Acquisitions in English:
On vagueness and the use of contrastive data
in tense and aspect research
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In the present presentation I will take up in detail the concept of acquisition in English. Intricately related with this concept is the question of vagueness, something which I will try to convince the audience that is essential for natural language understanding.

The whole presentation will be corpus-based on a translation corpus, and I will take some pains to illustrate the advantages -- and the limitations -- of this approach, presenting some reflections on the actual process followed and the ways it could have been improved.

Underlying the whole presentation is my belief that aspectual categories are language-dependent, an idea I have presented in a previous seminar and which I discuss at more length in my thesis. In that context, I will discuss whether my recognition of the "corresponding" class of Aquisições for Portuguese should be seen as a counter-argument to such a claim.

What is an acquisition?

An acquisition is a category of the English tense and aspect system, which labels the expressions that correspond both to a state and the inception of such state. Those expressions are vague between the two denotations; sometimes the context allows for a clear choice; but not always.

For this definition to make sense, one has to interpret aspectual classification as a classification of relationships between world situations recognized/discretized by a language and linguistic chunks.

Figure 1

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Support for the concept of acquisition in the literature

A number of different scholars, with different motivation and approach, have noted a problem with what has been traditionally called English statives. I sustain that these remarks are related and can be unified through the concept of acquisition.

I present examples from the verb classification, discourse and contrastive camps.

Verb classification

When discussing time schemata in the Vendlerian framework, some verbs stood up separate from the start:

Vendler (1967) wrote:

"I do not claim that (...) a verb exhibiting a use fairly covered by one schema cannot have divergent uses, which in turn may be described in terms of the other schemata. As a matter of fact, precisely those verbs that call for two or more time schemata will provide the most interesting instances of conceptual divergence in this respect -- an ambiguity which, if undetected, might lead to confusion." (page 98)

(...) "There is, however, a group of verbs with conceptual divergences of their own. With respect to many of these verbs, it is hardly possible to establish the category to which they "originally" belong. The group of verbs I have in mind comprises philosophically notorious specimens like (...), to know, to understand, on the one hand, and to see, to hear, and their kindred on the other." (page 110)

(...) Knowing is clearly a state in its dominant uses (knowing that, knowing how, knowing something [somebody]). (...) Doubts may arise, however, from uses like And then suddenly I knew! and Now I know it! which sound like achievements. (...) A little reflection shows that they are related rather rather as getting married (achievement) is to being married (generic state)." (page 112)

And he goes on discussing these verbs in the remaining 12 pages of his 25 pages chapter...

Dowty (1977), in his 2.2.7 Examples of the Four Vendler Categories in Syntactic and Semantic Subcategories (pp.65-71) includes in the categories:

"I. STATES. D. 5. Physical perception verbs [all are achievements as well as states] see, hear, smell, taste, feel, perceive. 6. Cognitive verbs with propositional objects [also achievements] understand, know, believe, doubt, regret. 7. "Psych-Movement" Verbs [propositional subject, human object; also achievements] dismay, worry, please, surprise, astonish. (...) III.ACHIEVEMENTS. F. "Cognitive (many both achievements and states) 1. Physical perception: notice, spot, see, catch sight of, hear, taste, smell, feel, lose sight of. 2. Abstract cognitive: realize, recognize, understand, detect, find (also accomplishment), remember, forget."

Heinämäki (1984:165) notes that:

"many, if not all cognitive verbs and perception verbs, can both have the achievement interpretation and denote the state-of-affairs that results from the achievement"
Discourse analysis

A recurrent problem within discourse analysis has been the treatment of discourses such as *John closed the door and switched off the light. It was pitch dark around him.*, discussed at least in Partee (1984), Dowty (1986), and Nerbonne (1986).

The rules for discourse interpretation have been considerably complicated because of the possibility of these occurrences, where the time associated with states following events do not overlap with these. Noting that *be* can be considered an event makes at once the problem theoretically simpler.

But verbs other than *be* have also been discussed in the discourse literature and pointed out as having two faces:

L. Carlson (1981:38) considered the "dynamic" class, illustrated by the verb *stand*, which allowed momentaneous adverbials, progressive aspect, and durative adverbials:

"An intermediate class (...) is recognized between Vendler's classes "stative" and "activity" sharing properties of both."

Couper-Kuhlen (1987:15), discussing the sentence *He sat straight up in his chair, staring at the bottle*, says:

"the event <he sit straight up in his chair> is open to two different temporal interpretations, depending on whether we treat it as an activity with no clear initial or ending point [...] or an Accomplishment with a clear beginning point".

While Caenepeel (1989:85, my emphasis), discussing a sentence with *sat* as main verb, states even more bluntly:

"The reader's interpretation of verbs which are, in principle, ambiguous between a state and an event interpretation can be explained along the same lines: if a contingency relation can be detected between the aspectually ambiguous proposition and the state of affairs which precedes it the proposition can be interpreted as an event:

"Tessa, sit down. I'll make you some oatmeal." As if a hand were pressing down on her shoulder, she sat."

Moens (1987:82), discussing *when*-clauses in connection with a main stative clause, contends:

"(...) the state cannot have been caused by that culmination point. Whether or not this is the case is largely dependent on world knowledge and may often remain undetermined. Consider the examples (cf. Smith 1983:487):

When Harry broke that vase, Sue was in a good mood.
When Harry broke that vase, Sue was in an extremely bad mood.

(...) For some states, (...) an inchoative reading is easier to come by, as in *When Harry came in, I knew the answer."

This last example shows that even statives for which there is a lexical counterpart (in this case, *learn*) are possible to interpret as inceptive.

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Translation studies

Matveyeva (1985) discusses English to Russian translation in detail, and, as an instance of her claim that "different verbs may denote phases of the course of an action" (Matveyeva, 1985:93), she presents (where the Portuguese translation was substituted for the Russian text):

"a sentence conveying an action which has led to a specific state [which is described in the original]" (page 98)
(...)
Am I mad? -> Endoideci? "(page 104)

At the time when I believed in crosslingual aspectual classes, I actually suggested an acquisition class for both languages in Santos (1991a:4-5):

We then posit the existence of lexical items simultaneously (even though not necessarily ambiguously) meaning a set of time patterns: (...) Acquisitions denote both an achievement and its resulting state.
(...)
Imperfeito/Perfeito distinction in Portuguese, consistently selects the two readings. (...) Perfeito does not imply the negation of its argument in a time prior or equal to the present, as is the case with all other classes (...)
Occurrence with Começar/Begin (as opposed to achievements) (...)
Occurrence in simple present (as opposed to achievements) in both languages (...)
Not occurring in the English present perfect (as opposed to states and achievements) (...)

No doubt, however, that the main evidence for that claim were Portuguese aquisições, together with the fact that a few of those Portuguese aquisições translated into English verbs that seemed to have a similar behaviour: remember, see, know about, ?realize, ?recognize. I now actually doubt most of my English insights at the time.

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Research path

1. I noted that some verbs are contrastively related to more than one verb — something generally known, especially if one does (machine) translation.

| Verb      | Meanings                                      | Tense form          | Kind of subject       | Technical domain | Number of arguments | World knowledge, accompanying clauses | Physical vagueness | Kind of object | Reflexive/non-reflexive | World knowledge, accompanying clauses | Kind of object |
|-----------|-----------------------------------------------|---------------------|-----------------------|------------------|---------------------|---------------------------------------|-------------------|----------------|-----------------------------|----------------------------------------|----------------|-----------------------|
| conhecer | know, meet, be acquainted with, get acquainted with |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| comer     | essen, fressen (people), ingest food, (animals) ingest food |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| céu       | heaven, sky (spiritually above earth)          |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| deixar    | leave, let, abandon place, abandon control    |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| ficar     | get, remain, new result state, continuing result state |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| logo      | pond, lake (small-sized), large-sized         |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| retirar   | remove, retreat, leave, move things out of a place, move self out of a place |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| enganar   | cheat, fail, be wrong, induce others in error, induce self in error |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| oferecer  | give, offer, unconditional transfer, conditional transfer |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |
| passar    | spend, cross, go by, leave behind in time, leave behind in space |                     |                       |                  |                     |                                       |                   |                |                             |                                         |                |

I selected as more relevant for my study the case where the main clues were directly knitted to the tense and aspect system. It turned out that that for the study of the English tense and aspect system the notion of result could not be dispensed with, and thus the ficar instance was also very much under scrutiny.

2. Because of the pair ser/estar, a must for the study of Portuguese tense and aspect, I analysed especially the translation of the English be.

As reported at the Oslo meeting in 1995 (Santos, 1995), and described in Chapter 14 of my dissertation, what emerged was that this distinction was not present in English, but that be did in fact behave in a dichotomous way regarding translation into Portuguese, having one translation as event and another as state.
Then I noticed, during the study of other translation pairs (in particular, to test the hypothesis that position verbs were much more frequent in English than in Portuguese) that position verbs worked like that too.

The pervasiveness of this phenomenon convinced me that a new English lexical class should be postulated.

3. Because I am convinced that grammatical distinctions go hand in hand with the lexicon, the above realization led to the hypothesis that I was facing a new English aspectual class, i.e., a category that was an integral part of the English tense and aspect system.

It was easily seen to be the case that the passive and the pluperfect worked as acquisitions, but actual look at the corpus produced substantial additional evidence:

the modal could
the verb have
passive
perfect
position verb + ing

Not all combinations of an acquisition being used as a grammatical auxiliary produce resulting acquisitions, though. The progressive is a case in point: it cannot be read as imperative.

An exception to the acquisitional behaviour of be, noted e.g. by Vlach (1993:274), is "the more exclusive category of locative stative", his examples being Allen is under the table and Betsy is at work. These sentences match in all respects with progressive sentences, which are states (not acquisitions) in my model.

4. Background "crunching": Having finished the dissertation, other cases — that show that the phenomenon is not typical of the corpus used there — have appeared:

- By looking at translations only, from English, I note a large number of weird sounding Portuguese sentences that must come from the difficulty to translate acquisitions:

  From Viva o Nodi, translation by Maria da Graça Moctezuma of Enid Blyton's Hurrah for little Noddy!

  E todos tiveram de se pôr em fila e deitar uma moeda para um capacete dos policiais. Este ficou muito pesado quando caiu lá dentro a última moeda! (p.21)
  'And all must stand in a queue and throw a coin to a policeman helmet. This was very heavy when the last coin entered it!'

  O Nodi ficou tão admirado que nem conseguia gritar. (p.12)
  'Noddy was so astonished that he was not even able to shout.'

  E antes que (...) fecharam-no na esquadra (...) Como o Nodi estava triste! A sua cabeça até deixou de abanar.
  'And before he (...) they put him in jail. How sad Noddy was! His head even
stopped waving.'

Acompanhou-os até à toca dos coelhos e ali estavam todos os carros!
'He accompanied them to the rabbit hole and there were all the cars!'

O chefe da polícia deixou o Nodi guiar o autocarro como recompensa, e ele estava tão entusiasmado que é difícil descrever
'The police chief let Noddy drive the bus as a reward, and he was so excited that it is difficult to describe'

Por isso sentaram-se para o banquete e não levou muito tempo que os pratos ficassem todos vazios
'Therefore they sat to the banquet and it did not take long until the plates were all empty'

From Os elefantes nunca saltam, translation by Carlos Grifo Babo of Violet Easton's Elephants never jump:

Esta resposta provocou grande excitação entre os animais e, assim que o elefante ficou suficientemente longe para não os ouvir, logo ali combinaram fazer um concurso, a ver quem conseguia que o elefante desse um salto.
'This answer caused great excitement among the animals and, as soon as the elephant was far enough not to hear them, at once arranged a competition to see who would make the elephant jump'

• By looking at English originals (and performing simultaneous translation):

From (an abridged version, Walt Disney based) Peter Pan:

They flew on and on through the starlit sky, until at last the day was dawning.
Voaram pelo céu estrelado até a manhã romper

Hearing the loud ticking of the watch, the Captain fled crying out, "Argh! Help!"

Ao ouvir o tiquetaque do relógio, o Capitão fugiu aos gritos: — Ai! Socorro!

One might say that some ing-clauses as well as some presentative clauses carry the same vagueness: inceptive or stative?
Corpus evidence for the concept of acquisition

Methodological question

How can a corpus of translations produce evidence for a monolingual hypothesis?

For a claim of vagueness in the source language, it may:

- Display examples of the two kinds of translations
- Display single examples where it is not clear what the "right" choice is (better put: no choice should be made if the target language had the means to preserve the vagueness): these are typically cases where there is disagreement among translators.
- Displaying quantitative evidence that a particular phenomenon is relevant.

How can a corpus of translations further help in the development of monolingual hypotheses?

- Allowing investigation of frequent correlates, in both languages, and the further study of these in order to identify what is responsible for what.

Practical data

Some actual evidence:

- Examples of the two kinds of translations for a large range of different source items
- Single dubious examples
- some quantitative wrap-up
Some dangers of a corpus-based contrastive study

The foundations of corpus-based contrastive studies have yet to be laid. In addition to the already extremely complex task of deriving reliable generalizations from corpora in general, the problem of translation lurks behind.

But some things should at once be clearly stated:

1. The existence of translations into two categories does not by itself license the inference that the category means (or can mean) these two things. Considerations of target adequacy can cause the translators to systematically (or not) add or drop information.

2. The existence of translations into two categories may be led by the structure of the target language, and not be meaningful in the source language (i.e., there are no two categories in the source language). In other words, contrastive evidence per se cannot base a monolingual claim: one has to distinguish between monolingual vagueness and contrastive vagueness.

3. Using a translation corpus means that one is working as well with contrastive hypotheses, it won’t do to sweep these under the carpet. In particular, one must address the two alternative possibilities (listed in 1. and 2. above) before one can present two kinds of translations as evidence for a monolingual claim.
The significance of vagueness

I hold that vagueness is an essential property of natural language.

Scattered arguments for vagueness

Hintikka, 1980:4:

One of the most interesting features of game-theoretical semantics in general is that many game rules leave it open which player (myself or nature) makes a move. This is neither an imperfection (e.g., ambiguity) of language nor a flaw in the game rules, but an important part of how our language actually works.

van Benthem, 1986:63-71, 125:

These various examples point at general type-change mechanisms in natural language. Many expressions do not stay within one single category: they can travel, within certain constraints.

[...]

The three kinds of type change thus identified share one common feature: one single expression adapts itself to various linguistic contexts.

[...]

Expressions of natural language need not stay in their basic category, but can assume higher types when desired for the purpose of interpretation. [...] Still, there is a system to such type changes: not anything goes.

Kamp & Reyle, 1993:505:

There is much to be said for conceptual rigour. Indeed, within philosophy the demand for it has been all to the good. But in natural language semantics the situation is, we think, somewhat different. One of the central tasks in semantics is to articulate the conceptual structures that guide and support our, human, understanding of the languages we use. If that understanding crucially involves concepts which are to some degree underdetermined, then the semanticist has the task of spelling out precisely how and to what extent the concept is underdetermined; it will not do to substitute a fully determinate concept of one’s own conception for the underdetermined notion that is in actual use.

But what is vagueness, after all?

Let me suggest some ways of characterizing vagueness: first, in a negative way, by distinguishing between it and ambiguity:

# vagueness is systematic, ambiguity is accidental
# choice is information preserving in ambiguity, but not in vagueness
# ambiguity corresponds to homonymy, vagueness to polysemy (Kempson, 19)
# vagueness is present in natural language both in competence and in performance, while ambiguity is a property of only the latter

Then, I discussing some positive characterizations:

Analogue and discrete vagueness

There is analogue and discrete vagueness. It is the latter I am interested in, because it is the
one relevant for grammar (grammatical categories are discrete -- though vague). Such discrete vagueness has been described precisely by Keenan (1978:173) thus:

if a speaker can remain indifferent between alternatives $a$ and $b$ and still meaningfully assert some sentence, then the sentence is vague according as $a$ or $b$ obtains

Natural language vagueness corresponds, for me, to a logical-OR (inclusive) plus some sharing of the two members of the OR.

I.e., it corresponds to the cases where we have an expression which behaves as a logical OR (i.e., is true when at least one of the disjuncts is true) but the disjuncts are not independent.

(share variables, share conceptual structures, etc.)

**One-dimensional and multidimensional vagueness**

**Note:** Dahl (1985:6) distinguishes between one-dimensional and multi-dimensional impreciseness; in defining the latter for the concept 'being Swedish', he says

we do not know which of a number of criteria should be decisive, and there is no way of reducing 'Swedishness' to a one-dimensional scale.

I agree that the question of multiple defined objects is important, too, but it is not the one I am after here, because Dahl's multiple criteria are independent, while mine are not. I.e., the problem is not a fuzziness between stativeness and eventiveness (whose criteria are independent) but dependent criteria relating fairly distinct (not fuzzy) things.

**Monolingual and contrastive vagueness**

Another especially relevant distinction is the one between monolingual and contrastive vagueness:

Monolingual vagueness has clauses over the model of the "real world"; contrastive vagueness has clauses over the model of the world as seen by the other language, or simply clauses over the other language. In other words, the metalanguage for defining vagueness can be model theory or another language. (For translation you don't need to go further than the other language: but that's another story.)

Again, this distinction is not mine. A specially relevant reference in this respect is Keenan (1976:166):

it would surely be surprising, and a very strong empirical claim, that different languages using different means to express 'meanings' always arrived at exactly the same end.

An interesting consequence of the difference between ambiguity vs. vagueness, also pointed out by Keenan, is that in cases where the target language has no corresponding ambiguous or vague device, in the former case a translation can be exact, while in the latter it will always be inexact.

But one could also cite Kaplan et al.'s (1989:276) remark concerning translation:

The target structures may and usually will have grammatical and semantic features that are
not determined by the source. [...] for a target sentence to be an adequate translation of a
given source sentence, it must be the case that a minimal structure assigned to that sentence
by the target grammar is subsumed by a minimal solution to the transfer description. One
desirable consequence of this formalization is that it permits two distinct target strings for a
source string whose meaning in the absence of other information is vague but not
ambiguous.

**Relativist methodology, not necessarily results**

*Objection:* There are acquisitions in English, aquisições in Portuguese. So aren't these
just different labels for the same (universal) aspectual class?

What is an Aquisição? It is a category of the Portuguese tense and aspect system which
labels the expressions that correspond both to a state and the inception of such state. Those
expressions are vague between the two denotations; sometimes the context allows for a clear
choice; but not always.

Examples: *conhecer* (know, meet), *perceber* (realize, understand), *saber de* (learn, hear,
know), *reconhecer* (recognize, know), *rodear* (surround), *ter* (have)

Now, the first objection to the objection is: It is true that there is far from an overlap
between the English and the Portuguese classes.

*O:* One possible answer is: These are just lexical idiosyncracies; the kind of details
Chomsky is not interested in, only to be suffered by MT developers (or MT lexicographers)... or
human translators.

My answer is: They are not lexical idiosyncracies: together come grammatical and
quantitative facts as well. They point to a different organization of the grammar of the language,
and they should be taken into account in any realistic model of the two languages. Contrastive
evidence makes that furthermore clear when one sees that even the cases where aspectual class
preservation is (in a competence model) possible actual translations diverge!

*O:* OK, but then how can you explain that there are two classes with a mirror definition in
the two languages?

If one assumes that model-theoretically events and states are language-independent
concepts, then there is a finite (or at least countable) number of combinations that can be
actualized in any natural language. It is theoretically possible — and fairly probable — that two
languages have the same combinations, but that's all!

To the degree that the languages have carved reality the same way (in other words, have

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lexical items that almost overlap in reference) it is also probable that they have assigned those lexical items to the corresponding combination.

But one should not assume that languages have carved reality the same way — at least before contrastive evidence is amassed!

Bottom line: I defend a relativist methodology, but the results are only dependent on the languages themselves! And that is as it should be...

References


1. (p.205) And she was silent, for his voice was command.
    Ela calou-se, porque a voz dele era uma ordem.

2. (p.205) Kino held the great pearl in his hand, and it was warm and
    alive in his hand.
    Kino apertou a pérola na mão e sentiu-a quente e viva.

3. (p.475) He was quiet now
    Agora a criança acalmara

4. (p.500) And suddenly he was afraid of his talking
    E, de repente, assustou-se com os próprios pensamentos

5. (p.501) Suddenly Kino was afraid.
    Nessa altura, Kino sentiu um medo súbito.

6. (p.500) Instantly Juana was on her feet and her hand lay on his arm.
    De um salto, Joana pôs-se de pé e pousou a mão no braço de Kino.

7. (p.212) Kino's brother Juan Tomás and his fat wife Apolonia and their
    four children crowded in the door and blocked the entrance
    João Tomás, irmão de Kino, a gorda Apolónia, mulher dele, e
    os quatro filhos vieram das suas cabanas, amontoaram-se à
    porta, barrando a entrada

8. (p.212) the red swelling extended farther around it in a hard lymphatic
    mound
    toda a bolha vermelha se alargara numa dura baba linfática

9. (p.475) only a few small barnacles adhered to the shell
    só algumas pequenas lapas se lhe tinham agarrado

10. (p.515) "I am sorry, my friend," he said, and his shoulders rose a little
    to indicate that the misfortune was no fault of his.
    -- Lamento muito, meu amigo -- disse ele. E erguia um pouco
    os ombros para mostrar bem que não tinha culpa nenhuma
    daquela contrariedade.

11. (p.208) and any children who showed a tendency to scuffle [...] were
    hissed to silence by the elders.
    Se qualquer criança tentava brigar, [...] logo os irmãos mais
    velhos a obrigavam a estar quieta.
12. (p.209) he thought Kino might look toward the place where it was buried.
Pensava que Kino havia de denunciar com os olhos o lugar onde a esconderia.

13. (p.208) and the neighbours were hushed
Os vizinhos ficaram mudos

14. (p.224) Kino's eyes were hooded now, his cheeks were drawn taut.
Kino tinha os olhos velados e as faces retesadas:

15. (p.410) and the canoes were drawn up in front of this area.
e era em frente dessa zona que os barcos se alinhavam.

16. (p.209) The great pearl was wrapped in an old soft piece of deerskin and placed in a little leather bag and the leather bag was in a pocket in Kino's shirt.
Embrulhou a pérola num velho pedaço de macia pele de veado, meteu-a num pequenino saco de coiro, e o saco de coiro, por sua vez, na algibeira da camisa.

17. (p.481) "It was torn up and the floor dug--even the baby's box turned out,
--Revistaram tudo, escavaram o chão. Até o caixote de Coyotito revolveram.

perception and could:

18. (p.211) And, looking down, she could see the cigarette of the man on watch.
Por baixo da gruta, Joana viu o cigarro da sentinel.

19. (p.428) Now they could see the little road ahead of them
Agora viam a estrada debaixo dos olhos

20. (p.431) Even in the distance he could see the two on foot moving slowly along
Mesmo àquela distância, pôde ver que os que vinham a pé andavam lentamente

21. (p.438) Kino heard the baby whimper, and he knew from the muffled sounds that Juana had covered his head with her shawl.
Kino ouvia o pequeno choramingar, e percebia, pelo som abafado, que Joana lhe tapara a cabeça com o xale.