



Children's development of Time, Modality and Aspect: Constructing a world within language



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Prologue

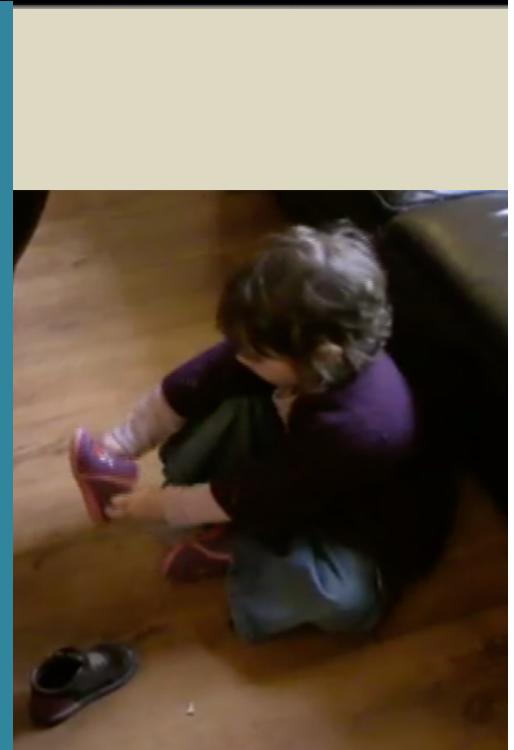


Experiencing language (Ochs, 2012)



“(Children) learn how to use language as a tool to elicit attention, to establish relationships and identities, to perform social actions, and to express certain stances. All this is part of being a speaker of a language.”

(Ochs 2012)





“Languaging” experience



Modes of experiencing the world (Ochs, 2012: 149)



“Languaging” experience

Arthur is not home, he will come back at 5.

Arthur is not home.



Language also creates worlds of its own

Remembrances of things past

Projects and dreams
of things to come

Figments of our
imagination



The fairy
flew away
above the
mountain.



Boas (1911), Sapir (1921, 1927), Whorf (1956),
Gumperz and Levinson (1991), Lucy (1997)



Displacement

(Smith, 1980; Veneziano, 2001)

- Disconnection

(Parisse, Pontonx, Morgenstern, 2018)

Pretend play

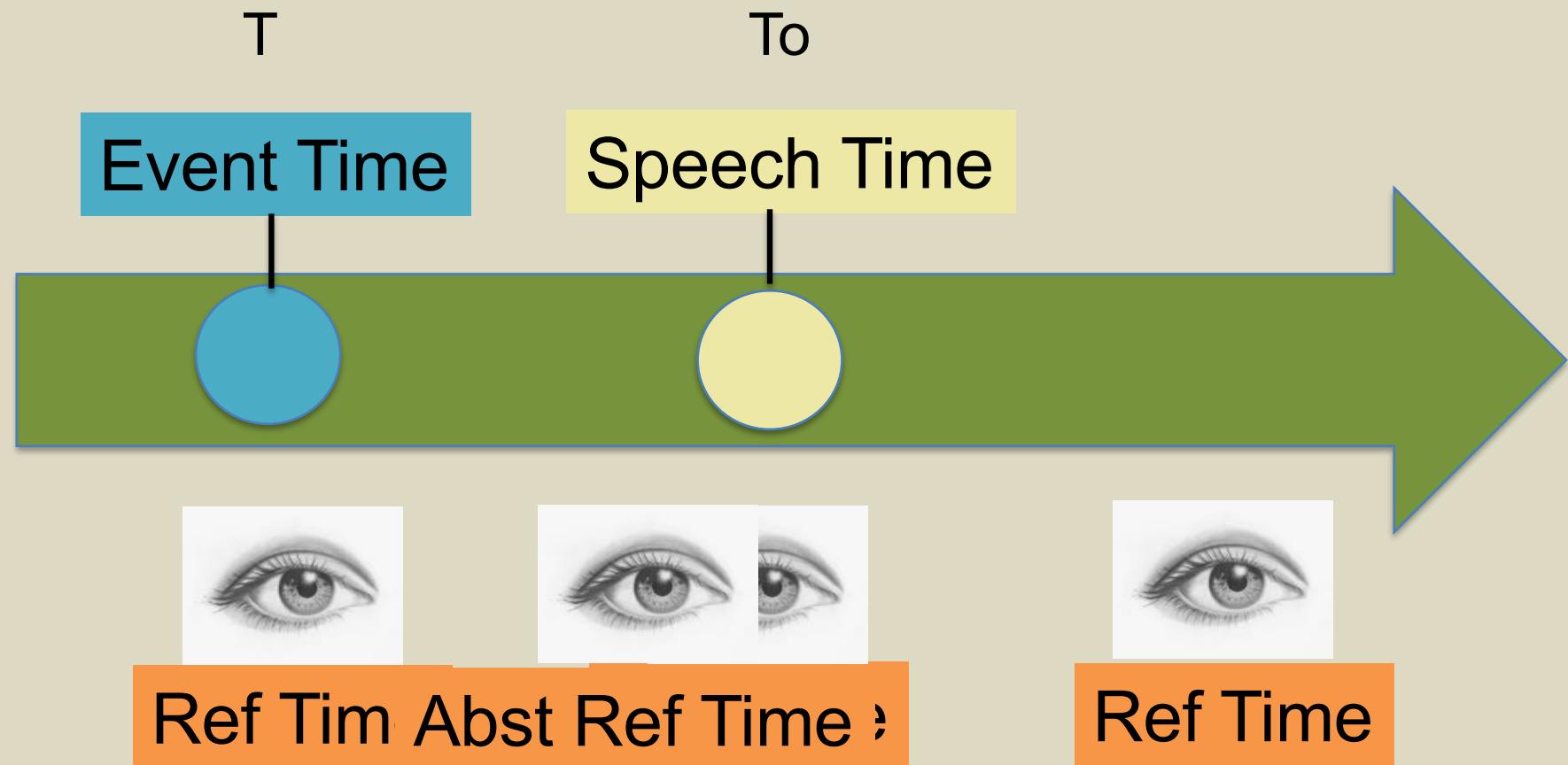
Book reading

Reference to past or future events

Children's acquisition of the notion of
reference time
in a construction grammar framework



Focus on reference time



Weist (1986); Reichenbach (1947)

Reference time ≠ T

Example 1 – Madeleine 4;0



Mad: Et après la sieste on a regardé. **Elle avait fondu.**

And after our nap we looked: **it had melted.**

Obs: Ça alors! **Oh my!**

Mad: Parce que elle...
i...dans la classe i **faisait**
trop chaud. **Because, it...**
i..., **it was too warm in the**
classroom.



Construction grammar

Child language is a dynamic process

Usage based Construction grammar allows us to capture

- How exemplars of constructions are generalized and organized thanks to daily use;
- How children learn to use very abstract semantic notions or speak about elements that only exist in or through language

Linguistic constructions index events, processes, notions, that children grasp through their use in everyday experiences.



Developing mental spaces or languaged spaces (Langspaces)

- Language is experienced in situated interactions.
- Some situations offer more **affordances** for worlds to be constructed through language use only.
- Based on mental spaces (Fauconnier, 1994), we call these situations **languaged spaces** or **Langspaces**.
- **Langspaces** are associated to specific multimodal scripts with specialized language forms.



Our proposal

Specific linguistic forms used to express
a switch in reference time

Children find them in their input
and reproduce them

Focus on the imparfait

- Marks a displacement between the speaker and the here and now (Patard, 2007)
- Not frequently used before 3;0 (Parisse et al. 2018)
- Heard in situations in which it is clearly associated with displacements of reference time



How experiencing language can build language meaning so that later language can create experience

Previous results:

The French *Imparfait* allows children like adults to create special meaning (disconnection, reference time shift) *Parisse et al. 2018*



Present Goal:
How language experience can create the abstract functions of the *Imparfait*



State of the art

Grammatical aspect and tense in French

FRENCH

PAST

il avait peur du loup

He was afraid of the wolf
Anaé, 3;04

a trouvé la tétine!

found the pacifier

Antoine, 2;03

IMPARFAIT
Imperfective

PASSÉ
COMPOSÉ
Perfective

All Examples drawn from the **Paris Corpus**

Parisse, C., & Morgenstern, A. (2012). The unfolding of the verbal temporal system in French children's speech between 18 and 36 months. *Journal of French language studies*, 22(1), 95-114.

Aspect Hypothesis (AH)

Andersen, 1989; Shirai, 1995

PREFERENTIAL ASSOCIATIONS OF TENSE – LEXICAL ASPECT

ENGLISH (1;6-7;0)

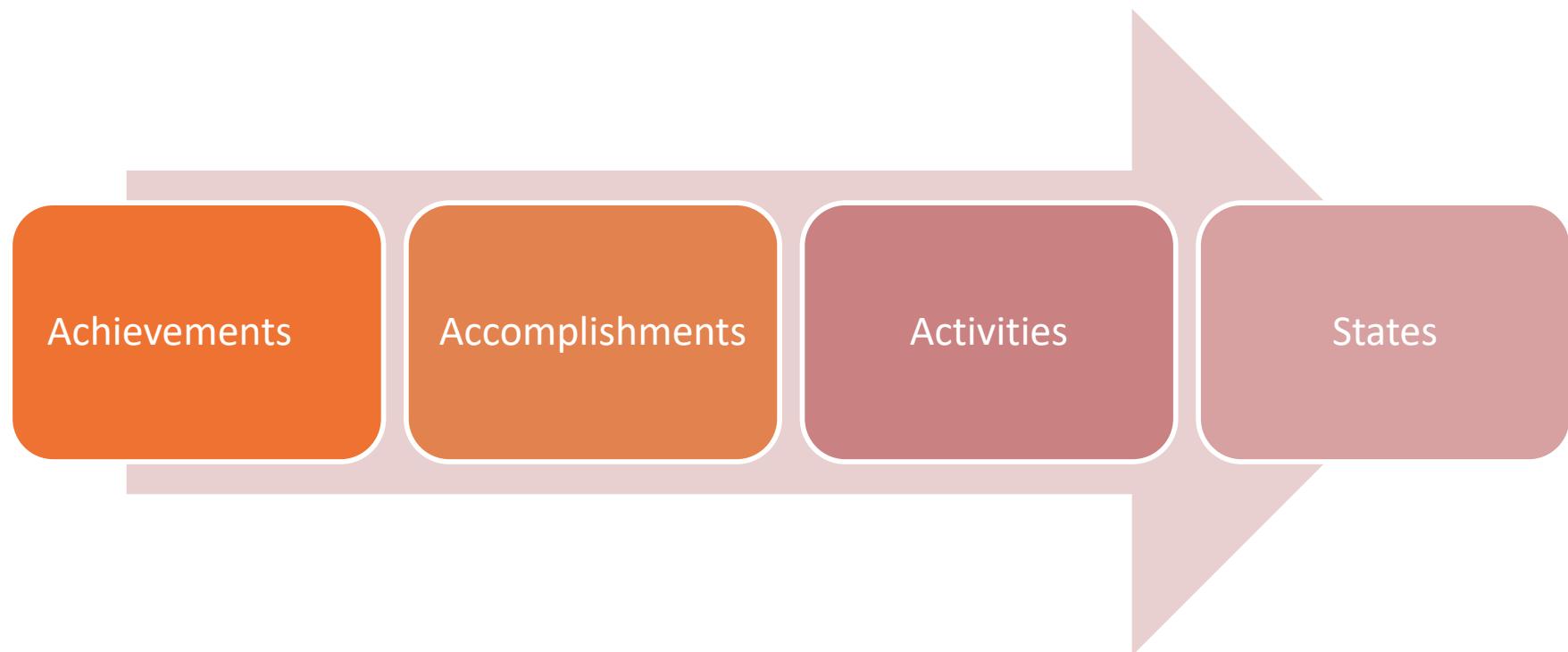
Past tense → **non-durative, telic events**
(achievements/ accomplishments)

(Past) progressive → **durative, atelic events**
(activities)

(Shirai, 1991, 1995; Bloom, et al. 1980; ...)

“Undergeneralization” of tense morphemes
Modeled on most frequent associations in parents’
speech (“*distribution bias*”)

PATH OF GENERALISATION OF PERFECTIVE PAST TENSE MORPHEMES ACROSS LEXICAL ASPECTS



Lexical aspect categories

(Vendler, 1957)

Imparfait

Anaé, 4;00
Petit_Chien **était**
en dessous son lit
*Little Dog was
under his bed*

State
[- telic]
[+durative]
[- dynamic]

Activity
[- telic]
[+ durative]
[+ dynamic]

Anaé, 4;00
alors elle elle
arrosait les fleurs
*So she watered
the flowers*

Antoine, 2;11
Non **est** pas
parti
(Antoine, 2;11)
*No, did not
leave*

Achievement
[+ telic]
[- durative]
[+ dynamic]

Accomplishment
[+ telic]
[+ durative]
[+ dynamic]

Anaé, 2;03
Tout le monde
s'est trompé
*Everybody made
a mistake*

Passé composé

Passé composé

RESULTS: *Imparfait*

Example 2 in pretend-reading situations (Anaé 4;00.13)

Anaé: Petit soleil s'endorma@c

Little sun fell asleep

Quand le soleil metta@c un chapeau
pour pas qu'il a trop chaud + ...

*When the sun put a hat on so he would no
be too hot*

Il fermait les yeux et tous les deux ils
sontaiten@c amoureux et ils rigolaient.

*He had his eyes closed and they were both in
love and they laughed*

Narrative
system

- Passé simple/imparfait

Narrative
space

- Break from reality /
build fictive reference

Example 3: Imparfait with **telic** and **atelic** predicates in pretend-play situations

RESULTS: *Imparfait*

(Antoine, 4;05.16)

Antoine : on **disait** que là **c'était** le papa et la maman et là y **avait** l' enfant

Let's say here it was the dad and the mum and the child was there.

Observer: d'accord là c'est l' enfant.

Alright this is the child

Antoine **étaient** trois

Were three of them

Observer : ils **étaient** trois (.)

There were three of them .

Child's initiative

- Maintains use of imparfait despite observer's switch to present

Atemporal reference

- Break from reality / build fictive reference

Results from previous studies

Parisse, de Pontonx & Morgenstern 2018

Brunet & Morgenstern 2019

- Children model their use of the past tense on what they hear (*imparfait* associated to atelic predicates; *passé composé* mostly to telic predicates)
- Children overuse frequent form-function pairings in their input
 - Children associated the *passé composé* with achievements more often
 - *Imparfait* used to locate states in the past but with accomplishments and achievements to build fictive reference.
- Over the period, the children generalized the *passé composé* following the path predicted by the Aspect Hypothesis



New study



Types of analyses

Combination of
quantitative and qualitative analyses



Data: *Paris Corpus*

(Morgenstern & Parisse, 2012)

- Longitudinal data of 7 French speaking children
- Video-recorded monthly in spontaneous interactions
- 229 hours of discourse, 1.3 million words



Interpreting child language productions in context

Interaction
Situation
Longitudinal knowledge of the dyads

Adult interlocutor's interpretation



Coding situations

Adult and children's situated discourse

Other situations

Langspace situations

With supporting object codified activity

- Game
- Book
- Movie, photo
- Pretend play
- Singing
- Playing

Without supporting object or codified activity

- Memories
- Story-telling, displaced events



Example 4



Anaé 1; 06
C'était la musique

Mother : ouh c'est dur
oh it's hard

Mother: ça **c'était** quand tu
étais tout petit bébé
that was when you
were a tiny baby

Mother: hu? / hu?

Mother: **C'était** la musique
it was the music

Example 5: Anaé 3;08



Mother: Oh tiens regarde. Qu'est-ce que c'est ça? / Oh look! What's that?

Anaé: C'est quand quand j'étais dehors à.../ It's when I was outside in...

Obs: Où ça? / Where?

Obs : Ca sent bon déjà la ratatouille. / The ratatouille already smells good.

Anaé: Ben oui. / Well yes.

Obs: Tu sens avec ton nez?/ Can you smell it with your nose ?

Mother: C'est où ça Anaé?/Where is that Anaé ?

Anaé: C'était chez nous/ It was at home.



Example 6: Antoine 3;09



- Grandma :** Raconte à tonton Christophe
Tell uncle Christophe what happened
- Antoine:** Flora elle **était** pas là / Flora **was** not there.
- Christophe :** Pourquoi, tu crois qu'elle est malade?
Why, you think she's sick ?
- Antoine:** Je pense / I think so



Results

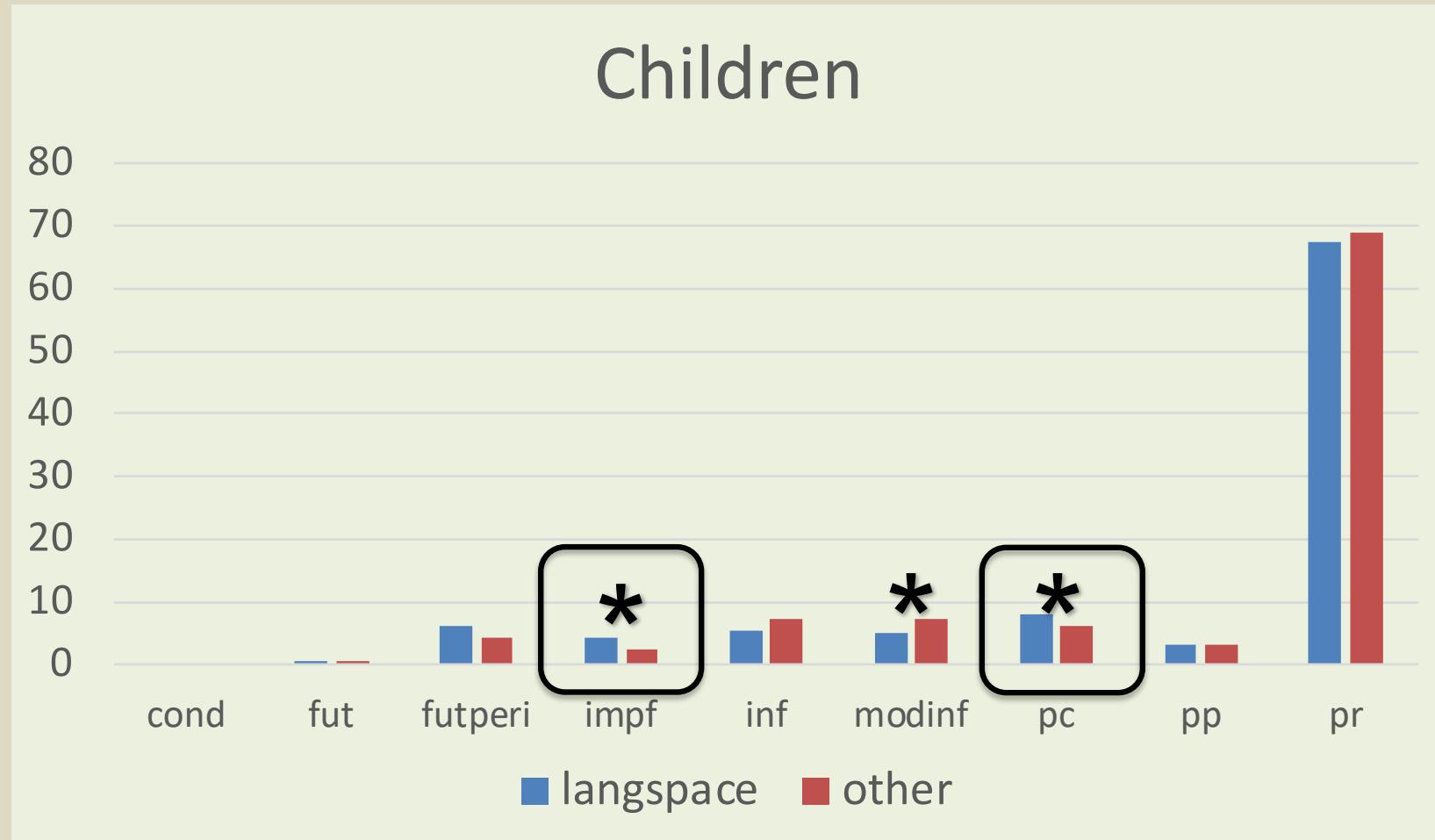
Comparison between **langspace** situations
and **other** situations

Comparison between
different **langspace** situations



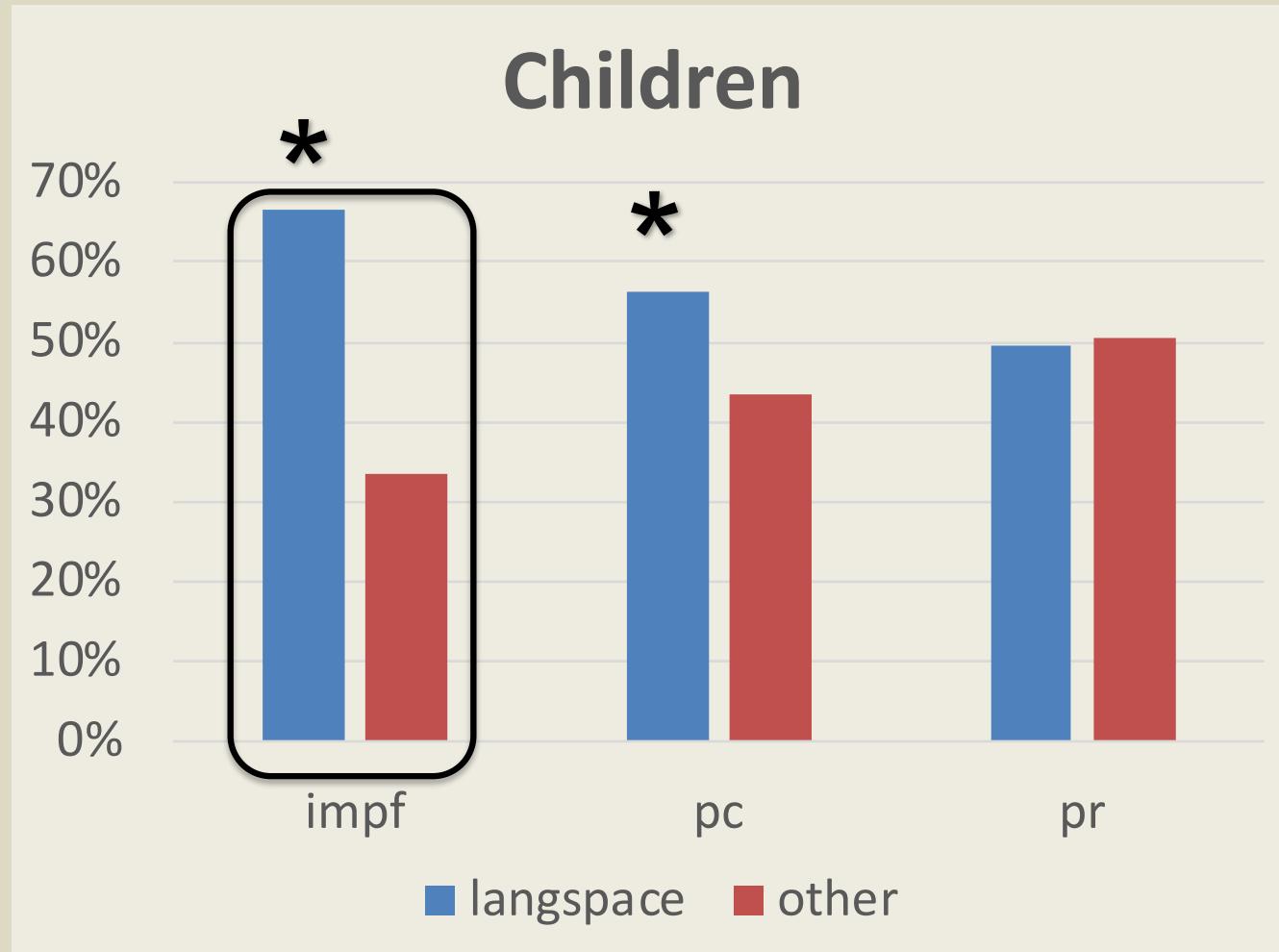
Quantitative analyses

Child use in langspace situations/other situations



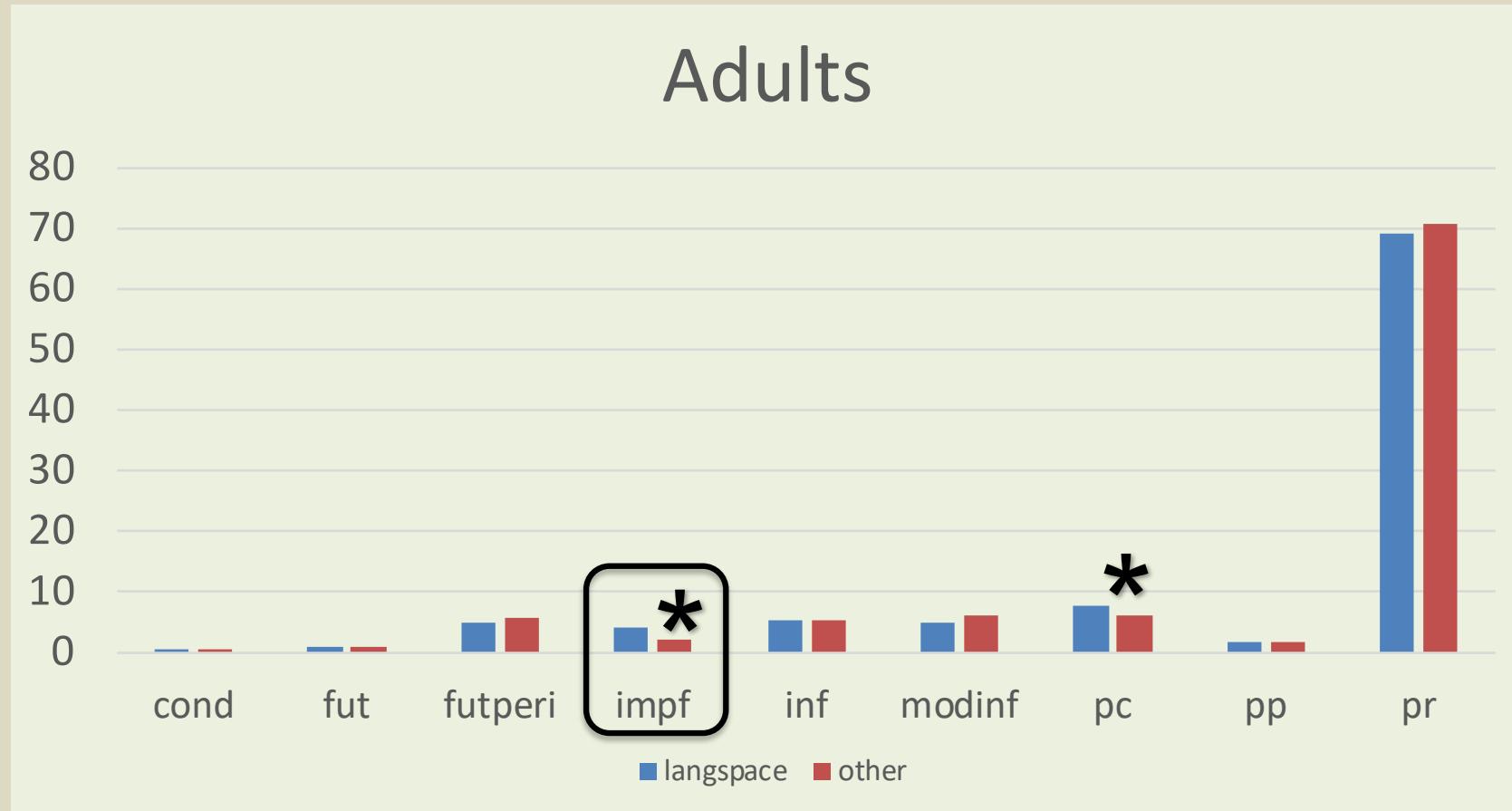
Group difference (t-test) for *impf*, *modinf*, *pc*
 Individual difference (chi-square) between tense uses

Child use in langspace situations/other situations





Adult use in langspace situations/other situations

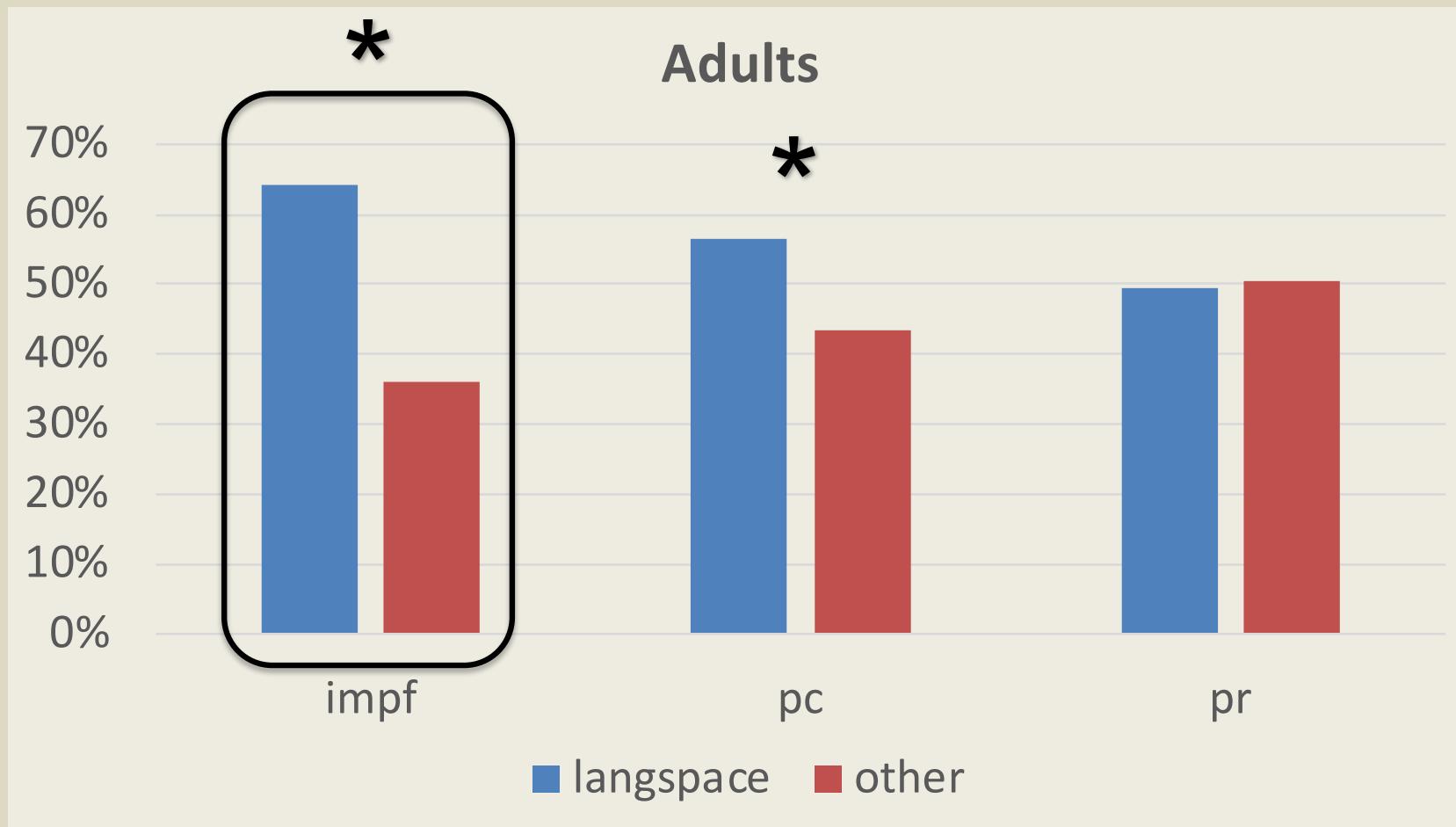


Group difference (t-test) for impf, pc

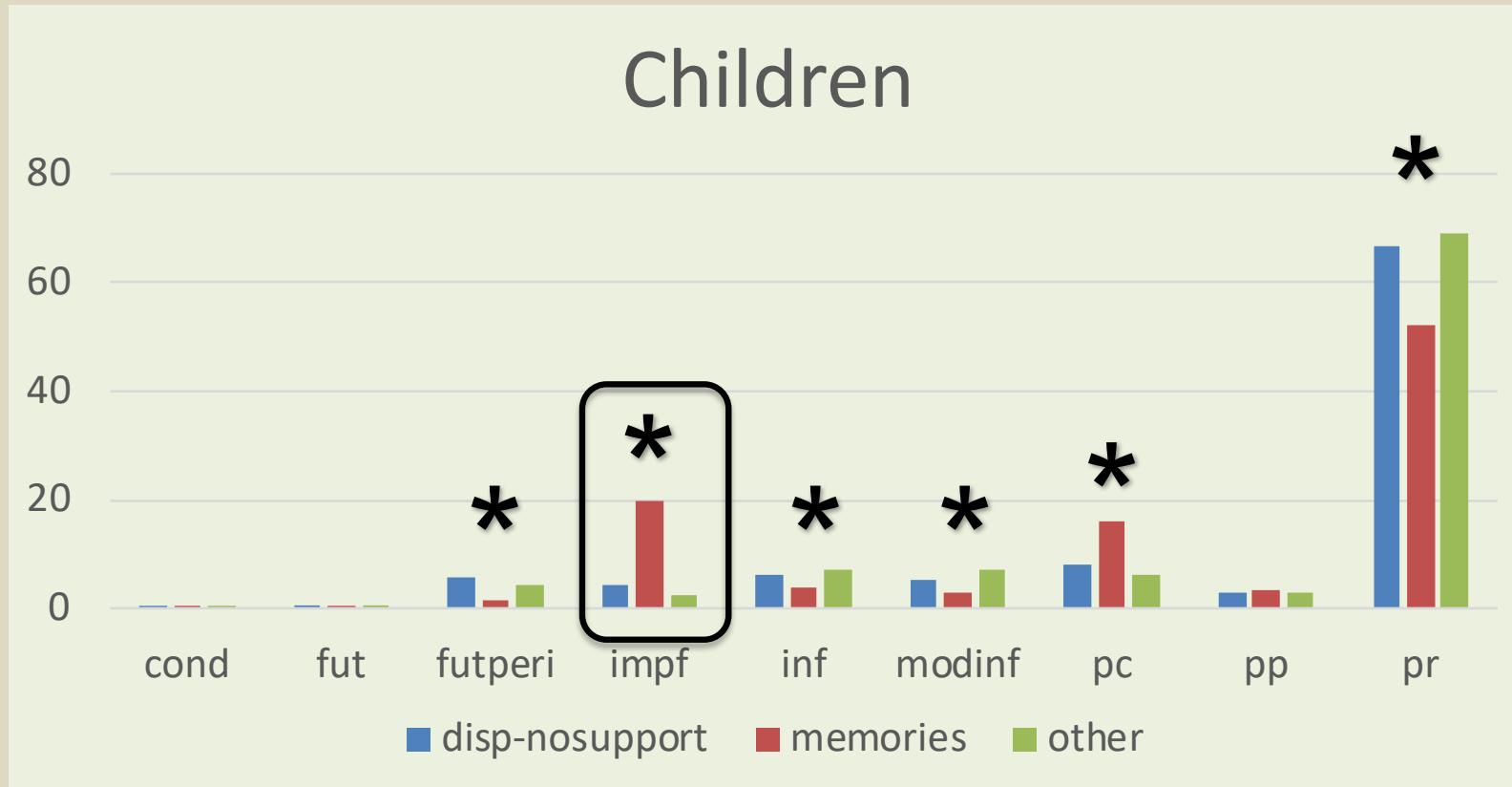
Individual difference (chi-square) between tense uses
except for one family



Adult use in langspace situations/other situations



Child use In different langspace situations

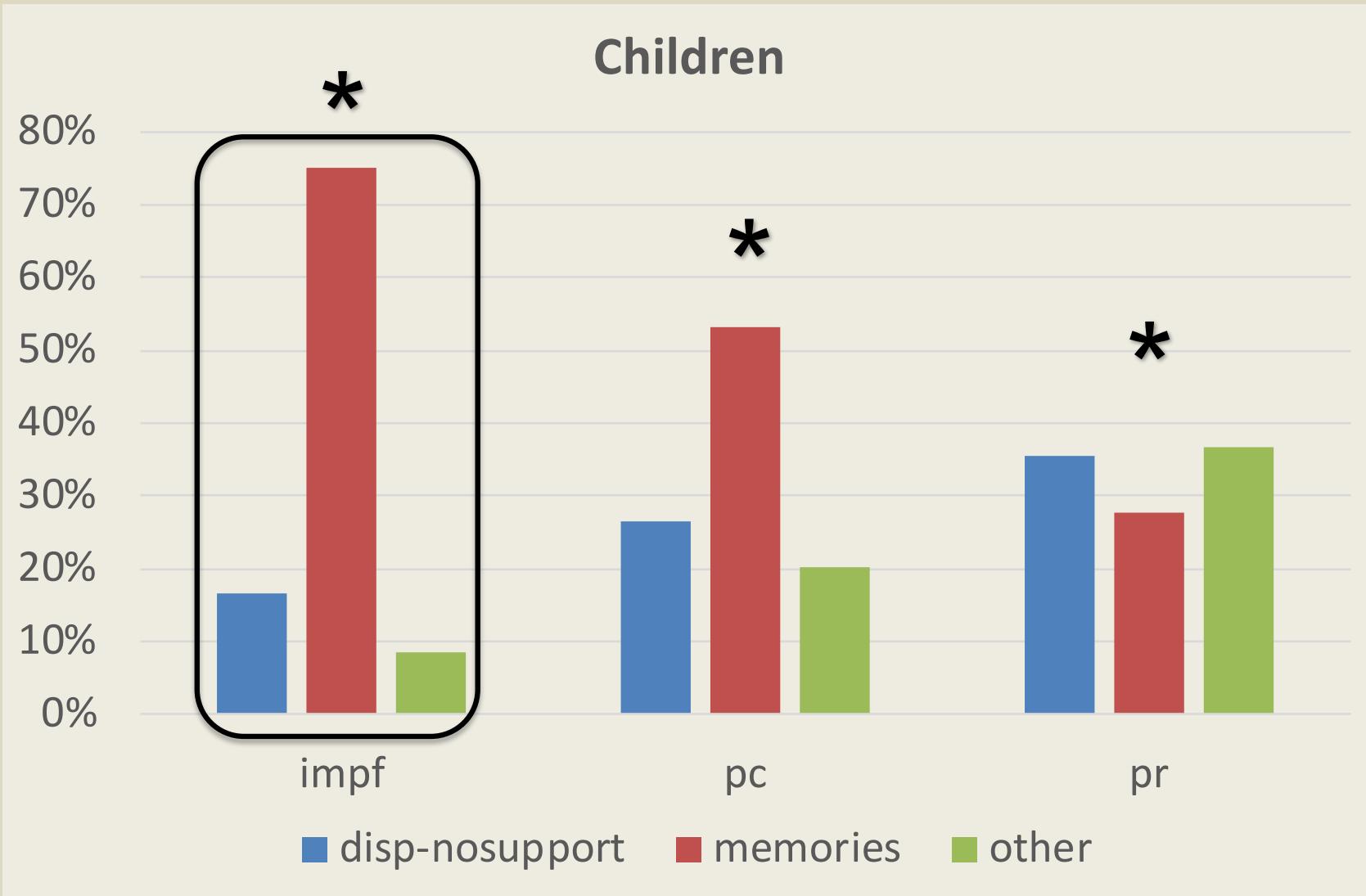


* → Group difference (t-test)

- Strong individual difference (chi-square) for impf and pc for memories for all children
- Except for **memories**, trends are often specific to a child or a dyad (different tense use)

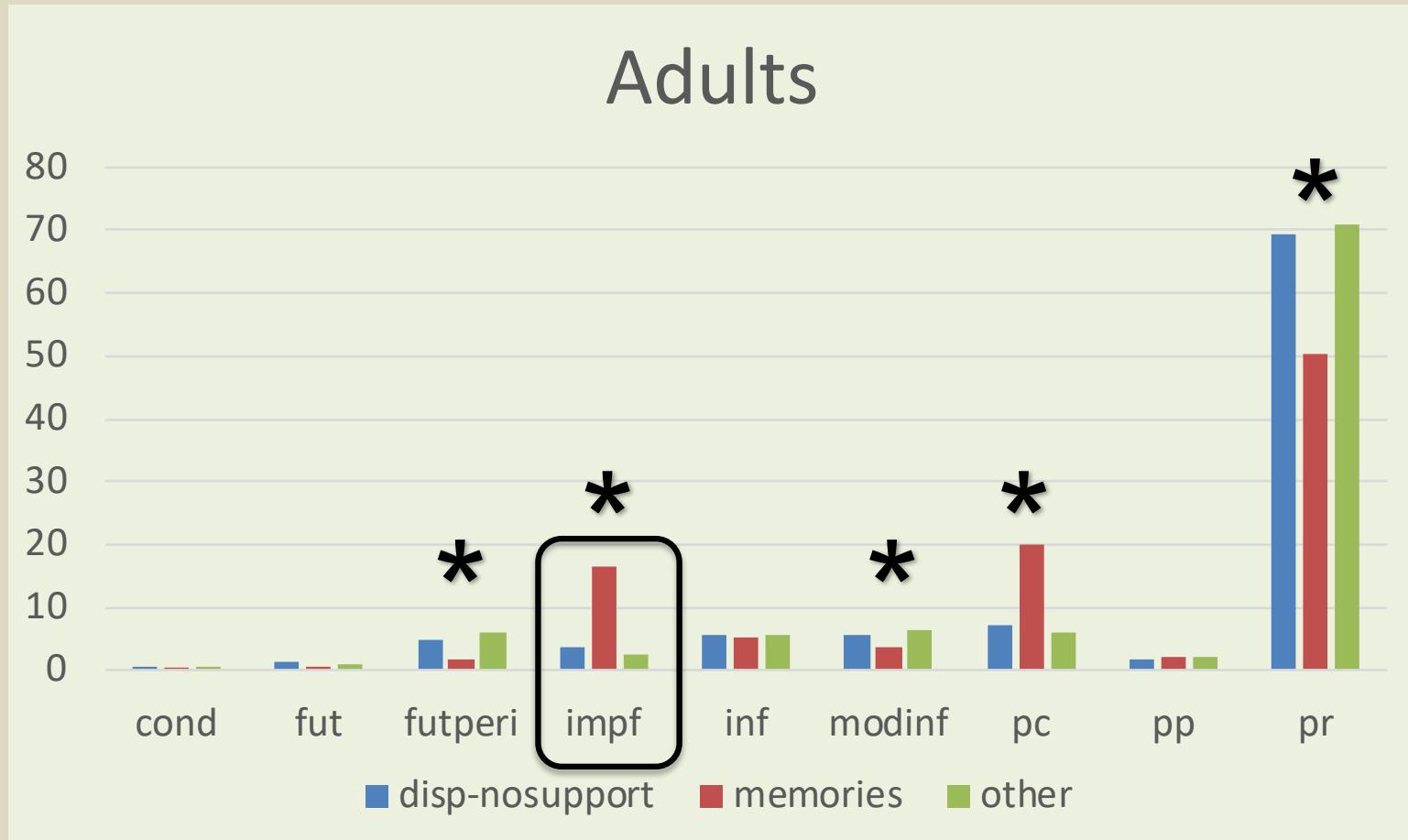


Child use In different langspace situations





Uses in different language space situations by adults

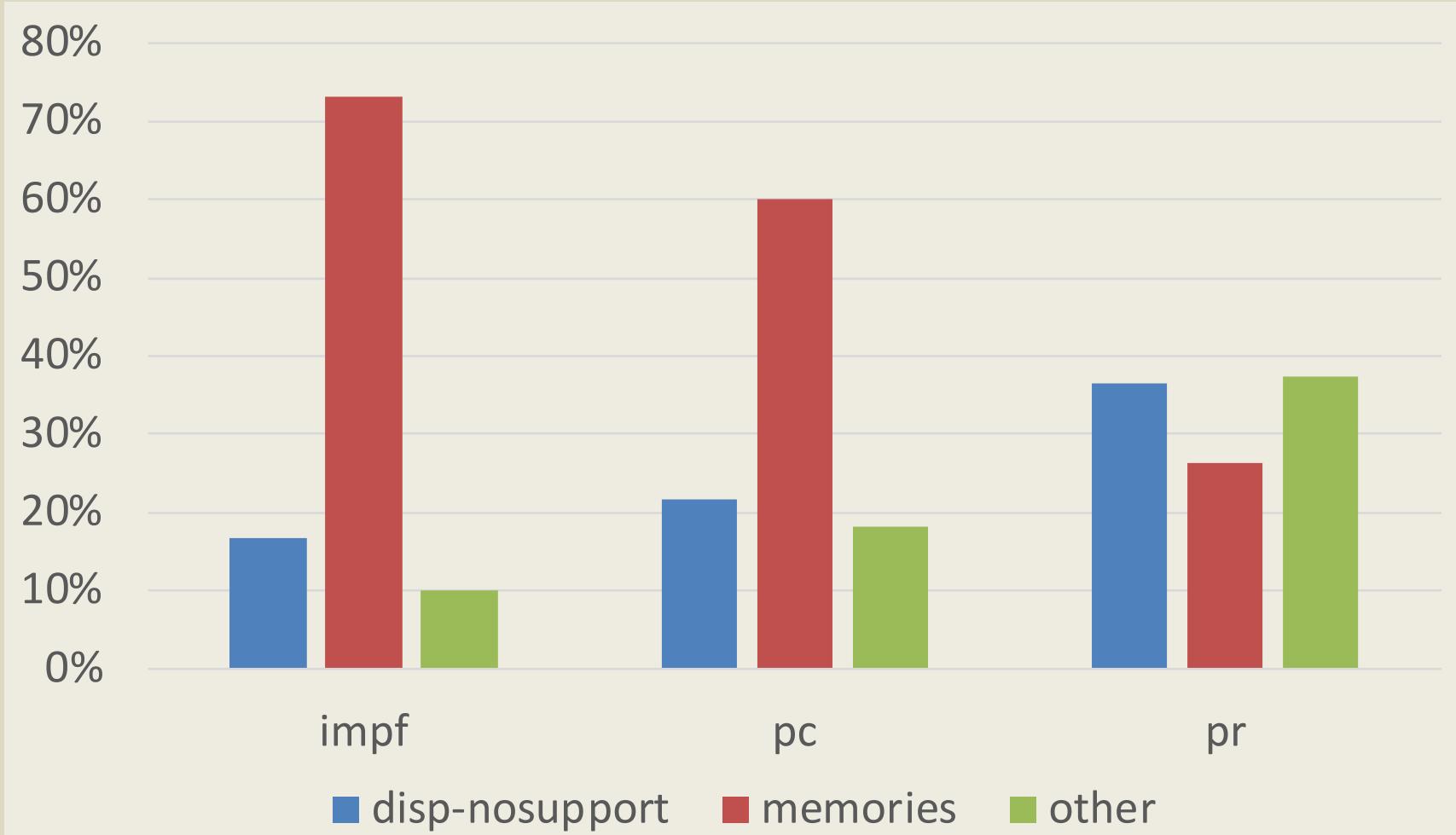


* → Group difference (t-test)

Strong individual difference (chi-square) for impf and pc for memories for all adults – For other situations and tenses, it is dyad specific



Adult use in different langspace situations





Correlations between child and adult tense uses in different situations

		adult					
		disp-no-support	memories	book	pretend-play	game	other
child	disp-no-support	0,98	0,63	0,90	0,86	0,90	0,92
	memories	0,46	0,96	0,35	0,09	0,14	0,17
	book	0,76	0,43	0,92	0,80	0,81	0,74
	pretend-play	0,93	0,47	0,94	0,83	0,94	0,89
	game	0,62	0,04	0,68	0,79	0,75	0,76
	other	0,88	0,28	0,93	0,94	0,97	0,93

Correlations for the use of tenses other than present



Illustrations

Example 7 - Anaé 4;00: telling a story (book)



Example 8 - Anaé 4;00: telling a story (book)



Example 9 - Antoine 2;09 : confusion between imparfait and other tenses



Example 10 - Antoine 4;00: memories...



Antoine: avant c'était cassé ça .
%gls: before that was broken



Example 11 – Madeleine: Hypotheses



MOT: ah ben non dans la neige
vaut mieux pas êt(r)e pieds nus #.

Example 12 – Antoine

Playful imparfait

(imparfait pré-ludique)



Example 13- Madeleine 6;0
Playful imparfait (imparfait pré-ludique)



Example 14- Playful conditionnel (Conditionnel pré-ludique)





Discussion

- The *imparfait* is especially used in situations when people are talking about memories (this is true for all families).
- The adults use the *imparfait* in specific situations, even when the children are too young to use it themselves.
- Other tenses are used in other situations. Tense use can be family specific (for example the present or the past can be used for story telling).



Conclusion: situated construction grammar

- Children experience the use of **examplars** in **specific interactive situations**. The situations involve social actions, cognitive mindsets, and languaged spaces.
- The exemplars will later be reused and **generalized** to a larger range of situations with similar features, allowing the children to express meanings that they have experienced before with the same specific linguistic forms.

Co
La
JE



Merci - Thank you

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Tense alternation in French

Extract 1: Ludivine et Caroline (pair 8 time code 2.29).

*CAR: **Elle est tombée**, et en fait elle a dû dévaler les [/] les marches **et personne n'est allé la voir**. **She fell** and in fact she must have rolled down the stairs and noone **went to see her**.

PC:
Ponctual

PC:assessment

*LUD: puzzled expression.

*CAR: Donc euh **tout le monde passait à côté**. Well euh, enveryone **was walking by her**.

Impf:
Activity

*CAR: Et i(l)s en **avaient rien à faire**.

They weren't in the least concerned

Impf:
State



«Tout le monde passait à côté»

Imparfait/ unbounded





« Elle est tombée » (she fell)
passé composé/**bounded**





Analyses qualitatives

Extrait 2: présent de narration





Analyses qualitatives

Extrait 2. Session 1. Time code 6.02

*STE: On se **baladait** avec des amis, il **était** quatre heures du matin. On **accompagnait** quelqu'un pour prendre un bus, quand soudain une voiture s'arrête.

*SOR: *rit.*

*STE: *rit.* Et cinq mecs **sortent**, et **commencent** à casser la gueule d'un pote. Du coup je **commence** à rentrer dedans, et **je me fais défoncer.**

*SOR: **T'es sobre bien sûr .**

*STE: Ouais non pas trop.

*SOR: *rit.*

*STE: c'est vrai qu'après au commissariat pour le test [laughs] moyen . Et euh et donc ouais donc euh je me **relève**, j'en **vois** un autre.



Analyses qualitatives

Extrait 3: imparfait/présent simple/passé composé



Extract 3. Session 4. Time code 2.35 to 3.54

*MAR: Il se trouve que euh **j'étais** pas à Paris pendant mon inscription à la fac, et euh et donc c'est ma mère qui **m'a inscrite**. Et trois mois après mon inscription, j'avais toujours pas reçu mes certificats de scolarité. Ca **faisait** deux mois que je **payais** ma carte nigo semaine par semaine et que ça **commençait** à coûter un petit peu cher [laughs]. Et **j'avais** pas non plus mon petit stickers pour ma carte d'étudiante.

*AUR: catastrophe !

*MAR: catastrophe [rit].

*AUR: [rit].

*MAR: Et euh donc **je vais** une fois au bureau **je me fais** littéralement rembarrer.

*AUR: [rit].

*MAR: **On me dit** de revenir dans une semaine. **Je peux pas** revenir la semaine après, **je reviens** deux semaines après.

*AUR: +< 0 [laughs] aussi non <les xxx> [///] les horaires d'ouverture ne **correspondent pas** .

*MAR: ah oui

*AUR: +< ah ça ! le pire !

*MAR: +< Enfin bon **j'y suis allée** trois fois avant mais bon, quand **j'ai réussi** à y aller [rit]

*AUR: [rit].

*MAR: Et j'**y retourne** deux semaines après, et une fois de plus <ah ben non i(l) faut attendre comme tout le monde> [*discours rapporté*]. Oui sauf que tout le monde **a déjà reçu** tout

*AUR: [rit].