Does caregiver input influence children's early acquisition of modality?

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Background to modal verbs

➤ Focus of study is on the following modal auxiliaries: *can, could, may, might, must, shall, should, would, will*

➤ Modal verbs can express either **deontic** meanings such as: ability, obligation or permission, e.g. "You *must* go to bed now"[1]

➤ Or **epistemic** meanings, in which a speaker expresses their level of belief/ certainty towards proposition, e.g. "That *must/might* be the postman"[1]

Modal verbs are crucial in order to communicate effectively

➢ To develop **pragmatic skills** and adopt **politeness strategies**, e.g. "*Would* you like to open the window?"

➢ To express one's own and **understand others' beliefs**

➢ Ability to take others' perspectives (**Theory of Mind**) may be closely linked to epistemic modal comprehension and production[2]

➢ Children first produce epistemic modals around 3-4 years, coinciding with period of success on ToM tasks[2]

Children first produce modals with deontic meanings

Wells (1979) carried out a corpus analysis on 60 mother-child dyads, following children from 1;3-3;9 years

➤ *Can, will, shall* first to appear around 2-3 years

➤ *Can* mainly used to indicate **ability** or **permission**, e.g. "I *can* reach the bottle"

➤ *Will* conveying **intention** to act, e.g. "I *will* pick that up for you"

➤ *Shall* functioning as **suggestion**, e.g. "*Shall* we go out now?"

➤ Few uses of *must* or *might* (particularly for speaker belief)

Epistemic meanings emerge halfway through the third year

Wells (1979)'s findings are also supported by Fletcher (1985)'s corpus study following a child aged between 2;4-3;9

➤ *Can, will, shall* appear at similar age for equivalent functions

➤ *Must* emerges around 3 years but to signal obligation, e.g. "You *must* dress up"

➤ **Not until 3;5 years** that *could* and *might* are used **epistemically to represent possibility**, "These *might* fit me", "That *could* work" (but rare)

Acquiring modals is a difficult task for the language learner

➤ In some cases, a **modal form may carry more than one meaning**, e.g. *can* – ability, permission, obligation

➤ Children need to understand that **one form can be extended** to different uses depending on context, e.g. *could* – discussing ability in the past or suggesting a future event

➤ They also need to grasp that **other modals' use cannot be extended** in the equivalent way, e.g. *might* – only epistemic

➤ **Difficulties in subtleties of meaning** for different forms carrying out similar function, e.g. *should* and *must* for obligation; *might* and *may* for certainty

Research on the influence of caregivers' modal use is limited

➢ Wells (1979) found similarities in the **frequency of modal verb forms** across children and caregivers

➢ No study has yet focused on modals' **associated functions in the input**

➢ Research on acquisition of other complex verbal form-function mappings, e.g. *go*, have shown that both frequency and specific form-function mappings in caregiver speech can account for children's learning of these structures[4]

➢ Need for information on **modals' specific form-function distributions** in the input and their **frequency**[4]

Research Questions

1) Which **modal auxiliaries** do caregivers **use most often**? How does this relate to the frequency of these forms in children's speech?

2) What are the **main meanings** of caregivers' modal auxiliaries? Do they more frequently use modals for deontic or epistemic purposes? How does this relate to children's use of these meanings?

Methodology

➢ **Corpus analysis** of longitudinal data consisting of two mothers' naturalistic speech to their children when aged 3 and 4 years (Max Planck database).

➢ Transcripts analysed for use of following **modal auxiliaries**: *can, could, may, might, must, shall, should, will and would* (both affirmative and negated, e.g. *can't*)

➢ **2860 instances** of these modal auxiliaries, analysed according to frequency of these **forms and their functions.**

Coding modal verb function

Modal verb function

EPISTEMIC

DEONTIC
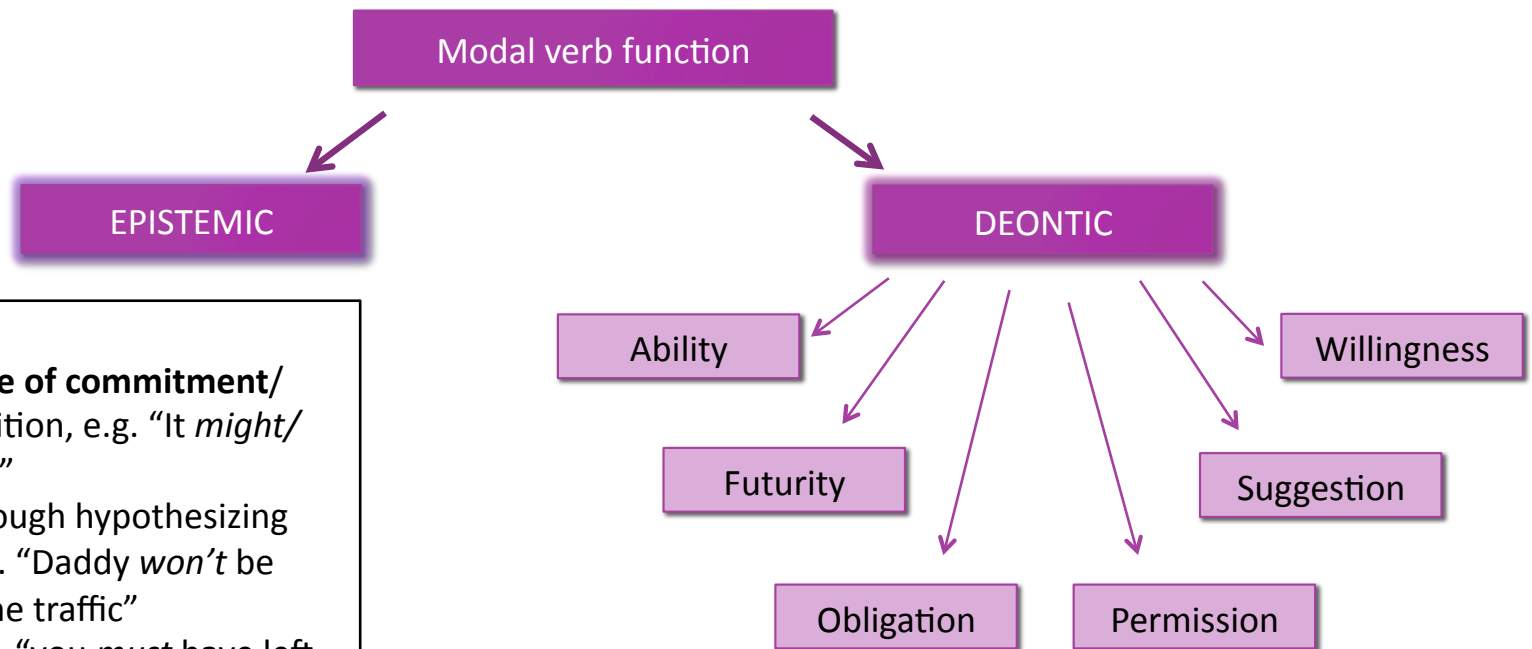
Speaker:
- reflecting their **degree of commitment/ certainty** to a proposition, e.g. "It *might/ must* be the postman"
- **expressing belief** through hypothesizing about a situation, e.g. "Daddy *won't* be home on time with the traffic"
- **inferring conclusions**, "you *must* have left the house late to have missed your train"

Ability

Futurity

Obligation

Permission

Suggestion

Willingness

Definitions of the deontic subcategories

| Deontic subcategory	Definition	Examples
Ability	Ability or inability to carry out a task, focused on own or others' actions	"I *can* reach the bottle", "He *couldn't* catch the bus"
Futurity	Indicating an event in the future, often one's own or others' intention to act, but not assumptive (epistemic)	"I *will* go to the shops in an hour", "We *will* have to make sure that we walk the dog today"
Obligation	Expressing that speaker or listener should (or should not) carry out an action. This includes the speaker giving orders	"I *must* clean up this room", "*Can* you be quiet?", "You *should* go to your room".

Definitions of the deontic subcategories

| Deontic subcategory	Definition	Examples
Permission	Speaker granting/refusing someone permission to do something or expressing their own allowance	"You *can* leave the table now", "*May* I have a drink?"
Suggestion	To suggest an idea (without the forceful nature associated with obligation). Introducing a new concept or activity	"We *can* go for a nice walk later", "*Shall* we read this book next?", "You *could* build a house with these blocks of cheese"
Willingness	Associated with the speaker (or their interlocutor)'s desires or preferences	"*Would* you like some milk?", "I *would* like a sandwich"

Preliminary findings focused on the caregivers' use of modals
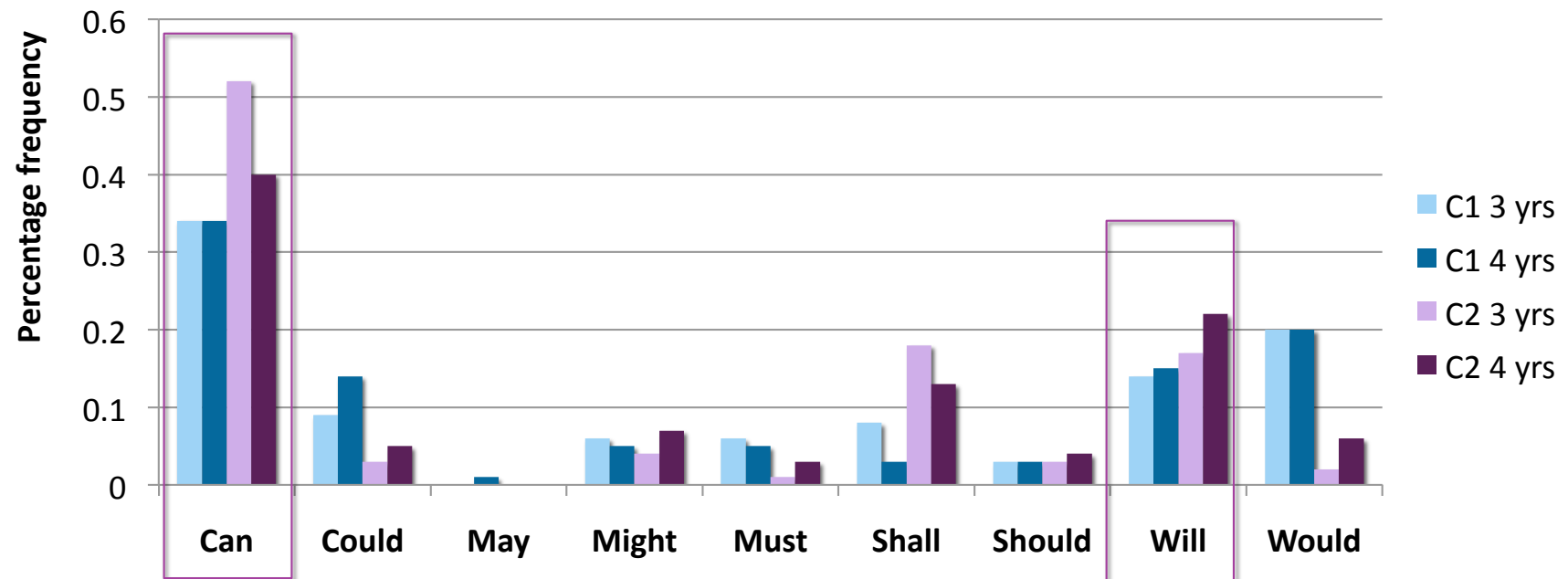
Caregivers mostly use modals to convey a deontic meaning
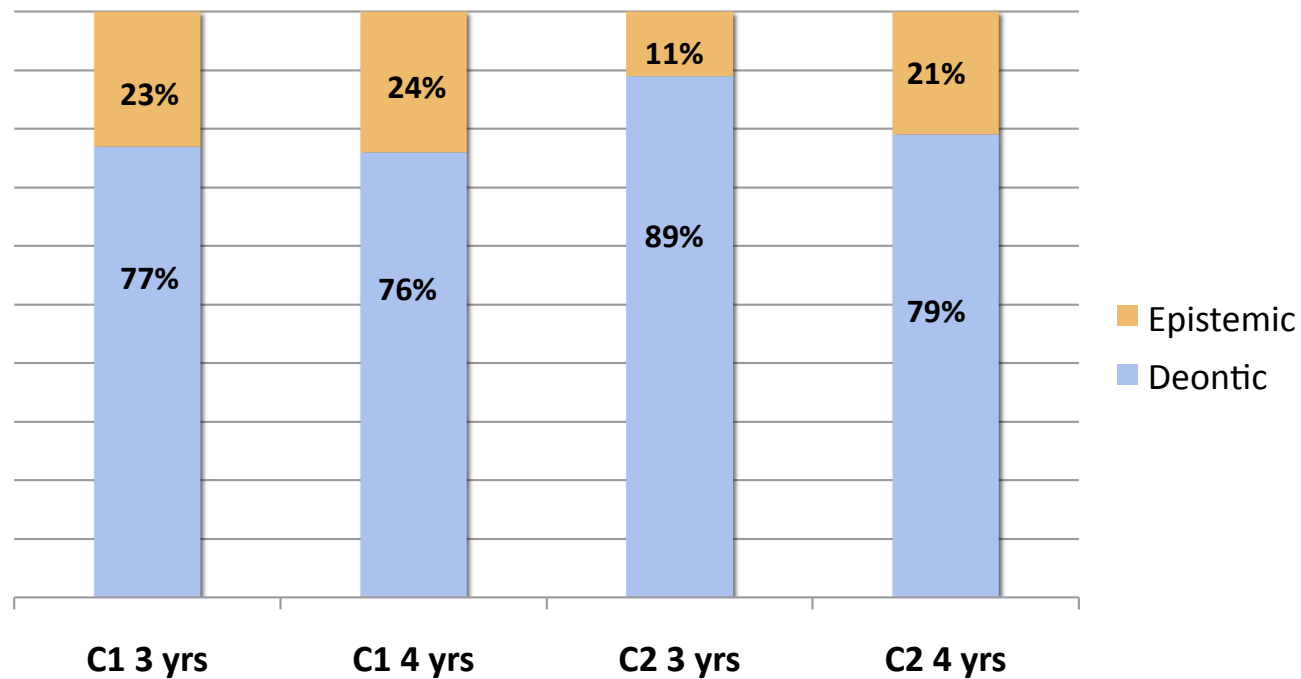
More fine-grained analysis shows ability to be most prominent meaning
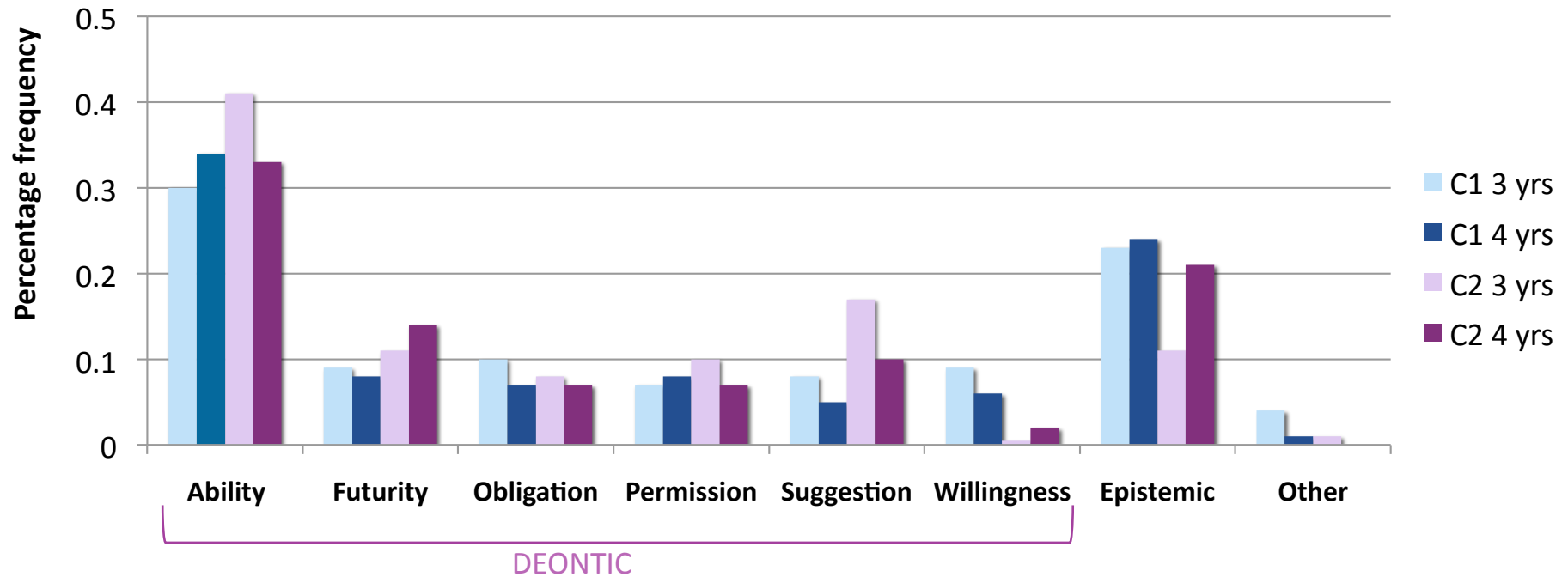
Summary of current findings

➢ *Can* and *will* **most frequent modals** used by caregivers – similar to previous research on children's speech

➢ Although, evidence of **individual differences** (specifically *shall* and *would*)

➢ **Deontic uses more common**, particularly ability. Perhaps due to focus on concrete tasks in the here and now

➢ More abstract **epistemic uses increase** slightly **as children approach age 4 (C2 data)**

Next steps - to analyse the children's speech

Predictions:

➤ *Can, will* and *shall* will be the most frequent modals

➤ Modals will mainly carry out a **non-epistemic function**, e.g.

ability, obligation, permission

➤ From age 4, children's **use of epistemic modals will increase**

➤ Acquisition of modal **form-meaning mappings** will be **influenced**

by modal frequency and its specific **form-meaning characteristics**

Acknowledgements

Professor Anna Theakston (Supervisor)

Professor Elena Lieven (Supervisor)

Dr Silke Brandt (Supervisor)

Economic Research Training Council (Funder) – Grant no. ES/L008955/1

Thank you for listening ☺

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