Porter lyric on ‘the change from major to minor’ (‘Ev’ry Time We Say Goodbye’, 1944).

## 6. Discussion

### 6.1. The continuum of idiomaticity

Jones’ studies and ours have identified typical lexico-grammatical frames in which antonyms co-occur and which are associated with certain discourse functions. Murphy (2006) has argued that these frames are constructions, that is, conventionalized form-meaning pairings involving partially lexicalized grammatical forms and contrastive meaning. The instantiation of these contrastive constructions with conventionalized antonym pairs results in significant collocations—i.e. word strings that are found in corpora at greater than chance rates, such as *begin and end* or *both true and false*. As the results in section 4 indicate, many of these frames in Swedish can be directly translated into English, for example *mer X än Y/more X than Y* and *både X och Y/both X and Y*. This means that we find many translationally equivalent collocations in the two languages, such as *mer kvinnlig än manlig/more feminine than masculine*. In spite of such phraseological similarity, the ‘equivalent’ collocations are not used at the same rates in the two languages. Closer examination of the pair-by-pair differences shows that the two languages differ in the extent of conventionalization—or idiomaticity—of some of these collocations.

While *idiom* has traditionally been defined as a multi-word expression with a non-compositional, often figurative, meaning, idiomaticity can be regarded as a prototype category. Nunberg et al. (1994:492–493) list six properties that are typical of idioms: conventionality, (syntactic) inflexibility, figuration (i.e. metaphor), proverbiality, informality and affect. On their account, only one of these properties is found in all idioms. This is conventionality, which is:

a relation among a linguistic regularity, situation of use, and a population that has implicitly agreed to conform to that regularity in that situation out of a preference for general uniformity, rather than because there is some obvious and compelling reason to conform to that regularity instead of some other. (Nunberg et al., 1994:492)

Because there are no ‘compelling reasons’ for the form of such linguistic regularities, we expect that different linguistic communities will have different conventionalized set phrases. As such, idioms should be expected to be language-specific, in that their literal translations will not necessarily be idiomatic in other languages. This is the case for the items counted in the Idiom category in this and Jones’ study, such as *blowing hot and cold* ‘to alternate between extremes (especially of emotion)’ and *the long and the short of X* ‘the upshot of X’. In addition, however, we have found some semantically compositional phrases whose translational equivalents are present in both languages, but which are far more common in one language than the other (in the corpora searched), like *the change from major to minor* or *fördelarna överväger nackdelarna* ‘the advantages outweigh the disadvantages’. While these are not idioms on the traditional, non-compositional definition, they are expressions that seem to be more conventionalized in one language than the other. Stefanowitsch and Gries’ (2003) notion of ‘collostructions’ is an apt concept here, as we have lexemes (antonyms) that are attracted to a particular contrastive construction and vice versa.

The co-occurrence data for the 24 antonym pairs with statistically significant distributional differences show some instances in which well-known, if compositional, expressions can account for statistical differences between Swedish and English, as noted in section 5.2.4. The examples discussed so far do not, however, contribute to an explanation for the greater proportions of Coordinated antonymy in English and, to a lesser degree, the greater proportions of Simultaneous antonymy in Swedish. While this difference is visible in a gross evaluation of antonym functions as presented in Fig. 1, it becomes clear in the word-pair-by-word-pair evaluation that the gross differences are due to particularly striking cross-linguistic differences in functional distribution for certain antonym pairs. In the case of Simultaneous antonymy, the word pairs that tend toward that function in Swedish have the semantic characteristic of ‘valuation’ in common. In the case of Coordinated antonymy, there is little in the way of semantic clues as to why some antonyms are frequently used in the Coordinated function in English, nor why they are not used as much in this way in Swedish. Closer examination of the data, however, suggests that the differences are not purely semantic, but idiomatic in terms of the strength of the phrases’ conventionalization.

Taking a closer look at those pairs that had much higher rates of Coordinated antonymy in English, Table 7 shows the distribution of those pairs in common Coordinated constructions in the English data. Notable here is the way in which some pairs favour certain constructions, such as *X or Y* for *win/lose* and *X and Y* for *begin/end*. For 8 of the 11 pairs, a single construction accounts for more than 60% of the Coordinated instances. This demonstrates that it is not so much that the Coordinated function (in all its guises) is preferred in English but that in many cases the popularity of a particular collostruction has disproportionately influenced the overall proportion of Coordinated data.

Table 7 shows the commonality of particular coordinators with particular antonym pairs, while Table 8 shows that these antonym pairs generally occur in particular orders (*X–Y* or *Y–X*) within these conjunctive/disjunctive constructions, further demonstrating that some of these pairs occur predominantly in apparently set phrases.<sup>2</sup>

Top of the list in Table 8 is *begin and end*, as in *Politics did not begin and end in Westminster*. Because its meaning is arguably compositional and it is an instantiation of an extremely common construction (*X and Y*), *begin and end* was not considered an idiom in the original analysis, nevertheless it could be described as conventional, or idiomatic, English, in the sense that the phrase is very familiar to native English speakers. Not all of the 11 pairs in Table 8 show such strong tendencies to occur in particular phrases; in particular, *gay and straight* shows no strong trend toward a particular type of coordination. Nevertheless, most of the pairs favour a particular frame, with more than 60% of the

<sup>2</sup> The percentages in Table 8 do not match those in Table 7 because Table 8 includes *X and Y* and *X or Y* both as complete constructions and as constituents of larger constructions, such as *both X and Y* and *either X or Y*. Thus, for example, Table 8 shows that 76.9% of the Coordinated *right/wrong* examples include the phrase *right or wrong*, as opposed to *right and wrong*, *right nor wrong*, *wrong or right* or any other phrase.

Table 7

Distribution of Coordinated constructions in English pairs with high rates of Coordinated use.

	X and Y	X and Y alike	Both X and Y	X or Y	Neither X nor Y	Either X or Y	Whether X or Y	Other	Total
Begin/end	22 <b>96.6%</b>							1	23
Cold/hot	14 <b>60.9%</b>			7	1	1			23
Fail/succeed				22 <b>81.4%</b>		3	1	1	27
Female/male	29 <b>67.4%</b>		5	7	1			1	43
Gay/straight	6 <b>33.3%</b>	3	3	5			2	1	20
Large/small	15 <b>65.2%</b>		2	5				1	23
Long/short	3 <b>42.9%</b>		2	2					7
Lose/win	1			22 <b>88.0%</b>			2		25
Old/young	15 <b>44.1%</b>	6	8	5					34
New/old	58 <b>76.3%</b>		6	9				3	76
Right/wrong	2			8 <b>61.5%</b>	1		2		13

Coordinated data—the most common function for those pairs—associated with a particular frame and a particular antonym order, resulting in a set phrase.

In most cases, the ways in which these Coordinated constructions are used is available in both Swedish and English. But Swedish does not use these phrases so frequently that the Coordinated function surfaces as the most common discourse function for these antonyms. This again gives evidence that some of these phrases are conventionalized compositional idioms in English, but are less conventionalized in Swedish. The questions remain: (a) does English generally rely more strongly on such conventionalized phrases? (b) had we searched for different antonym pairs, would the same trend be evident? These questions are answerable, but require a different data set from the one we have presented here.

Table 8

Most frequent Coordinated constructions for English antonyms that significantly differ in function from Swedish antonyms.

Pair	Most common Coordinated construction	% of Coordinated data
Begin/end	Begin and end	96.6
Lose/win	Win or lose	84.0
Old/young	Young and old	82.8
Fail/succeed	Succeed or fail	81.5
Right/wrong	Right or wrong	76.9
Female/male	Male and female	76.7
New/old	Old and new	73.7
Large/small	Large and small	65.2
Cold/hot	Hot and cold	60.9
Long/short	Short and long	42.9
Gay/straight	Gay and straight	20.0

## 6.2. The *lagom* effect

We have demonstrated that the languages differ in the degree to which they use particular antonym/function/frame combinations and the degree to which certain of these combinations are conventionalized and used. It is a different matter to explain why some of these combinations are more common in one language than the other. Some of this variation can be attributed to accidents of culture, such as the existence and popularity of a particular song lyric. The remaining question for our investigation is whether any of these differences might reflect different cultural outlooks and values. We were particularly interested in whether Swedish *lagom* values—i.e. the valuing of moderation and compromise in all things—might interact in interesting ways with oppositeness, which often involves extremes of scalar measurement. We believe we have found such an interaction in the greater use of Simultaneous antonymy in Swedish as compared to English.

*Lagom* is often described as an “untranslatable” emblem of Swedishness (Zetterberg, 1984; Barinaga, 1999; Rosenberg, 2002; Forsstrom, 2004), with Zetterberg (1984:85) identifying it as the “key word” of Swedish rationality, which (in contrast to British culture) is “marked more by moderation than by logic driven to its final conclusion”. Swedish-English dictionaries typically give translations for adverbial and adjectival *lagom* as ‘just right’, ‘(just) enough’, ‘sufficient(ly)’, ‘in moderation’, ‘moderate(ly)’, ‘adequate(ly)’, ‘optimal’, ‘reasonable’, ‘fitting’, ‘appropriate’, ‘suitable’ (Norstedts, 2000; Språkradet, 2007). Others describe it as “middle-of-the-road” (Rosenberg, 2002:174) or “something approximating ‘the golden mean’” (Milner, 1989:49)—though Forsstrom (2004) makes a distinction between *lagom* and perfection, translating it as:

“not too much and not too little”, “not good and not bad”, “not big not small”, “ok”, “just right – though not perfect”

The term is commonly thought to derive from *laget om* ‘around the team’, referring to the passing of a jug of beer amongst men, in which case taking too much would be selfish but taking too little would involve “opting out of the common spirit” (Ruth, 1986:53, quoted in Milner, 1989). Accordingly, “*lagom* implies moderation, but it also evokes a second fundamental aspect of Swedish values, a responsibility to participate in common activities” (Milner, 1989:49).

*Lagom* is most often expressed as finding a balance between various opposed states:

It mirrors the dilemma between personal freedom and social responsibility, between informal relations and formally showing respect for the person, between expressing one’s emotions and avoiding open conflict through compromising and consensus. (Barinaga, 1999:7–8)

Discussions of the word *lagom* frequently give examples of its use with antonyms in a *lagom X, lagom Y* frame, and two examples of this were found in the Parole corpus:

- (61) Från hans äkta säng tog jag en broderad kudde, *lagom liten* för att jag skulle kunna dölja den under chalatan, *lagom stor* för att kunna kväva honom med.  
 ‘From his marriage bed I took an embroidered cushion, *lagom little* to be able to hide it under my *chalat* [cloak], *lagom big* to be able to smother him with.’
- (62) Vattnet var *lagom kallt*, *lagom varmt*, i synnerhet här inne i badvikarna.  
 ‘The water was *lagom* cold, *lagom* warm, in particular here in the bathing coves.’

Both of these *lagom* examples have Simultaneous effect (although (61) was classified as Ancillary, under the ‘Ancillary first’ rule of categorizing). Our claim here is that the *lagom* effect goes beyond the use of *lagom X, lagom Y* frames and influences the greater-than-English proportions of Simultaneous antonymy, particularly with respect to highly evaluative antonyms—which accounted for most of the Simultaneous uses in Swedish. While a cause–effect relation between specific cultural values and antonym behaviour is difficult to pinpoint, we note the following corroborative evidence.

First, it might be suggested that the more limited range of styles and authors in the English data hides an English tendency to use the same range of antonyms as Swedish in this function. However, the difference here goes beyond the differences in source material. First, while strongly evaluative words may be less frequent in an English broadsheet

newspaper than other registers, *strength/weakness* is used for the Simultaneous function, while register-appropriate pairs like *advantage/disadvantage* and *false/true* are not used in this way. Second, if register were the only issue, then we would expect to find broader application of the Simultaneous function in the more varied data of Jones' (2006) spoken language study, but this is not the case. While it is certainly the case that all of these evaluative antonym pairs can be and are used in Simultaneous functions in English beyond Jones' corpus, the data indicate that the practice is more common in Swedish.

Second, the *lagom* mindset is attributed with the Swedish propensity for avoidance of conflict, consensus building, and the avoidance of expressing strong personal opinions (Barinaga, 1999; Peacock, 2002). This dovetails with the finding that the expression of Simultaneous antonymy differs most from English in the use of antonyms that make forceful evaluative (often moralistic) claims ('true/false', 'right/wrong', 'advantage/disadvantage') or express emotion ('happy/sad', 'hate/love').

Finally, the relation between cultural values of moderation and consensus and the use of the Simultaneous category is supported by its relative strength in both Swedish and Japanese (Muehleisen and Isono, 2008) as compared to English. Comparison between Japanese and Swedish values relating to moderation and community, in contrast with other Western value systems, has been explicitly made by Swedish ethnographer Åke Daun, who refers to Swedes as "the Japanese of the North" and the Japanese as "the Swedes of Asia" (Daun, 1986, 1989). Of course, the comparison is not absolute, and Sweden could be said to have more in common with other Western cultures than Japan has. In Muehleisen and Isono's study, Simultaneous antonymy was the fourth most common function at 7%—thus accounting for a larger proportion of the data than any of the minor categories in Jones' English study. If Swedish culture differs from English culture in its value of moderation, and Japanese culture differs even more on this measure, then the percentages of Simultaneous antonymy in the three cultures (0.1%, 2.1%, 7%) can be seen to reflect those differences.

The use of the Association category, the seventh most common category in Swedish (versus a few Residual examples in English) may also be a cultural symptom related to *lagom* values, since that function focuses on the balance between extremes. In contrast, the seventh most common English category is Extreme antonymy, in which only the most polar edges of two opposite categories are denoted, as in *For thousands of years in Britain, food had to be either very cold or very hot* (see example (7)).

## 7. Summary, conclusions and further questions

In summary, antonyms are used for the same range of discourse functions in Swedish and English. The two most common functional categories are the same in the two languages: Ancillary, using antonyms to create secondary contrasts, and Coordinated, using antonyms to indicate the range of values within a dimension. All of the minor and sub-residual categories that Jones (2002) identified were found in the Swedish data. While we have explored the possibility of two further sub-residual categories, Transitive and Synonym, there is no cause to believe that these categories are particular to Swedish, since similar English data is easy to find, and the numbers of such examples are extremely low as compared to the major and minor categories. In the main, this study has demonstrated the applicability of Jones' (2002) functional categories to a language other than English. It raises the question of whether Ancillary and Coordinated functions are universally the most common uses of antonyms and encourages continued (cf. Muehleisen and Isono, 2009) investigation in less closely related languages.

Although the similarities between English and Swedish are striking, the distribution of the categories is significantly different. The statistical difference is largely the result of a small number of trends in particular categories. First, the number of Residual sentences is greater in Swedish than in Jones' original English study (2002). We take this as unremarkable, since the proportion of Residual sentences has been greater in every subsequent study employing Jones' categories. Since the categories were fashioned through examination of a particular data set, it is not surprising that they suit that set best. Second, the rate of the Coordinated function is greater in English than in Swedish, and third, the numbers of Simultaneous and Association sentences in Swedish were larger than in English.

While the Coordinated category was less frequent in Swedish than in English, Swedish had greater proportions of Ancillary and Residual sentences. One might suggest that methodological differences between the English and Swedish studies (particularly, having more people involved in coding) favoured Ancillary and Residual categorization in Swedish. Recall from example (11) that the Ancillary categorization trumps other categorizations. Thus, in cases of disagreement among coders, if one of the possible codings was Ancillary, it was more than likely that the final coding

would be Ancillary. Similarly, if both coders could not agree upon another classification for a clearly contrastive use of an antonym pair, then the pair was labelled “Residual”. However, if the differences were due to the double (and sometimes triple or quadruple) coding, we would predict an across-the-board preference for Ancillary and Residual codings in the Swedish study. Instead, this general trend toward Coordinated in English was particularly supported by a small number of antonyms that had much higher rates of the Coordinated function in English. We have shown that the difference indicates a tendency in English to use these antonyms in quasi-idiomatic expressions. It is something of a chicken-and-egg question whether English tends toward stronger conventionalization of Coordinated antonym phrases because it has a cultural-communicative preference for the Coordinated function, or whether it is a tendency to rely on idioms that raises the rates of the Coordinated function.

In the course of examining antonym functions, we have identified several contrastive constructions that are used to instantiate those functions in Swedish. This is a key step in investigating Swedish antonymy further and identifying antonym-rich collocations (Stefanowitsch and Gries, 2003). We started our study with a list of English antonyms and approximated Swedish equivalents. Lack of translational equivalence meant that the Swedish pairs investigated (a) sometimes co-occurred at lesser rates than the English pairs, and sometimes not at all, (b) sometimes introduced problems of non-comparability due to polysemy or morphological class, and (c) may not be the antonyms that would reflect Swedish antonym function most accurately. The next step is to start from the contrastive constructions we have identified in order to discover which word pairs tend to co-occur in them. We introduced a relatively noise-free method for doing this in Jones et al. (2007), and have begun collecting data using this method for Swedish. Searching the *lagom X, lagom Y* construction would also be interesting in order to compare the semantic qualities of antonyms used Simultaneously in that construction versus other Simultaneous uses.

Finally, we have suggested that cultural attitudes toward moderation may have an effect on the distribution of antonym functions, particularly the Simultaneous function. Further investigation of this topic should include cross-linguistic/cross-cultural comparison involving cultures with a range of cultural values that impinge on opposition. It would be interesting to compare the use of Simultaneous antonymy in cultures with different values using the same language, such as British versus American culture. However, the rate of Simultaneous antonymy in British English is already so low that comparison is likely to be difficult. Investigation of these issues for bilingual language users might demonstrate an effect of the majority or first-language culture on minority/second language use. In comparing the use of Simultaneous antonymy across cultures, attention should be paid to the semantic characteristics of the antonyms involved and whether evaluative antonyms are particularly found in Simultaneous use.

During the course of this research, additional questions were raised about the taxonomy of antonym functions and the search methodology. First, should the Ancillary function be considered as belonging to a different taxonomical level than the other categories, since (arguably) the Ancillary categorization focuses on the antonyms’ effect on other elements in the sentence (the ‘B-pair’) rather than the contextual relation between the antonyms themselves (the ‘A-pair’)? Second, does this taxonomy of antonym functions apply to antonym co-occurrence within larger stretches of text? For the purposes of this study and Jones’ 2002 study, only co-occurrences within sentence boundaries (marked by sentence-boundary punctuation) were considered, as this is a practical means for searching within written corpora. Studies of spoken language, however, have investigated co-occurrence within turns (Jones and Murphy, 2005; Murphy and Jones, 2008) or collocational ranges (Jones, 2006), and Murphy (2004) has argued that antonym co-occurrence across speakers’ turns is relevant as well. The degree to which the same functional categories are relevant to longer stretches of written text is yet to be determined. These questions are left for future investigations.

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