Swedish *hinna* viewed through its English correspondences – *have time* or *be able to?*

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Abstract
This article considers the Swedish verb *hinna* and its English correspondences in the English-Swedish Parallel Corpus – both in the direction Swedish original to English translation and in the direction English original to Swedish translation. Swedish *hinna* lacks a straightforward equivalent in English; thus its English correspondences in parallel corpora can shed light on its meaning and use, as described in the method 'seeing language through multilingual corpora' (Johansson 2007). The results for *hinna* suggest that *hinna* is monosemous, but that its core meaning is enriched by implied ones (presupposition and conversational implicature). Based on the observed translations and sources of *hinna*, we propose that in the majority of our data *hinna* denotes time sufficiency and also presupposes ability and conversationally implicates actualization. We relate our discussion of *hinna* to van der Auwera and Plungian's (1998) semantic map of modality, in which ability and sufficiency are seen as contiguous modal meanings.[1]

1 Introduction

The Swedish semi-auxiliary verb *hinna*, as in (1), lacks a straightforward equivalent in English, which makes it a good candidate for investigation in parallel corpora, both from a purely contrastive point of view and for the semantic information about *hinna* offered by the English correspondences.

(1) Jag har inte hunnit   äta (ännu).
     I   have not HINNA.ptc eat (yet).
     'I haven't had the/enough time to eat (yet)'

In the major Swedish reference grammar, *Svenska Akademiens Grammatik* (SAG) (Teleman et al 1999), *hinna* as in (1) is defined as a semi-auxiliary in the category *potential modal auxiliary*. Teleman et al (1999(4): 297) describe the meaning of *hinna* as marking the ability of the subject referent to realize a particular action within a relevant time frame, and also state that *hinna* typically requires an animate, agentive Subject. In addition, they argue that there is usually no clear meaning difference between modal auxiliary verbs and lexical verbs with the same form in Swedish (Teleman et al 1999(4): 282), but do not comment specifically on *hinna* in this respect. Aijmer (2004), in a study of "verbs and related constructions with the meaning dynamic possibility or ability in English and Swedish and their relation to actuality", describes *hinna* as a verb making the "enabling conditions" of someone's ability explicit. In our terms, the enabling condition for *hinna* corresponds to time sufficiency, i.e. the availability of enough time for some event to take place.

What is interesting about *hinna*, then, is that it seems to communicate **both** a notion of *time sufficiency* and a notion of *ability*, both of which we take to be modal meanings. Thus, *hinna* can be glossed roughly as 'have enough time to be able to [do sth]'. Such observations about the semantic properties of *hinna* have not been studied extensively in light of Swedish corpus data and there is no corpus-based study of *hinna*'s correspondences in English.

The aim of this paper is therefore to seek to account for semantic properties of the Swedish verb *hinna* as mirrored in its English correspondences in the English-Swedish Parallel Corpus (ESPC) (cf. Johansson 2007). The data consist of *hinna* and its English correspondences retrieved from Swedish original texts (fictional and non-fictional) translated into English (SO→ET) and English original texts translated into Swedish (ST←EO). One main advantage of authentic texts and their translations is that neither the source texts nor the translations were produced with a theoretical agenda (cf. Aijmer 2004), which should provide a richer spectrum of contexts for *hinna* compared to constructed examples. For a thorough description of the ESPC, we refer to Altenberg and Aijmer (2000).[2]

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[2] A description of the corpus is also available at
http://www.sprak.gu.se/english/research/research-activities/corpus-linguistics/corpora-at-the-dll/espc/.

A point of departure for the study is that if, as we claim, *hinna* carries multiple simultaneous meanings, they may all be made more visible by the English correspondences – both the sources and the translations. As pointed out by Johansson (2007: 28) "one of the most fascinating aspects of multilingual corpora is that they can make meanings visible through translation. Ambiguity and vagueness are revealed through translation patterns." In addition, we aim to consider whether implications (presuppositions and implicatures) in original texts can show up in the correspondences not only as presuppositions and implicatures, but also as as explicit assertions or entailments[3]. We thus follow Chesterman (1998) in regarding *the tertium comparationis* of translations not as a basis for the analysis but as its result. In traditional contrastive analysis terms, we approach the parallel corpus data from the point of view of the single verb *hinna*, rather than from the point of view of a tertium comparationis, i.e. some independent meaning component which could form the basis of, say, a comparison of Swedish and English expressions of time sufficiency and ability.

We argue that *hinna* in its most common semi-auxiliary uses involves three meaning components: time sufficiency, ability and actuality*,* of which only time sufficiency is part of the core semantics of *hinna*, ability is presupposed and actuality is conversationally implicated. We show that the congruent English correspondences typically reflect one or two of these components, time sufficiency (e.g. *have time*), ability (e.g. *can*, *be able to*) or actuality (*manage*), but that the complex meaning of *hinna* is mirrored in how these congruent correspondences interact with their context. For example, what is (lexically) presupposed by *hinna* may be asserted or presupposed (or otherwise implied) by an English correspondence (such as e.g. *can*) in conjunction with the surrounding context.

The article is organized as follows. In section 2, we take a first look at the English correspondences of *hinna*, and provide a rough classification of *congruent* correspondences in terms of the meaning components they reflect. Section 3 takes a closer look at the meaning correspondences outlined in section 2, time sufficiency, ability and actuality. Section 4 shows the co-occurrence of time sufficiency and

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[3] Our primary aim is not to propose a novel approach to these notions. Instead, we employ what we take to be reasonably standard characterizations of entailment, presupposition and implicature, and define them where it is required.

ability/actuality in the translation examples. In section 5, we re-examine our data and take a closer look at zero translation and show that in a majority of cases, time sufficiency is contextually present, e.g. in temporal clauses. Section 6 further motivates our suggestion that time sufficiency constitutes the core meaning of *hinna*, and section 7 embeds our discussion in a semantic map of modality, where ability and sufficiency are seen as contiguous modal meanings. Section 8 concludes.

2. Hinna *and its correspondences in the directions SO→ET and ST←EO*
In this section, we take a 'surface' look at the English correspondences of *hinna* in the ESPC to explore whether this material can tell us something about how the meaning components of *hinna* can be described. The surface approach means that we only consider the *congruent* English translation correspondences of *hinna* – i.e. those correspondences where *hinna* is translated with a verb construction and the source syntax is kept intact (Johansson 2007: 23-26). Table 1 gives the English translations and sources of *hinna*. The type of meaning realized by the correspondence is specified in the column 'semantic type'.

Table 1 English sources and translations of *hinna* in the ESPC

Correspondence	SO→ET		ST←EO		Semantic type
	N	%	N	%	
Ø	27	28	34	39.5	?
have time	17	17.6	7	8.1	Time sufficiency
manage	15	15.6	-	0	Actuality
can	11	10.6	13	15.1	Ability
get there/as far as	8	7.7	7	8.1	?
catch up to/with	6	5.7	6	6.9	?
be able to	4		1		Ability
be time	2		1		Time sufficiency
find (the) time	2		-		Time sufficiency
make it	2		-		Actuality
arrive	1		3		?
reach	1		-		?
be capable of	1		-		Ability
chase after	-		1		?
complete	1		-		?
forestall	-		1		?
gain on	-		1		?
get around to	-		1		?
have a chance to	-		1		?
other	6		8		?
Total	104	100	86	100	

* Column one gives the verb phrases that show up as English translations of *hinna* in Swedish original texts (SO→ET) or as the source of *hinna* in Swedish translations from English original texts (ST←EO)*;* columns two and three give the raw frequencies of these – with percentage information for the most common correspondences, and column four our classification of the translation correspondence into time sufficiency, ability or actuality meaning. The translation correspondences that are not easily categorized are marked with a question mark in column four.

A first glance at Table 1 suggests that *hinna* is polysemous since the majority of the congruent correspondences seem to reflect *one* of the time sufficiency, ability and actuality meanings. In addition, Table 1 shows a third meaning, indicated by a question mark. The correspondences of this type are, in order of frequency, *get there/as far as, catch up to/with, arrive, reach, chase after, complete, forestall, gain on*. Common for these correspondences is that they mirror a construction with [*hinna + place adverb*] and thus *only* correspond to *hinna* as a main verb, as illustrated in (2):

(2)   Redan innan han hade <u>hunnit fram</u> började han tala lugnande till
        sig själv, inåtvänt och utan att röra på läpparna. (KOB1T)
        Even before he <u>got there,</u> he had started talking to himself
        Inwardly, without moving his lips, in order to cool down.
        (KOB1T)

We tentatively suggest that correspondences such as (2) mirror an
accomplishment meaning involving 'getting somewhere' or 'reaching an
end-point', and that a possible explanation for why this meaning only
shows up for main verbs is that it reflects a historically older and less
modal meaning than the other correspondences. According to *Svenska
Akademiens Ordbok* (SAOB) (http://g3.spraakdata.gu.se/saob/), *hinna* is
historically related to Gothic *hinþan* ('catch') and Old High German
heriunda ('prey') as well as English *hunt,* and in Old Norse it partly
merged with *inna* ('reach an end', 'finish'). The meaning in (2) seems
close to this historical origin and can be glossed roughly as ''someone
succeeds in getting to a certain end point''. Importantly, though, ability is
always entailed in these cases – if you reach somewhere or get
somewhere, it follows that you have the ability to do so. Moreover, time
sufficiency may also be involved. In examples such as (2), for instance,
time sufficiency meaning is present in the sense that the example is a
comment on the brevity of the time period it took for someone to get
somehwere (i.e. not much time had passed before he started talking to
himself). Nevertheless, since the 'accomplishment' correspondence is the
only type that is not reflected in both lexical- and auxiliary use of *hinna*,
we will largely leave it aside in our discussion.
      Unlike the 'accomplishment' correspondences, the correspondences
marked as time sufficiency, ability and actuality in Table 1 support the
observation made by Teleman et al (1999(4): 282) that there is no sharp
demarcation line between auxiliary and lexical (main verb) uses of verbs
such as *hinna*. The absence of a clear distinction is illustrated by cases
like (3-8) where we have the same translations (*have time* in (3-4), *can* in
(5-6) and *manage* in (7-8)) regardless of the status of *hinna* as a lexical
(3, 5 and 7) or auxiliary verb (4, 6 and 8):

(3)   Men de <u>hann</u> inte ut. (KE1)
        But they <u>had n't time</u>. (KE1T)

(4)   Innan den <u>hunnit</u> samla sig trampade farmor rätt in i den: hon gav sig inte. (AP1T)
Before it <u>had time</u> to collect itself, Gran was pedalling right into it. (AP1T)

(5)   Hon kväljdes åt grymheten och sprang för galenskapen eller hukade sig om hon inte <u>hann</u> undan. (KE2)
Cruelty turned her stomach and she fled from folly, or ducked if she <u>couldn't</u> escape. (KE2T)

(6)   Hans fingertoppar rör vid mitt ansikte innan jag <u>hinner</u> dra mig undan. (MS1)
His fingertips touch my face before I <u>can</u> retreat. (MS1T)

(7)   Sen kommer gammelfrun, pigg och rosig och säger att hon har gjort smörgås, det är tio tusen räkmackor och kaffe och sen går Olle och jag runt runt på gårdsplanen tills det blir middag. Vi <u>hinner</u> fyra varv. (IU1)
His wife, lively and rosy cheeked, said she had made a few smörgås — seemingly about ten thousand of them, with prawns — and then Olle and I tried to walk round the place until dinner time. We <u>managed</u> four circuits. (IU1)

(8)   "Ja, jämmer och död, den ligger nu på andra sidan avgrunden, och det blir synd om den som inte kan hålla sej, tills vi <u>hinner</u> inrätta en ny." (AL1)
Yes, death and destruction! It's on the other side of the chasm now, and I 'm sorry for anyone who ca n't contain himself until we <u>manage</u> to build a new one." (AL1T)

In the remainder of the paper, we focus on the time sufficiency/ability/actuality correspondences, predominantly in auxiliary- or semi-auxiliary functions and only briefly return to the accomplishment meaning towards the end of the paper.

3. Time sufficiency, ability, and actualization
In this section, we discuss the English correspondences of *hinna* intitially classified as time sufficiency, ability and actuality in more detail. Section 3.1 deals with time sufficiency, 3.2 with ability and 3.3 with actuality.

3.1 Time sufficiency (as participant-external possibility)
In our material (see Table 1), the time sufficiency meaning of *hinna* is most clearly reflected in the correspondences with *have time*, where time sufficiency is conceptualized as time possession. Example (9) and (10) are illustrations:

(9)   Hon hade inte <u>hunnit</u> bli riktigt vuxen när hon fick mig. (AP1)
        She had n't really <u>had time</u> to become grown up when she had had me. (AP1T)

(10)   She <u>had just enough time</u> to rush in, pick him up, see if he was wet or marked in some way, and then go back to work. (GN1)
        Hon <u>hann bara precis</u> springa in, lyfta upp honom och titta efter om han var våt eller skadad på något sätt och sedan skynda sig tillbaka till arbetet. (GN1T)

   In our view, the time sufficiency translations reflect the core semantics of *hinna*. The assumption is that the time-sufficiency notion is always present in *hinna* and therefore part of a Swedish native speaker's knowledge of the word *hinna*. One indication of this core status is that *ha tillräckligt med tid* 'have enough time' seems to be the most natural paraphrase of *hinna*, as also indicated by Teleman et al's (1999) gloss, referred to in section 1, above.

   Thus, it follows that *ha tillräckligt med tid* can be understood as an entailment of *hinna*. Generally, the criterion for entailment is that in a sentence pair such as (11ab), (11b) is an entailment of (11a) if the sentences are related in such a way that if (11a) is true, (11b) is also true – irrespective of context. Further, typical of entailments is that they do not hold under negation, an observation which holds true for sentence pair (11ab): If (11a) is negated, (11b) is no longer an entailment. It is possible that (11b) is true, but we cannot know without context. If it is true, the interpretation would probably be that Paul had sufficient time to do it, but failed to because his abilites were subnormal.

(11)   a. Paul hann göra det.
             Paul HINNA.past do it.
             'Paul had (sufficient) time to do it.'

         b. Paul hade tillräckligt med tid för att göra det.
             'Paul had sufficient time to do it.'

Some additional observations about sufficiency are worth noting. For one, sufficiency is most naturally understood as degree in relation to a scale or a position on a scale. The kind of sufficiency relevant for *hinna* is a relation between time periods. For instance, to guarantee that you have sufficient time to drive to work, you estimate how long the drive will take and relate that time to the period between the time you start from home and the time you start work. In (9), for example, the time relation is explicitly expressed in the dependent clause *when she had me*, which provides the limiting point at which you either have or do not have sufficient time to do something.

    In addition, sufficiency is often discussed as a modal notion, and several types of constructions have been discussed in this respect, most notably quantifiers like *enough* and *too* and similar expressions (see Malis 2014, for a brief overview). There is some debate in the literature with respect to what type of modality is involved – necessity or possibility. By way of illustration, it is possible, as shown by Beck & Rullman (1999: 261), cited in von Fintel & Iatridou (2007), to paraphrase clauses with the adjective *sufficient* in one of two ways:

(12)   Four eggs are sufficient (to bake this cake).
         a. It is not necessary (given the rules for your cake baking) that you have more than four eggs.
         b. It is possible (given the rules for your cake baking) that you have only four eggs.

    Since similar paraphrases are possible with *hinna*, as shown in (13), we feel justified in assuming that *hinna*, too, encodes modal meaning.

(13)　Jane hinner　　　　läsa tre　　artiklar på en timme.
　　　　Jane HINNA-pres　read three　articles in　an hour.
　　　　a. It is not necessary (in order to finish three articles) that Jane has more than one hour.
　　　　b. It is possible (in order to finish three articles) that Jane has only one hour.

　　　Specifically, we follow Beck & Rullman (1999) in assuming that sufficiency is a subtype of possibility. In section 7, we see how this analysis fits with the modality framework proposed by van der Auwera and Plungian (1998), in which sufficiency can be understood as a particular type of participant-external possibility, i.e. possibility in relation to a specified or understood time limitation as opposed to participant-internal possibility, which reflects a person's inherent ability. For now, it suffices to conclude that the correspondences with *have time* mirror a core semantic notion of time sufficiency in *hinna*, which we understand as a participant-external modal notion expressing degree in relation to how much time is required for an event to be possible. In order for the event to be possible, however, it is of course also a requirement that someone is able to do something given sufficient time. In the next section, we consider translations which pick up the semantic notion of ability.

3.2 Ability (as participant-internal possibility)
Table 1 shows that the most common congruent correspondences of *hinna* conveying a clear ability meaning are *can* and *be able to*. An interesting question, however, is whether the ability modals reflect pure ability in these correspondences, or whether ability meaning is conditioned by particular contexts. With this in mind, consider (14) and (15), which illustrate a typical context type for correspondences with ability modals:

(14)　Innan jag <u>hinner</u> eller vill svara fortsätter han: […] (MS1)
　　　　Before I <u>can</u> reply, or even begin to want to, he continues, "Trust me." (MS1T)

(15)   Sedan hade jag lämnat dem stående på däck och skyndat mig
       därifrån innan Alva <u>hunnit</u> komma på vad hon skulle svara.
       (JMY1)
       Then I left them standing on the deck and hurried away from there
       before Alva <u>could</u> think of an answer. (JMY1T)

In (14) and (15) *hinna/can* occurs in temporal *before*-clauses, which
are normally interpreted as veradical/factive (see Condoravdi 2010 for a
review of the semantics of such clauses.), and these *before*-clauses
licence negative polarity items like *anything*, thus behaving similarly to
negative clauses. In (14) and (15), the negative meaning is that there is
no answer given. Interestingly, *can* is favored both as translation and
source for *hinna* in these context; 5 of the 10 translations with *can* occur
in such *before*-clauses (cf. examples (4) and (15) above), and 6 of the 13
sources. What these examples illustrate, then, is a kind of negative
actuality conditioned by the temporal clauses. In other words, 'pure'
ability is not negated but rather the ability of replying or thinking of an
answer as conditioned by the *before*-clause.

We hypothesize that the reason for choosing a translation with *can*
rather than *have time* is often the fact that time sufficiency is made
explicit by means of a time limitation and that the correspondences
instead mirror a *presupposed* ability meaning in *hinna*.[4] Our main reason
for regarding ability as a presupposition and not an entailment is that the
presupposed ability meaning persists under negation. Sentence pair
(16ab) illustrates this relation:

(16)   a. Tim hann/hann inte svara.
          Tim HINNA-past/ HINNA-past NEG answer
          'Tim had time to/did not have time to answer.'

       b. Tim kunde svara.
          'Tim was able to answer.'

To specify, the presupposition that Tim is able to answer persists
even if (16a) is negated. It is precisely this presupposed ability that

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[4] Although *have time* also appears in this context – as illustrated, for instance, by
example (4).

seems to be captured in the cases with negative actuality. In (14), for example, the negative actualization of the act of replying does not mean that the subject referent is unable to act, just that he/she did not manage to do it within the time limitation provided.

Beyond the examples with negative actuality, *can* and *be able to* reflect non-actualized ability for *hinna*, particulary in non-past tense examples. In (17), for example, *be able to* is used for non-actualized ability in a context where the ability can not be expressed by a modal auxiliary in the translation due to the defectiveness of the inflectional paradigm for English modals.

(17) Vi upplever den tekniska utvecklingen som enorm, läkarvetenskapen som allt mer omöjlig att besegra, variationsrikedomen i varuutbudet som allt mer oöverskådligt och avstånden i världen som allt kortare. Vi kan t ex se vilken del av världen som helst inom några sekunder på en TV-skärm i vårt vardagsrum, vi kan gå i ett varuhus under en hel dag utan att <u>hinna</u> se allt och vi byter arbetsplats oftare än någonsin. (BB1)
And all of us normally experience the technical development   as enormous, the medical sciences as ever more invincible, the richness of variety of goods and services as more and more difficult to have an overview of, and the distances in the world are ever shorter. We may, for instance, see any part of the world within a few seconds on our television screen in our living-rooms, *we can enter a supermarket and spend one entire day without <u>being able to</u> see everything*, and we change jobs more often than ever before. (BB1T)

The text in (17) is all about the effects of technological development, the availibility of goods and a shrinking world, and it is against this backdrop that the *hinna*-clause is understood. What the highlighted clause conveys is something like 'we lack the ability to see everything that is available in a supermarket since there is simply too much of it' i.e. non-actualized ability.

We conclude that the correspondences with ability seem to reflect a presupposed ability meaning which becomes relevant in contexts where there is a time sufficiency limitation made explicit. Further, many of the correspondences with ability modals involve actuality, but that actuality

does not seem to be a necessary component, particularly not in the non-past examples. We discuss the notion of actuality in the next section.

3.3 Actuality

The material include 17 correspondences with *manage,* all as translations of *hinna*. Curiosly there are no sources with *manage*, which may be an effect of translation bias – *manage* has a relatively clear correspondence in the verb *lyckas* ('succeed'). In line with Karttunen (1971), we regard *manage* as a verb entailing *actuality* meaning. More specifically, Karttunen (1971, 2012) argues that *manage* is a two-way implicative verb, which means that in positive contexts, it is entailed that the event in the complement clause took place, and in negative contexts that it did not take place, as exemplified in (18ab) (adapted from from Baglini and Francez 2015). This differs from so-called factual verbs, such as *admitted*, exemplified in (19), where the truth of the complement clause does not change with the polarity of the complement-taking verb.

(18)   Two-way implicative verb:
       a. Solomon managed to build the temple – Solomon built the temple.
       b. Solomon didn't manage to build the temple – Solomon did not build the temple.

(19)   Factive verb:
       Solomon admitted that he built the temple – Solomon built the temple.
       Solomon did not admit that he built the temple – Solomon built the temple.

   Our data are thus compatible with an analysis of *manage* as an implicative verb. This means that correspondences with *manage* for *hinna* entails the actuality or non-actuality of the event in the complement clause. However, *manage* differs from *hinna* since *actuality* is not necessarily entailed in *hinna* – only in *manage*. That is, although there is potential, and also likelihood, for actuality readings in *hinna*, we argue in the discussion of the correspondences with *can* and *be able to* in 3.2 above that this actuality is not obligatory. Nevertheless, where

manage is used in the translations, it serves as an indication that the actuality implicature of *hinna* goes through in that particular context. Support for this is found in van der Auwera and Plungian (1998: 104) who define *manage* as "participant-internal actuality". To illustrate, even when it takes an explicitly actualized complement like *succeed in*, *manage (to)* seems to express actualized ability, as in the following Googled example, (20):[5]

(20)   This was mainly because even if *a family* <u>managed to</u> <u>succeed in</u> clearing the bureaucracy of obtaining the title, their   inability   to fulfill land tax duties meant that they could be dispossessed by the government for nonpayment /.../ (Abdulei et al 2015)

A possible problem with (20) is whether *manage to* in fact gives rise to non-actualized meaning on account of the generic reading of the Subject, *a family*. To explain, as noted by Bhatt (1999) for *was able to*, generic readings of indefinite NPs like *a family* (in 1) favor non-actualised interpretations. In example (l), however, we would argue that the most natural reading of *managed to* is still one of actualized ability. Further, in positive contexts, the correspondences with *manage* also attribute to a participant the *ability* to do whatever the complement clause denotes: If someone managed to to something, it follows that they also had the ability to do it. Understood *ability* is less clear in negative polarity contexts, however, where it can be questioned whether the examples reflect general inability to do something, or a more 'temporal' inability conditioned by the context of situation. We return to this issue below.

In addition to its actuality entailment, *manage to* is typically claimed to presuppose that the event requires some effort on the part of the subject (e.g. Karttunen 1971, Bhatt 1999: 177-179, Aijmer 2004). This observation is supported in our material. In example (21), for instance, *effort* seems presupposed:

(21)   Jag <u>hann</u> lära mig en del... Hon lärde mig en del. (GT1)
        "I <u>managed</u> to learn a bit myself... She taught me a bit." (GT1T)

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[5] We include a Googled example since the corpus data did not contain clear examples of explicitly actualized complement.

In fact, it seems that this presupposition of effort is central to choosing *manage* as a translation. These translations have in common that there is some effort or uniqueness involved in someone's ability to do something (or not do something) within the time limitation set up. Very often, the examples are from negative polarity contexts. This is illustrated in (22) where the discourse context suggests that the conductor has particular (unique) abilities beyond what we normally expect from conductors:

(22)   By the time the driver has come out with his full range of rude words and actually given Johnny a box on the ears without Johnny realizing it, the conductor has managed to get the trolley poles back in place so the gentlemen can get back into their bus and return to their timetable, and allow all the other traffic that has piled up in the meantime to get going again, as the number fifty-two coming from the other direction has also stopped, purely out of sympathy, nothing dramatic. (PP1T)

We conclude that *manage* reflects actualized ability meanings presupposing a notion of effort. The actuality observation is important in light of our understanding of *hinna* as a modal verb: on the one hand, in a definition of (non-epistemic) modality as a means of referring to events/states beyond the here and now, e.g. to the possibility of some event taking place, actualized ability is not, strictly speaking, a modal meaning at all. On the other, the occurrence of so-called actuality entailments (Bhatt 1999) has been associated with modal verbs crosslinguistically, e.g. deontic (semi-) modal auxiliaries such as French *devoir* 'must/have to' (see Hacquard 2014 for discussion), and this suggests that the modality meaning cannot be dismissed purely on the grounds of actuality meaning. In section 7, we address the relation between actualized ability and modal meanings from the point of view of van der Auwera and Plungian's semantic map of modality.

Summing up, what the actuality translations tell us is that *hinna* can, indeed, imply that an event actually occurred, but it is not the case that all instances of *hinna* do this. In other words, *hinna* does not entail actuality, but it typically conveys it. Since we assume that *hinna*'s core meaning is that of time sufficiency, we suggest that actuality is a case of implicature, and that the translations with *manage* pick up this

implicature. It is not absolutely clear whether the implied actuality is tied to the lexical item *hinna*, however, or if it is more generally associated with expressions of sufficiency. We tentatively assume that actuality is a conversational implicature associated with at least some expressions of ability and sufficiency. As an example of a potential expression, we note that the Swedish verb *orka* ('have enough energy to be able to') appears to share the implication of actuality with *hinna,* as evidenced, for example, by a high proportion of English translations with *manage* for *orka* in the ESPC. In addition, Karttunen (1971) has noted that *too* and *enough* may, but need not, give rise to actuality readings. As regards the nature of the exact relation between sufficiency meanings and implications of actuality, we await further research.

4 Double translations and monosemy

Our initial classification in section 2 of the congruent correspondences as reflecting ability, time sufficiency or actuality meanings might suggest that *hinna* is polysemous between these readings, and that the correspondences reflect this. However, we have several reasons to think that the situation is different. For one, we have noted that in some of the negative polarity contexts, *hinna* corresponds to an ability modal which seems to capture a presupposition of ability in *hinna* which is conditioned by a context that makes a time-sufficiency meaning explicit (e.g. temporal dependent clauses), and the implicative verb *manage* seems to reflect a conversational implicature of actualization (and a presupposition of effort) in *hinna*, but since *manage* is an implicative verb, *ability* is also understood. There is thus reason to look beyond the congruent correspondences for clues about how the meaning of *hinna* is mirrored.

 An eye-opener in this respect is that, although there were actually very few examples in our data, translators may opt to translate *both* the ability/actuality component *and* the time sufficiency component of *hinna* in separate constructions. Consider (23):

(23) Jag ser ronden komma men <u>hinner</u> inte varna henne. (PCJ1)
   I see them coming but don't <u>manage</u> to warn her <u>in time.</u> (PCJ1T)

In (23), with an implicit time limitation 'before the round arrived', *hinna* is translated with both *manage to*, which entails actuality and ability, and *in time*, which has no source in the original other than *hinna*. In our opinion, there is nothing even remotely tautologous about the translation, it merely separates the meaning components of *hinna* into distinct expressions. Further, the translation underlines that the *actualized ability* reading is conditioned by limitations, which reflects Teleman et al's insightful description of *hinna* referred to in the introduction, as marking the ability of the subject referent to realize a particular action within a relevant time frame (Teleman et al 1999(4): 297).

The translation in (23) indicates to us that *hinna* is not polysemous, but rather that the three meaning components (time sufficiency, actuality, and ability) are present simultaneously. This means that a serious question arises with respect to the relative ease with which correspondences of *hinna* can be categorized as denoting ability, time sufficiency or actuality, as in Table 1 above. In section 5, we re-examine the data to see how the components can be identified in the correspondences, both in the cases which were initially given a single classification as time sufficiency, ability and actuality and in those translations initially classified as 'zero'.

5 Contextual time limitations

Table 1, was mainly concerned with congruent correspondences associated with *hinna* (in both directions of translation SO→ET and ST←EO), resulting in a relatively neat classification into ability, time sufficiency and actuality correspondences.[6] However, given the nature of time sufficiency, this approach did not really do justice to the correspondences. Nor, in fact, did we analyze the originals in enough detail. In particular, we did not analyze all originals with respect to the presence or absence of an explicit limiting time frame. In going through the correspondences, however, we note that a 'temporal' limiting point is commonly present in the context of the originals, both in the Swedish and in the English examples. Consider, for example, (24) and (25):

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[6] In addition, we noted accomplishment readings, but these were dismissed from the discussion on the grounds that they may represent a separate meaning of *hinna*.

(24) Men just den <u>här veckan</u> hade han inte <u>hunnit.</u> (HM2)
Her husband Robert usually baked all the bread they needed, but he <u>hadn't managed to</u> <u>that week</u>. (HM2T)

(25) He smells of peppermint LifeSavers; underneath that is his ordinary smell, of cedarwood lead pencils and wet sand. Sometimes he throws up into paper bags, or beside the road if my father <u>can</u> stop the car <u>in time</u>. (ST1)
Det luktar LifeSavers med mintsmak om honom; under det finns hans vanliga lukt, av blyertspennor i cederträ och våt sand. Ibland kräks han i papperspåsar, eller vid vägkanten om far <u>hinner</u> stanna bilen <u>i tid</u>. (ST1)

Both the original and the translation in (24) and (25) contain an explicit time limitation, *that week* in (24) and *in time* in (25). Initially, the correspondences were classified as actuality (*manage* in 27) and ability (*can* in 28), respectively, but clearly, this misses the point that the actuality/ability is seen in relation to a given time period. The pattern that emerges now is that the temporal contextual frame is present for correspondences with both time sufficiency verbs and (actualized) ability verbs. Thus, we can expect that even the zero correspondences occur with such contextual time limitations.

More specifically, upon close examination, it is clear that in roughly two thirds (20/27) of the zero translations and in three fourths of the zero sources (29/34), the duration of an event is related to another time period in one of three ways:

     I. A specifically defined time period (the relevant time frame is made specific)
    II. A point in time or the beginning of another event limits the time period.
   III. Other event as 'norm' (the relevant time-frame is set by the pace of another event)

Examples (26)-(28) are illustrations of I-III, respectively (the contextual time limitation is indicated in bold).

(26) Han står tyst **ett kort ögonblick**. **Tillräckligt länge** för att jag ska
      <u>hinna</u> se att någonting skiftar i hans ansikte. (MS1)
      He remains silent **for a moment**, **long enough** for me to see that
      something changes in his face. (MS1T)

(27) Ny kung blev Kristoffer av Bayern som bara <u>hann</u> styra några år
      innan han dog och Karl Knutsson Bonde valdes till kung. (HL1)
      The next king, Christopher of Bavaria, reigned for only a few
      years **before he died** and he was succeeded by Karl Knutsson
      Bonde, who (...). (HL1T)

(28) Hittills hade han inte varit utsatt för några olyckstillbud heller,
      medan Valfrid i sina trasiga och urväxta svenskkängor alltid fick
      springa med huggande mjälte för att <u>hinna</u> över med budkärran
      innan lokomotiven krossade honom som en lus på en tapet.
      (KE2)
      So far they had done their job, he had n't even had any close calls,
      while Valfrid, in his worn-down, outgrown work boots always had
      to rush across the tracks with his wheelbarrow, his heart pounding,
      **to keep the locomotive from crushing him like a louse on the
      wallpaper.** (KE2T)

Moreover, in three of the 'zero' translations (3/27), and of three of the
'zero' sources (3/34), a contextual element not present in the Swedish
version appears in the English version to underline the temporal
limitation. Examples (29) to (30) illustrate addition in such presence (in
bold):

(29) Och förmodligen skulle de inte ens ha <u>hunnit</u> få något larm, de
      skulle inte ens vara där. (JG1)
      Anyway, they would n't have received the alarm **yet**, would n't
      even be there waiting. (JG1T)

(30) To Aristotle **by now** the painting of which he and Homer were part
      was much more than an imitation. (JH1)
      För Aristoteles hade målningen som han och Homeros ingick
      i <u>hunnit</u> bli vida mer än en imitation. (JH1T)

In (29)-(30), the modal meaning of time sufficiency encoded in the auxiliary *hinna* in the Swedish originals is captured in the adverb *yet* in (29), and the prepositional phrase *by now* in (30). These translations can be described as 'divergent' translations (Johansson 2007: 25), i.e. a translation where the form of the original is changed, but meaning is kept, which means that they should be removed from the category zero translation in Table 1. Translations (29) and (30) clearly reflect Time limitation II: a point in time or the beginning of another event limits the time period.

In four of the zero translations (4/27) and five of the zero sources (5/34), we find that there is no clear evidence of a temporal contextual limitation in the sentence. One example is given in (31):

(31) Jag <u>hann</u> se hennes vita tänder när hon log mot barnet. (LH1)
      (I HINNA.past see her white teeth when she smiled to the child.)
      I saw her teeth **flash** as she smiled at him. (LH1T)

Without further contexts, the sentence in (31) can be interpreted so that *hinna* captures time sufficiency in the sense that the duration of her smile gave the speaker ('I') sufficient time to see 'her teeth'. In addition, it is possible that *hinna* comments on the brevity of the smile (i.e., the smile was so quick the speaker only barely had enough time to see her teeth). Some support for this analysis is the addition of the verb *flash* in the English translation. As pointed out to us by an anonymous reviewer, however, an equally likely explanation is that the time limitation is present in the wider context of the discourse. In this example, the previous sentence gives a hint of a limitation in that it explains how the woman returns inside her hut and is thus no longer visible to the narrator.

6. A note on time sufficiency and ability

The point of departure for this study was the observation that *hinna* conveys two modal meanings: *time sufficiency,* a specialized type of participant-external possibility and *ability*, a sub-category of participant-internal possibility. The results show that apart from some examples where *get to* translates the structure [*hinna* + place adverb], time-sufficiency is nearly always present in translations of *hinna,* either by a congruent translation correspondence such as *have time* or by contextual

time limitations that are carried over from the original or made more explicit by means of a divergent translation correspondence such as *by then*. This result is important, since it suggests that, except in constructions with [*hinna* + place adverb], *hinna* is not polysemous between ability and time sufficiency readings. Instead, we have suggested that time sufficiency is part of the core meaning and that *hinna* additionally presupposes ability and implies actuality via a conversational implicature.

Our proposal that time sufficiency, rather than ability, represents the core meaning of *hinna* is supported in cases where the ability presupposition does not go through. In our material, we have identified one context which clearly blocks an ability reading: with inanimate subjects, ability cannot be part of the meaning, i.e., it is not presupposed, and instead we get a pure time sufficiency reading. Also, in (32), the event is actualized, which additionally shows that ability and actuality are distinct.

(32)   I skaftet veckade sig skinnet och Franz hade legat lungsjuk så
       länge att det <u>hunnit</u> komma damm i vecken. (KE2)
       The uppers were creased, and Franz had been ill for so long that
       dust had accumulated in the crease. (KE2T)

In (32), *hunnit* seems to function as a comment on the length of the time period, but since we already have the adverbial *so long*, it adds very little in terms of meaning compared to the alternative without the auxiliary, which is the alternative chosen in the translation. In our material, we have only four examples with an inanimate Subject, and they have in common that they appear to add some minor comment, possibly of an aspectual nature, on the length of a period that has some relevance in the context. In addition, although our data include no such examples, *hinna* can occur with 'dummy' subjects like weather-*it*, as in (33):

(33)   Det hann börja regna innan utflykten var slut.
       It HINNA-past start to-rain before the-picknick was over.

Thus, with regard to the meaning of *hinna*, the English correspondences in this material suggest that Swedish *hinna* is a monosemous implicative verb where the modal category time sufficiency

implies the modal category ability in contexts with agentive subjects. The implication is asymmetric – whereas enough time implies ability, insufficient time does not imply inability. In contexts with inanimate subjects, on the other hand, the syntactic context may block the ability reading. In addition, in constructions with [*hinna* + adverb], often translated with *get to,* we may have a different, non-modal meaning of *hinna*, which suggests that *hinna* can be polysemous. We have also noted that evidence for regarding ability and time sufficiency as modal categories can be considered problematic in examples which involve actualization.

7. Hinna's semantic map

In this section, we argue that the observations about *hinna* as an implicative modal verb make sense viewed through the lens of van der Auwera and Plungian's (1998) proposal for a universal concepual space for modality: Modality's Semantic Map. We first introduce the notion of semantic map, and then place *hinna* on the map.

A semantic map represents a method for comparing languages with respect to meaning/use differences, and is based on empirical observations in a number of languages. As pointed out by Haspelmath (2003), one of the advantages of semantic maps is that they do not "imply a commitment to a particular choice among monosemic and polysemic analyses". What semantic maps do instead is that they show how expressions can be represented as covering a geometric semantic space, and thus they provide a means for comparison of form-meaning relations across languages. In the words of Boye (2010: 9): "The structure of a semantic map is an empirical result obtained by first identifying and generalizing over a number of comparable meanings across languages and then studying which meanings are directly related to each other in terms of synchronic polyfunctionality or diachronic change". Importantly, this means that entailments and presuppositions may be represented in separate categories on the map – as noted by van Leusen (2012: 426): what serves as an implication of lexical items at one point in time can become "conventionalised and part of their lexical description'" in the course of time.

We can now take a look at van der Auwera and Plungian's semantic map for modality (van der Auwera and Plungian 1998: 80). On this map,

modality is defined in terms of the notions of *possibility* and *necessity* whose meanings/uses form a continous space on the map. The map is interesting since it can be used to visualize the semantic boundaries of *hinna* in the universal conceptual space of modality, i.e., as a visualization beyond notions of polysemy and monosemy, or, for that matter, entailments, presuppositions and implicatures. To specify, according to van der Auwera and Plungian (1998), expressions for modality have moved or developed across adjacent categories on the map diachronically, and/or they can be polysemous or monosemous between two adjacent meanings synchronically. Figure 1 illustrates continuously related meaning categories in the semantic space of possibility, which is the space of interest for *hinna* (based on van der Auwera and Plungian 1998). The boxes with dotted pattern illustrate the semantic space coverd by *hinna*.

The semantic boundaries suggested in Figure 1 are based on our discussion of *hinna* as mirrored through its English correspondences. Two observations are of particular interest. Firstly, as suggested in the correspondences with the construction [verb + space adverbial], such as *arrive* and *get there*, *hinna* can be used for premodal meanings such as *arrive at* and *finish*. The map thus supports our suggestion in section 2 that an accomplishment meaning of *hinna* corresponding to a [verb + place adverbial] construction in English preceeds the other more modal meaning/uses of *hinna*. Secondly, regarding the correspondences with *have time*, *manage*, *be able to* or *can*, we have argued that *hinna*, by virtue of conversational implicature, covers the pre-modal adjacent meanings "participant-internal actuality" and "participant-external actuality", but also, by virtue of presupposed meaning, the modal meanings participant-internal possibility and, by entailment, participant-external possibility.
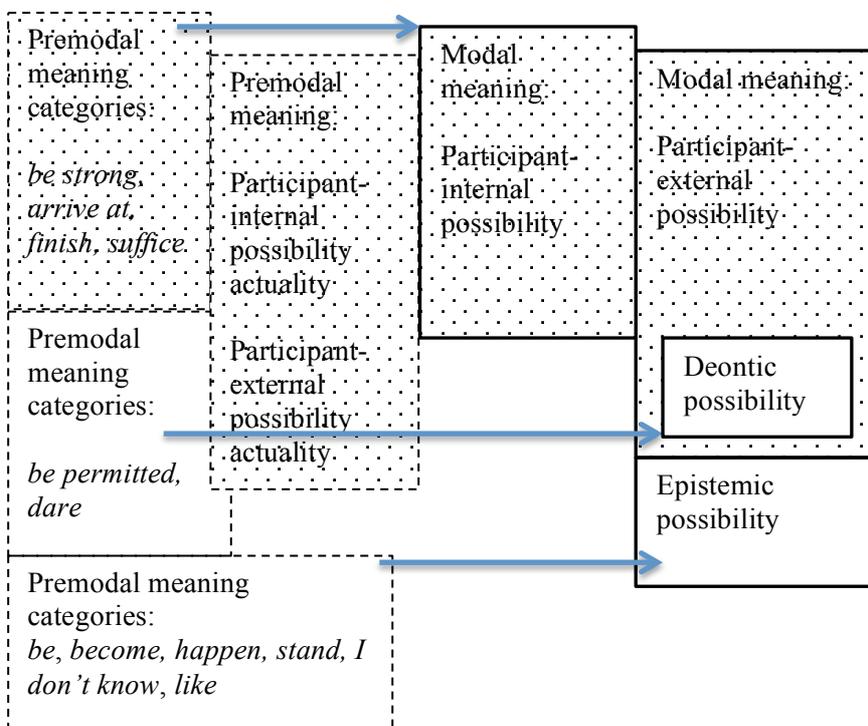
Figure 1 *Hinna* on Possibility's Semantic Map (based on van der Auwera and Plungian's Modality's Semantic Map (1998)). *Hinna* covers the patterned area (dots). Dotted lines represent premodal meanings and solid lines modal meanings. Arrows show how premodal lexical categories can grammaticalize into modal meanings.

Figure 1, then, provides a solution to the 'actualization' problem noted particularly for past-tense examples of *hinna*. In the map, participant-internal possibility actuality and participant-external possibility actuality are regarded as pre-modal categories related to the modal categories in terms of adjacency. We note further that *hinna* typically combines participant-internal possibility (ability) and participant-external possibility (time sufficiency), and argue that the relation between these meanings is one of implication, i.e. time sufficiency presupposes ability. This suggests to us that *hinna* has ventured into the domains of participant-internal and participant-external possibility in 'one go'. That is, since time-sufficiency meaning is

obligatorily present for *hinna*, we find it unlikely that *hinna* has had, or can have, a purely participant-internal possibility meaning. The pre-modal category mirrored in the translations with *arrive* and *get there*, on the other hand, might represent a separate meaning of *hinna*. From the perspective of the semantic map, there is nothing contradictory in *hinna* behaving both as a polysemous verb (separate meanings) and a monosemous verb (implication/vagueness). As pointed out by Haspelmath (2003), for instance, an expression can be polysemous with respect to some distinctions on a map and vague (monosemous) between others.

9 Conclusion

By studying the correspondences of the Swedish verb *hinna,* we believe we have managed to show the usefulness of translation corpora both in generating or confirming hypotheses about the semantic properties of lexical items, and in separating different approaches to phenomena like multiple meanings. By approaching the corpus correspondences from two different angles; focusing first on congruent correspondences, and then on semantic features in the context of such correspondences, we were able to demonstrate that *hinna* is best understood as encoding two meaning components, i.e. time sufficiency as entailment and ability as presupposition, but also typically conversationally implying actuality.

Figures 2 and 3 provide a schematic conclusion of parts of our analysis. Figure 1 illustrates how the meaning components of *hinna* are captured in the correspondences with ability verbs, such as as *can* or *be able to,* and Figure 3 illurates how the same components are captured in the correspondences with *manage*:
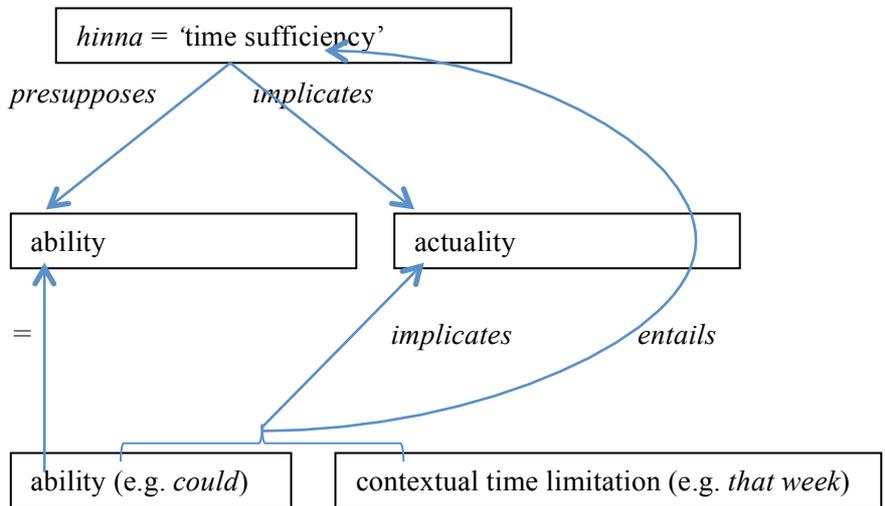
hinna = 'time sufficiency'

presupposes *implicates*

ability

actuality

=

implicates *entails*

ability (e.g. *could*)

contextual time limitation (e.g. *that week*)

Figure 2 *Hinna* corresponding to ability verbs

hinna = 'time sufficiency'

presupposes *implicates*

ability

actuality

entails *entails*
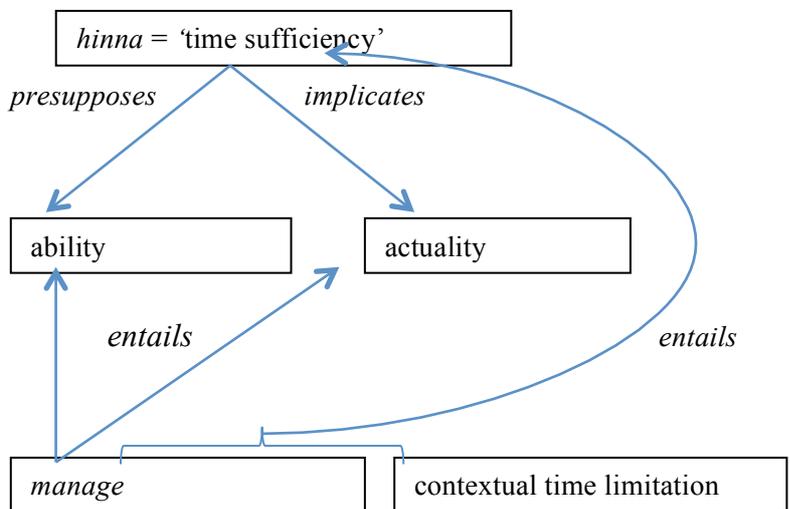
manage

contextual time limitation

Figure 3 *Hinna* corresponding to *manage*

From top to bottom Figures 2 and 3 illustrate our analysis of 'time sufficiency' as the core semantic component of *hinna*, and also how *hinna* presupposes ability and conversationally implicates actualization. From bottom to top they show how English correspondences (both translations and sources) can take different paths to these meaning components. Figure 2 shows how ability translations such as *can* together with a contextual time limitation entail time sufficiency and conversationally imply actuality, and Figure 3 shows how *manage* entails actuality on its own (as does *was able to*, if Bhatt 1999 is right), but can only imply time sufficiency in case the context supplies an expression denoting a time limitation such as *in time*. Correspondences directly expressing time sufficiency, such as *have time*, are not illustrated in Figures 2 and 3, but here we assume that the meaning time sufficiency is accessed directly.

We believe that our description of the meaning components of *hinna* is compatible with an analysis of *hinna* as an "implicative" verb (Karttunen 1971, 2012), even if we do not claim that actuality is an entailment of *hinna*, but rather a conversational implicature. Further, since we claim that *hinna* is unambiguously a sufficiency modal, enriched by implications, we assume that its core semantics may be derived via a Kratzerian analysis (in which underspecification and contextual determination of the core semantics is used to deal with the alleged ambiguity of modals like *must* or *can*). However, the exact relation between our approach and the formal treatments of 'polyfunctional' modality proposed by Kratzer (1981, 1991) remains unclear.

We argue, though, that time sufficiency and ability are contiguous modal meanings, in the sense that they occupy neighbouring areas in a semantic map of modality. Concretely, from the point of view of van der Auwera and Plungian's Modality's Semantic Map (1998), we understand both to be non-epistemic possibility senses; ability is participant-internal possibility, whereas time sufficiency is participant-external possibility. We also claim that actualized ability, although strictly speaking pre-modal, is contiguous with 'true' modal ability. For our present purposes, the distinction between pre-modal and true modal senses is not crucial, however. More important is the observation that the different senses are contiguous, which is compatible with our discussion of how the time sufficiency and ability/actuality meanings are related.

An important advantage of viewing meaning relations in terms of semantic maps is that it illustrates that even implied and presupposed meanings can be analysed as contiguous. This is interesting from a contrastive/typological perspective since it offers a possibility to illustrate, as suggested by van Leusen (2012), how implications can become part of the core meaning of words by way of conventionalization or specialization in one language, but not another, resulting in a situation where corresponding verbs in two closely related languages differ only in 'the strength of their implicative inference'. We take studies that zoom in on such contrastive differences to be a fruitful area of future exploration. Another area for further research that we have only touched upon in this paper is how entailments, presuppositions and implications of verbs interact with tense and aspect differences.

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