Young children's understanding of ongoing vs. completion

—studies in Imperfective and Perfective Participles

FiGS (Forces in Grammatical Structures)

Ayumi Matsuo
University of Sheffield

Early production

(a) Lost it (Bethan 20)
(b) Chocolate gone. Daddy gone. Teddy gone to sleep. Teddy fallen over. Tractor broken. Drink gone. (Daniel 22-24)

(a) Baby talking (Hayley 20)
(b) Birdie flying. Dog barking. Him swimming, Joey eating. (Bethan 21)
(c) Her going on walk. Lady eating fingers. (Angharad 23)
(d) Roland coming as well. (Daniel 24)

Introduction

Cross-linguistic research on the acquisition of the grammatical aspect morphology, especially with respect to the perfective-imperfective distinction, started in the 70's with Brown (1973); Bronckart and Sinclair (1973) and de Villiers and de Villiers (1973); however, until now there has been some discrepancy in the literature regarding the age at which children come to comprehend the perfective-imperfective distinction.

Shirai and Andersen (1995)

- Proto-type theory (environmentally-driven)
- Children search for prototypical patterns in the adult speech.
- If the adults use *-ed* with the verbs with clear ending and *-ing* with the ongoing events then that is what the children produce at first (before acquiring the full category).

Aspect first hypothesis

Children are using lexical aspect as a determinant for morphology that expresses tense/grammatical aspect (namely, -ed and -ing). Wagner (1998)

- Aspect before Tense Hypothesis; Aspect First Hypothesis
- Defective Tense (Bloom, Lifter and Hafitz (1980))
- Bronckart and Sinclair (1973)

Production before complehension?

Many researchers talked about the verbal morphology (*-ed* and *-ing*) being used very early

But…

Do children really understand the distinction between ongoing vs. completion (imperfective vs. perfective) aspect?

Findings from previous research

Weist, Sysocka and Lyytinen's (1991)

English and Polish children showed perfective-imperfective distinction using the grammatical aspect morphology at the age 2;6.

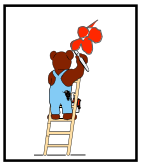
Wagner (2002)

English children did not show the distinction until age 4.

Weist et al. (1991) (success at age 2;6)

The bear drew a flower.

The bear was drawing a flower.



Why did children succeed in Weist's study?

- There was a smiling agent next to a completed picture and an agent that was engaged in the activity next to an ongoing picture. Maybe these agents (cf. smiling bear) served as a cue for imperfective and perfective interpretations.

Asher PERSPECTIVE function (1992)

Intentionality is encoded into the interpretation of ongoingness via the PERSPECTIVE function. A perspective is licensed by 'what has been mentioned in the discourse".

The bear that is engaged in a drawing activity--a good candidate cue for the interpretation of ongoingness.

Wagner's question

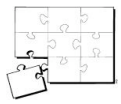
Do children understand the imperfective-perfective distinction when only given information about the relative completion of the object involved?

What is new in Wagner's study?

The agent information is absent from the scenes.

The girl was filling in a puzzle.

The girl filled in a puzzle.



Wagner's participant

Three groups

27 2-year-olds (mean age 2;8) (1;11-3;2)
20 4-year-olds (mean age 3;11) (3;3-4;5)
12 5-year-olds (mean age 5;0) (4;6-5;7)

Plus 16 college age students

Events used

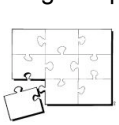
- 4 telic events (roll a car to school, fill in a puzzle, empty out a cup and draw a face)
- Method: A forced-choice sentence-to scene matching task

What is new in Wagner's study?

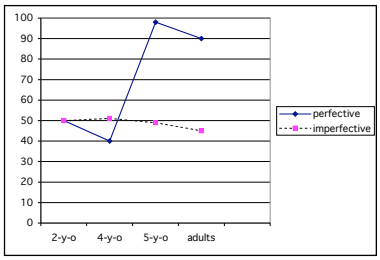
- The agent information is absent from the scenes.

The bunny: I was filling filling in a puzzle.

The elephant: I filled in a puzzle.



Wagner's results (mean correct with test sentences)



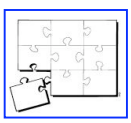
Two main findings

Given object-oriented information only, the children did not succeed in the task until age 5.

5-year-olds and adults remained agnostic about whereto match the imperfective sentence.

Lack of entailment

- I was filling a puzzle.(imperfective)
- I filled in a puzzle. (perfective)



Complication with Weist et al. and Wagner's study

According to Comrie (1976), Demirdache & Uribe-Etxevarria (1997), Dowty (1979) and Klein (1994), the perfective aspect in 'I filled in a puzzle' entails that the event of filling in a puzzle is complete; on the other hand, the imperfective aspect in 'I was filling in a puzzle' remains neutral about the completion of the event, which Wagner (2002: 122) terms "a lack of entailment".

Klein (1994); Demirdache & Uribe-Etxevarria (1997)

I was filling in a puzzle.

UT

possibility 1: ----[----]---------- |

possibility 2: ----[----]----------|---------

-

I filled in a puzzle.

[----------] |

The goal of this study is to investigate...

Whether young children know that present participles go with ongoing events whereas perfective participles go with completed events

Present vs. perfect participles (attributive use)

- Burning candle/boiling water/melting ice cream (present participles)
- Burned candle/boiled water/melted ice cream (perfective participles)

Experiment-the aim

The aim of the experiment therefore is twofold:

(i) extend the study of aspect to participles and by doing so,

(ii) disentangle tense from aspect. As noted earlier, the previous experimental sentences in included a past tense, while the new stimuli, being NPs (Noun Phrases), do not include any finiteness markers.

Klein (2002), 'On times and arguments'

present and perfect participles:non-FIN-linkable elements

Burning candle

UT

possibility 1: ----[--|--]----------

possibility 2: ----[--|--]----------

Burned candle

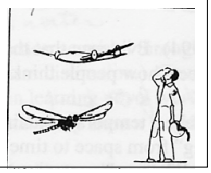
[---------- |]

Advantages of participles

The imperfective and perfective participles that are used in this study are not complicated by the interaction of aspect with tense. In other words, being a tenseless participle, the imperfective participles do not involve two possibilities. The participal forms get around the complication of "a lack of entailment".

What this study does NOT cover...

- Passive participles: pushed boy / beaten cat / washed clothes
- Adjectival participles (compounds): melting chocolate (chocolate for melting) / camping car / flying object
- Bowerman (2002)
- Classnotes:



Experiment

- Question: Do children know that -ing selects a subinterval of the first temporal interval of Vs and -ed relates the second time argument yielding a perfective reading? Do they do better in tenseless conditions?
- Participants: 49 English-speaking children between 1;6 and 6;8 [one 1-year-old, seven 2-year-olds, eight 3-year-olds, twenty-one 4-year-olds, five 5-year-olds and eight 6-year-olds] plus six adults participated in the experiment.

Experiment continued

- Methodology: Picture choice task (The participants were shown three pictures in total: two pictures contrasting completed and ongoing events plus a distracter picture. After viewing three pictures, the participants were asked to point at one picture in answer to a question such as 'where is a burning candle'.)
- For adults, a normal pen and paper grammaticality judgment task was employed

Sinking / sunken ship

Examples of the stimuli (5 events)

burn	burning candle; burned candle
fall	falling leaf; fallen leaf
melt	melting snowman; melted snowma
sink	sinking ship; sunken ship
close	closing door; closed door

Adjectival conversion with present participles (1)

- Intransitive verbs:

The lettuce is wilting: Wilting lettuce
The time is elapsing: Elapsing time
The child is running: Running child
An athlete is exercising: Exercising athlete

- Transitive verbs:

A woman is writing a story: Writing woman
The car is hitting a tree: Hitting car

Adjectival conversion with present participles (2)

Intransitive verbs:
Transitive verbs:
"-ing selects a proper subinterval of the first temporal interval of Vs"(Klein, 2002)

Adjectival conversion with perfective participles (1)

- Wilted lettuce
- Elapsed time

(unaccusative and telic predicates)

- *run child
- *exercised athlete

(unergative and atelic predicates)

- Written story
- Hit tree

(passive rather than completive)

Adjectival conversion with perfective participles (2)

- Wilted lettuce
- Elapsed time

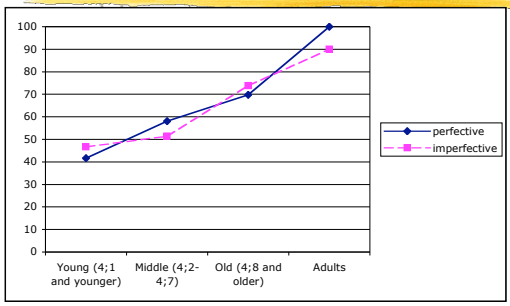
(unaccusative and telic predicates)

- *run child
- *exercised athlete

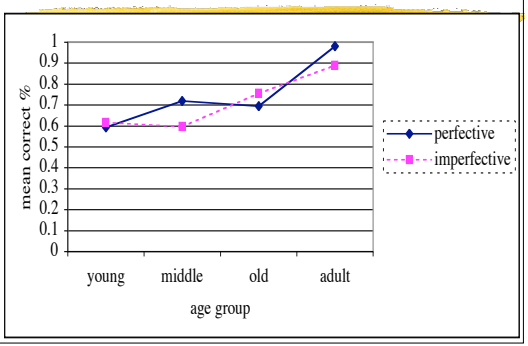
(unergative and atelic predicates)

Klein (2002) "the posttime introduced by *-ed* overlaps with the second time in Vs. If Vs provides no second time for an argument, as in *sleep* or *laugh*, no second time properties can be assigned: there is no appropriate AT-slot and therefore, the slept dog is uninterpretable.

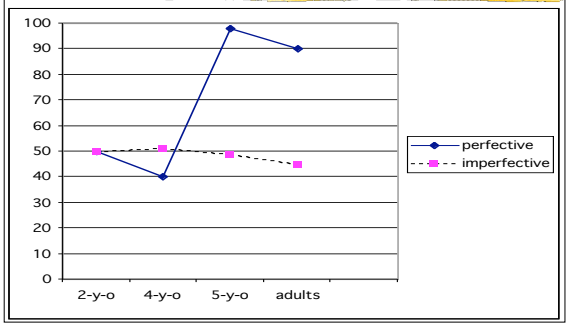
Results (% correct)



Results (% correct)--digression in Dutch…



Wagner's (2002) Results (% estimated)



Experiment-Results

A mixed design ANOVA in SPSS was run with age group (Young, Middle and Old) as a between subject factor and aspect (imperfective vs. perfective) as a within subjects factor; there was a main effect of age ($F(2, 42)=4.750$, $p=0.014$) and a main effect of aspectual type ($F(1, 42)=293.64$, $p<.000$) but no interaction of aspect by age.

Experiment-discussion

- The results of this experiment, then, are consistent with Wagner's (2002) results and run contrary to those of Weist et al's (1991).
- Younger children do not control the perfective/imperfective distinction (in the absence of the agents' intention cues)
- Using a different construction: present and perfective participles shows a gradual development of children's distinction of aspects.

One notable difference

- The imperfective trials in Wagner (2002) showed a markedly lower mean of correct responses, resulting in a significant difference between perfective and imperfective trials by 5-year-olds (2002: 118).
- This difference was probably due to the fact that the imperfective test sentences in Wagner lacked the completion entailment

Conclusions

This experiment supports prior results in van Hout (1998) and Wagner (2002) which indicate that children who are younger than 4 years old indeed have problems in the interpretation of aspect.

However, what will be consistent amongst all findings will be that young children (around 2;6) can tease apart two interpretations correctly if they have other cues. It takes 5 years to exhibit adult-like judgment in the absence of other cues.

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