

'Where does Granny live?' The role of test questions in conversational remembering between mothers and their children with developmental language disorder.
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Abstract:

Background:

Parent-child conversations form the primary context for language acquisition (Clark, 2018). This article investigates the role of test questions (TQs) in shaping turn construction opportunities for children with language disorder during conversational remembering with their mothers.

Method:

Video-recorded data from two mother-child dyads were evaluated using Conversation Analysis (Schegloff, 2007). A framework proposed by Heritage (2012) was used to examine TQ sequences initiated and developed from both a knowing and unknowing epistemic stance.

Results:

Our findings suggest that turn taking and turn construction opportunities for the child are shaped by:

- Congruity of mother's epistemic stance within and across turns
- Positioning of mother's remembering as shared, joint or collaborative
- Availability of language elements in mother's turn for the child's next turn construction
- Expectation from mother of competence display by the child in their following turn

Discussion / Conclusion:

Our data reveal the potential of CA to inform understanding of TQ patterns and interventions which support parents in the refinement of conversation skills to help children with language disorder.

1 Introduction

Children with developmental language disorder (DLD) experience difficulties with comprehension and/or production of language, which can create barriers to everyday conversation with adults and peers (Bishop et al., 2016; Croteau et al., 2015). Poor language skills can place an increased burden on the conversation partner (CP) to direct and support the flow of talk (Bruce & Hansson, 2019; Perkins, 2007). Parents, in particular, have the potential to influence their child's communicative participation by employing conversation behaviours, such as questioning or commenting, which may limit or facilitate their child's use of language in interaction (Clark, 2018; Hoff, 2010; Nettelblatt, Hansson, & Nilholm, 2001). This article considers the specific role of test questions in shaping turn construction opportunities for children with DLD during naturally-occurring conversations with their mothers. The role of epistemics is considered as a driving force within the context of conversational remembering, as parents and children explore and negotiate symmetry across their domains of knowledge during their everyday interactions.

1.1 *Developmental Language Disorder (DLD)*

DLD affects around 7.5 per cent of children at school entry and can show long-term impacts on learning, self-esteem and social development (Conti-Ramsden, Durkin, Mok, Toseeb, & Botting, 2016; Norbury et al., 2016). The nature and severity of the disorder vary for each individual but may include strengths or impairments in word-finding, phonology, syntax, auditory memory, pragmatics and discourse. These may manifest themselves to a greater or lesser extent in conversation. However, the linguistic profile of children with DLD only partially accounts for the nature and quality of their interactions. Since conversation is a two-way enterprise, the role of CPs is also crucial (Bruce, Nettelblatt, & Hansson, 2012; Perkins, 2007) and the content and flow of talk will depend both on the child's communicative resources and those of their CP (Bruce et al., 2012).

Children with language disorder may differ from typically-developing peers in their intelligibility (Laasonen et al., 2018), their ability to initiate and maintain an interaction (Roberts & Kaiser, 2011) and their responsiveness to language (Liiva & Cleave, 2005). According to Yoder, Camarata, & Gardner (2005), this can lead to a vicious cycle, whereby young people whose communication is impaired 'are less likely to elicit language-facilitating interactions from significant others,' p.34. Parents of language-impaired children are reportedly more likely to display verbal directiveness, including increased use of questions (Yoder & Warren, 2001) – a characteristic which is negatively correlated with language gains for this population (Cross, 1984; Murray & Hornbaker, 1997). Meanwhile, parents are also less likely to provide contingent commenting or feedback in response to child-led activities or topics (Lasky & Klopp, 1982). While there is no evidence to suggest that parental behaviour can cause children's language disorder, taken together these shifts in interaction patterns are problematic, as both responsiveness and semantic contingency are known to promote language development in children with communication difficulties (Allen & Marshall, 2010).

1.2 *Parent-child interaction therapy*

Given the impact of language disorder on parent-child interactions and the key role carers play in supporting their child's development, many speech and language therapy (SLT) approaches focus on training adults to interact with their language-impaired children in ways that are known to facilitate communication and progress with spoken language (for a review

of parent-mediated interventions, see Roberts, Curtis, Sone, & Hampton, 2019). An approach commonly used with the parents of pre-school children with language difficulties is parent-child interaction therapy (PCIT; Falkus et al., 2016), which employs video-recordings of play sessions between adults and their children to highlight key communication strategies and support parents to reflect on their own interaction style. Therapy typically aims to limit adult questioning and increase responsiveness through the use of alternative behaviours, e.g. contingent commenting (talking about objects and actions within the child's attentional focus; Landry, Smith, & Swank, 2006) and recasting (modifying a child's utterances to correct or expand whilst maintaining the original meaning; Nelson, Camarata, Welsh, Butkovsky & Camarata, 1996). Both Falkus et al. (2016) and Roberts et al. (2019) reported significant change in parental use of language support strategies, as well as children's structural language skills, following intervention.

Notably, the children included in both the Falkus et al. study and the Roberts review had a mean age of less than 6 years; there is limited research into interaction-based therapy for older children. Whilst PCIT and similar approaches have been shown to have positive effects on children's communication, their focus is solely on the role of parents and carers in tailoring their input in order to promote language development; the child is not offered strategies to support their own expressive or receptive language, or to modify their turns in conversation. Further, even when employed with school-aged children (e.g. Allen & Marshall, 2010), PCIT centres on play-based situations, which may not reflect their day-to-day encounters with family, peers and adults outside the home. Croteau et al. (2015, p. 30) state that conversation situations 'are not sufficiently examined in speech and language interventions for children'.

Shared reminiscing, also referred to as conversational remembering (CR), between parents and children provides a key interactional context for developing children's language and wider social and emotional skills as they approach school age and beyond (Fivush, Haden, & Reese, 2006; Peterson & McCabe, 1992). Within this conversational framework, adults may engage in requesting, providing, confirming or negating information (Bohanek et al., 2009). However, the specific role of test questions in eliciting and responding to children's emerging memories and utterances has yet to be explored - particularly in relation to children with DLD.

1.3 Test questions

Test questions (TQs) are a key feature of adult-child discourse, accounting for up to a third of all requests directed at children (Siraj-Blatchford & Manni, 2008). While genuine questions call for the child to provide missing information, TQs solicit knowledge that is 'obviously already known to the questioner' (Grosse & Tomasello, 2012, p.192). Test questions (also referred to as 'known answer', or 'exam' questions) have been widely studied within formal classroom settings (Mchoul, 1978; Myhill, 2006; Searle, 1969). However, much less attention has been paid to their role within home-based conversations between children and their parents, or primary caregivers. Moreover, previous research has focused on children with typically developing language skills, offering scope to examine their role in shaping turn construction opportunities for children with DLD.

The three-part question, answer and response (QAR) turn structure has been extensively described in the pedagogical literature (e.g. Cazden, 2001; Myhill, 2006); with teachers typically initiating a topic by asking a test question (Q) that invites a specific known answer

from students (A), which in turn is given an evaluative adult response (R). As Grosse & Tomasello (2013) point out, this typical TQ sequence follows the same grammatical form as genuine questions; taking on the status of a 'repeated routine', with predictable response patterns, which children learn to recognise and follow. Yet, children as young as two years are able to recognise the difference between the two request types.

Grosse & Tomasello propose that parents may mark test questions with non-verbal cues, such as distinctive intonation and/or facial expression. However, (Heritage, 1985) points to the importance of what the questioner does after the child's answer in determining the status of the original question. Adults who pose 'real' questions typically receipt their answers with a 'change of state token', such as 'oh' (Heritage, 1985) which marks the speaker as having undergone a shift in their knowledge or point of view. By contrast, Tarplee, (2010) argues that, within a QAR sequence, a third-position receipt which 'evaluates' an answer to a question, e.g. by saying 'that's right', indicates that the adult has experienced no such change of state, but was evidently already aware of the information provided in the child's response. In the context of the classroom, the use of an evaluative receipt underlines the asymmetric relationship between teachers and pupils (Radford, Ireson, & Mahon, 2008); with the former holding superior epistemic authority, while children are required to display their knowledge of the 'correct' answer, rather than provide novel information. However, it is less clear how such sequences function within parent-child interactions, where roles and epistemic boundaries between speakers may be less well-defined.

Yu, Bonawitz, & Shafto (2019) propose that parents of pre-schoolers can employ test questions to support children's learning by directing their attention to key objects and concepts, e.g. when an adult asks: 'What does that button do?'. Looking beyond the immediate QAR sequence, these authors report that adults are more likely to follow up test questions with further comments or requests for information, than they are for 'genuine' information-seeking questions, e.g. 'Are you hungry?', suggesting that TQs open up opportunities for further interaction and learning within conversation. Similarly, Grosse & Tomasello (2013) argue that test questions can serve as 'interaction vehicles', especially for younger children, by helping to establish and maintain joint attention - a key skill underlying both language acquisition and wider development (Olsen-Fulero & Conforti, 1983; Shatz, 1979; Snow, 1972). However, the context of developing joint attention within play situations with pre-schoolers is far removed from the communicative experience of school-aged children, for whom conversation is the primary medium for language and social development (Clark, 2009).

In the field of acquired communication disorders, Beeke et al. (2013) argue that test questions can act as a 'barrier' to everyday conversation by limiting interactional opportunities and producing negative social and emotional effects for people with aphasia (PwA). According to these authors, a reduction in the use of known-answer questions forms a key target for conversation-based therapy, as they can cause unwarranted frustration or distress; creating a 'threat to face' by placing pressure on PwA to produce a specific noun or noun phrase, which may prove elusive despite extensive word search attempts (Burch, Wilkinson, & Lock, 2002; Goffman, 1972). Lock et al. (2001) further found that this type of failed word search, prompted by a test question, is often followed by a "correct production sequence"; a series of turns designed to prompt the semantic or phonological target, which the PwA is struggling to produce. In such sequences, CPs may actively withhold information in order to elicit a specific response from the person with communication difficulties, which may not be forthcoming. Aaltonen & Laakso (2011) have explicitly likened this process to school-based

activities, referring to such breakdowns in communication as 'exam halts'. Since many children with DLD exhibit similar word retrieval problems to adults with acquired communication disorder, it is likely that they will experience similar trouble in their talk, however there is limited evidence to support this, providing additional rationale for the current research study.

The use of test questions, which is prevalent in both child-directed speech and conversations involving adults with language disorder, links to the distinction between *epistemic status*; to what extent interaction partners have access to knowledge, as well as their rights and responsibilities to know it, and *epistemic stance*; a more fluid position whereby communication partners may withhold or demonstrate their possession of information through the content and design of their conversational turns. According to Heritage (2012b), the sharing of information is 'what warrants the production of talk' (p.31), while redressing imbalance in knowledge positions represents the 'engine' that drives conversation forward.

The literature indicates that test questions form a key turn type within adult-child interactions, yet there remains a lack of clarity around how TQs function for children learning and developing language within their everyday conversations at home. Previous studies have focused on coding and examining parental turns in talk (e.g, Yu et al., 2019; Fivush et al., 2006; Cleveland & Reese, 2005). However, since TQs exert their influence on participants and the flow of conversation incrementally across turns, an approach is needed that can expose and evaluate the sequential organisation of talk. One such methodology, which may be used to advance this field of research, is that of Conversation Analytic (CA; Schegloff, 2007; Sidnell & Stivers, 2013). CA is a systematic approach to the study of human social interaction, which aims to discover how speakers understand and respond to each other within their naturally-occurring talk. Its focus is on how conversational turns are designed and organised to produce sequences of interaction, from the perspective of the participants themselves. CA views conversation as orderly, with underlying rules and patterns, while language is seen primarily as a tool for social interaction. CA has previously been applied to the study of atypical interaction, e.g. between adults with stroke-related aphasia and their CPs (Beeke et al., 2014) and between deaf children and their teachers (Mahon, 2009). Radford, Ireson, & Mahon (2012) have also used the approach in their work on classroom interactions between teachers and children with speech and language difficulties.

1.4 Aims

In order to explore the two-way communication between parents and children with DLD, the analysis of video-recorded data within this article will draw on CA techniques to investigate test question sequences during naturally occurring interactions between two mother-child dyads. The context for the conversations is the co-construction of memories which form part of the child's everyday experience at home and at school. The aim of the current study was to examine how Mother and Child turns accomplish the activity of conversational remembering and occasion turn construction opportunities for the child to display and extend their emerging linguistic skills. The article considers sequences initiated and developed from both a knowing (K+) and unknowing (K-) epistemic stance, as well as where the validity of participants' access to information is unclear. Findings will enhance our understanding of the impact of DLD on parent-child interactions and will inform conversation-based intervention for this participant group.

2 Data and methods

To address the previously-identified gaps in the literature and current clinical practice, the authors of this paper have developed a new speech and language therapy (SLT) programme: 'Better Conversations with Children (BCC),' which incorporates principles and techniques from PCIT as well as from conversation-focused therapy for adults with aphasia and other acquired communication disorders (Best et al., 2016; Volkmer, Spector, Warren, & Beeke, 2018; Wiltshire & Ehrlich, 2014). BCC is aimed at children with DLD, aged 6-8 years, and their parents / main carers. The intervention entails making video recordings of each dyad's naturally-occurring conversations prior to therapy. These are viewed by the research therapist and participants to identify key barriers and facilitators to their individual communication. Children and parents are encouraged to reflect on and select specific strategies to practise increasing, or reducing, during their daily interactions at home. The overall aim of BCC is to evaluate and adapt conversation behaviours that are used by school-aged children with DLD and their CPs in order to extend understanding of the impact of language disorder on conversation and inform SLT practice.

2.1 Participants

Examples used in this article are from two dyads who took part in the BCC intervention. Both pairs were formed of monolingual English speakers from South East England, with formal and informal assessment confirming that children fitted the clinical profile of DLD; each presented with difficulty producing or understanding language that affected their day-to-day functioning, in the absence of an underlying biomedical condition (Bishop et al., 2016). Both pupils scored more than 1SD below the norm on the core language composite of the Clinical Evaluation of Language Fundamentals (CELF-5; Wiig, Semel, & Secord, 2017). Children have been assigned pseudonyms to protect their identity.

Dyad 1 was formed by 'Sidney' (male) and his Mother. Sidney was aged 6;08 on initial assessment and was in Year 2 at his mainstream primary school. Prior to his involvement in the current study, he had been referred to the school Speech and Language Therapist, who noted his significant difficulties in conversation, but did not offer any direct input. There is a family history of dyslexia (father) and a sister with complex learning and language needs. The mother reported that Sidney experienced frequent word-finding difficulties and that she and her son had trouble understanding each other during their day-to-day interactions. She admitted finding their conversations together 'hard work', as Sidney's contributions were limited, and she was 'always thinking ahead to the next question'.

Dyad 2 comprised 'Caiden' (also male) and his Mother. Caiden was aged 6;10 and attended a mainstream primary school. He had been referred to the Early Years SLT service, due to parental concern about his late talking, but was discharged without further contact. Teachers subsequently noticed his difficulties with language comprehension and sentence formation and referred him to the BCC project. Caiden described finding it 'hard to concentrate when everyone is talking'. He stated that 'it can be hard for me to say what I want to say' and complained that people frequently interrupted him, both at school and at home. Caiden's mother felt their conversations were 'balanced in terms of who does the talking'. She reported 'slowing things down' and breaking down instructions in order to help Caiden to follow what she was saying.

2.2 Data Collection and transcription

Data for this paper are drawn from a corpus of approximately three hours of videotaped conversations between six children with DLD each with their main carer at home, collected as part of the BCC Project, funded by the Economic and Social Research Council. Each dyad made their own pre-intervention recordings of approximately 5-10 minutes of conversation on three separate occasions across a six-week period, from which conversation therapy targets were identified. Two post-therapy conversation recordings followed, one immediately after the intervention and another six weeks later. This paper reports on our initial pre-therapy findings for Dyads 1 and 2, whose pre-intervention sequence organisation formed a collection with notable similarities of patterning. The total length of recordings gathered at this data point was 32 minutes and 11 seconds, with the central 5 minutes of each video selected for detailed transcription and analysis. This was to control for the variable length of home recordings. All transcriptions were carried out by the lead author and checked by the second author. Where disagreements arose, or additional observations were made, these were discussed and amendments were made as appropriate.

3 Findings

Examples of short and extended turns (Extracts 1-11) are examined in relation to the key research aims. Our focus is on sequences where questions are used to 'test' a child's knowledge or recollection, despite the parent knowing the answer. The analysis first presents examples of typical test question sequences (Extracts 1-4), which follow the QAR turn organisation pattern identified in the CA and child language research literature. This core set of data stands as a benchmark for analysis of other less clearly defined sequences, whose turn organisation differs from the typical pattern.

a) Typical Test Questions:

Extract 1, Dyad 2, 'school trip'.

145.	M	can you remember what <u>bus</u> we went on?
146.	C	(0.9) ((eyes up)) 345! -----
147.	M	345. yea:h.

In this typical QAR sequence, the status of the Mother (M's) turn as a test question is evidenced clearly by next turn proof procedure (Hutchby and Wooffitt, 2008, p.15). The nature of her receipt as evaluative is underlined by her repetition of Caiden (C's) answer and use of the affirmative 'yeah' (line 147). This indicates that she accepts the child's response, having assessed its goodness of fit against her pre-held knowledge; a move which asserts her status as the participant with superior epistemic authority over reminiscence of their shared trip. The analysis highlights the importance of considering the third turn position, rather than the Mother's originating turn alone (as in studies such as Cleveland & Reese, 2005, which concentrates only on coding maternal turns in isolation). In line 145, M could be thought to be initiating a simple information request (Schegloff, 2007; Stivers & Rossano, 2010), from a position of not knowing, or not remembering the bus number. However, her subsequent response reveals her true epistemic status (K+), in contrast to her initial turn, which is launched from an unknowing (K-) stance; compelling C's second pair-part response 'as a matter of normative obligation' (Heritage, 2012a, p.33).

Extract 2, Dyad 1, 'the weekend'.

26. M and where does granny live?
 27. S at <↑↓london:>
 28. M in ↑↓london.
 29. (1.5)

A further example of this typical test question-answer-receipt pattern occurs in lines 26-28, when Sidney (S's) mother asks the unambiguous test question 'Where does Granny [her own mother] live?' S replies with the 'correct' answer: 'at London'. He emphasises his response by elongating the vowels and employing a rise-fall intonation; perhaps indicating that he is aware of the status of the mother (M's) turn as a test question and underlining the 'display' of his knowledge. M mirrors S's prosody to indicate her acceptance of his answer, alongside her repetition of the place name and implicit repair of the preposition 'at' to 'in'. Notably, the test question sequence acts as a barrier to the progressivity of talk - leading to an extended pause in line 29. According to Heritage (2012b, p.49), this occurs because the mother's third turn receipt indicates that a real or apparent epistemic gap has been closed, removing the 'normative warrants for talking'. If the giving or receiving of new information acts as a driver or 'grist' for conversation, the achievement or revelation of knowledge balance acts to close down the sequence and production of talk; a move which Heritage conceives as stilling 'the epistemic see-saw'.

Extract 3, Dyad 1, 'the weekend'.

115. M ↑what did we do s:unday.
 116. S went to ↓↑granny's
 117. M no we didn't, that was the week befo:re!

This sequence of turns (from later in the same conversation) represents a further evaluative test question pattern, whereby M's repair in line 117 evidences her previous turn to have been a TQ because she goes on to correct S's answer. Here, the adult's action works in the opposite direction to the examples above by rejecting, rather than confirming, the child's response. While both sequence designs affirm the original question to have been testing the child, taking into account the work of M's third turn, here the mother acts to redress the child's lack of knowledge in her 'sequence-closing third' (Schegloff, 2007, p. 123). Thus, the epistemic imbalance is amended and the impetus for further discourse is removed.

Extract 4, Dyad 1, 'the weekend'.

82. M what did you eat? from the barbecue?
 83. S (1.2) a ↑↓burger:::!
 84. M and what else?
 85. S (.) ↑↓pizza::! and ↑↓chicken:.
 86. M and what did you have for ↑↓pudding?

While Sidney's mother explicitly challenges her son's reply in Extract 3, a third form of parental receipt within the typical QAR structure is that of an embedded acceptance of the child's turn, as can be seen in Extract 4. For example, M exposes S's 'a burger' (line 83) as matching her expected response by building upon her prior turn with a follow-up question: 'what else?' (line 84). She does this without acknowledging S's answer, or overtly demonstrating any change of knowledge status. This same pattern is repeated in lines 85-86, where M's 'and what did you have for pudding?'; acts as an implicit acceptance of S's account of eating pizza and chicken for his main course. This tacit alignment of the speakers'

epistemological position (K+, K+), followed immediately by a further TQ, allows the talk to progress and the work of collective retelling continues, with each question and answer adding a piece to the memory puzzle.

In all of the above examples, the nature of the parental receipt confirms a known-answer question to be testing the child's recall of a past event, the experience of which was shared to a greater or lesser extent between participants. The design of the third turns varies across extracts, yet fulfils the same action of receipting the child's answer (a) to the initiating question and (b) to the test of knowledge or recall. In summary, the mother may respond to the child turn by:

- (a) Repeating the key word or phrase spoken by the child; the function of this repetition can be enhanced by the prosodic features and non-vocal resources.
- (b) Repairing the child's answer through a correction or clarification request; (other-initiated other repair or other-initiated repair; Schegloff, 2000). In both cases, the adult's action of initiating a repair affirms the original question to have been testing the child and the child's answer to have been failed, or to be problematic.
- (c) Embedding receipt of the child's answer within a further question built upon the increment established by the prior question and answer. This is known to arise where questions about shared event memory challenge knowledge boundaries and epistemic status (Heritage, 2012b; You, 2015).

Across these extracts, the mother initiates talk with her child by employing an information request, which 'craves a response' (Heritage 2012a, p. 25); making the second pair-part required and thereby prompting the child to engage in conversation. However, the opportunity for conversational progression and language growth is minimal, since the pattern of third turn responses closes the perceived or actual gap in knowledge between participants; removing the possibility of sequence expansion and causing a halt in talk progression. If typical test questions do not facilitate a fruitful language response from the child, further investigation is warranted to determine what alternative resources mothers use in the design of their TQs in order to scaffold children's responsive turns.

b) Test question with answer prompt:

The next section presents examples which vary from the standard set, since they present a test question, framed by the mother with an accompanying answer prompt. In Heritage's terms, for the parent to present a test question, she must position herself as K- stance, whilst holding K+ status; an incongruity which is revealed within the same turn.

Extract 5, Dyad 2, 'school trip'.

3:00

126.	M	and- we see [what was santa?] (.) what did ((gestures antlers))
127.		santa?
128.		(0.9)
129.	C	a [<u>rein</u> °deer°]
130.	M	['ave on his:] sleigh.
131.	C	a / <u>rendi</u> :ə/. ((smiling))
132.	M	yeah, it was a <u>giant</u> one. (0.5) wasn't it?
133.	C	↑°yeah°.

Throughout this conversation, there are several instances where M recipient-designs her talk based on the assumed knowledge and competence of her conversational partner (Sacks & Schegloff, 2007; You, 2015). The above extract provides an unambiguous example of a test question sequence, whereby M cues Caiden into providing the word 'reindeer' by using a representational gesture (of antlers) to accompany her reference to Santa in line 126. The move is immediately successful, and C supplies the target in line 129. However, M does not immediately respond to this turn. Instead, she goes on to complete her question in line 130 - underlining the 'performative' nature of this sequence. C then repeats his statement in line 131 and this time, the mother accepts and builds upon his response: 'yeah, it was a giant one... wasn't it?' (line 132). Here, her verbal action implicitly rewards C for producing the correct answer in what is effectively the third turn position, although temporally it occurs in the fifth turn. Her tag question: 'wasn't it?' invites C to demonstrate his alignment with her testimony that the reindeer they saw was 'giant' (lines 132-133).

Extract 6, Dyad 1, 'the weekend'.

- 61. M what did grandad do? did he make a:-
- 62. S cake [((explodes into sustained laughter))]
63. M [no: he didn't make a cake!]
64. S ((still laughing; banging flip flops on legs))
65. M w:: what did he cook? did he u::se (.) a cooker?
66. S a k(h)oo: °h an- (.) ↑↓oven.
67. M no. what did he use? [outside]
68. S [a cooker.]
69. M wha- what d'you use to cook on outside in the
70. [ga:rden.]
71. S [a banana.] [s:(h)-] ((giggles))
[((smiles))]
- 2.00 72. M what did he use to cook on outside in the garden.
73. he [had-]
74. S [i have] no idea what's it called=
- 75. M =he made a b-
- 76. S burger.
- 77. M bar-be-cue.
78. S ba:rbecue.
79. M and what di==
80. S =wait [can i- can i?] see the
[((pointing to camera with flipflop))]
81. video.

At the start of this extract (line 61), Sidney's mother immediately deviates from her standard test question formulation by tagging a cloze sentence as a prompt to elicit her desired response from S: 'What did Grandad do? Did he make a-'. This immediately exposes the incongruity of her implied K- stance (encapsulated in her opening question), versus her evident K+ status, as revealed by her subsequent prompt. Unlike Caiden, who orients to his mother's cue to produce the required target, Sidney instead completes his mother's sentence with a joke ending: 'cake', accompanied by explosive laughter (line 62). M unambiguously rejects this move: 'No, he didn't make a cake!' (line 65). She then initiates a 'correct production sequence' (Lock et al., 2001). This is characterised as a series of turns designed to

elicit a correct name, even though the conversation partner already knows the target (see also Beeke et al., 2014; Gardner, 1989).

M pursues her 'practical remembering' goal (Engel, 1986) by asking the test question: 'What did he [Grandad] cook?' (line 65), but immediately reformulates this to a yes/no question: 'Did he use a cooker?'. The design of this turn is intended to prompt S to produce the word: 'barbecue', as an alternative to 'cooker'. In line 66, there is evidence of S's struggle to retrieve the target name; he begins to repeat 'coo-(ker)', but then stops to reformulate his answer after an inhalation and a brief pause. He eventually produces the candidate answer 'oven', which his mother decisively rejects: 'No' (line 67). She then attempts to cue him with additional semantic information: 'What d'you use to cook on outside in the garden?' (lines 69-70). In an echo of his earlier 'cake' response, S produces the clearly outlandish turn: 'a banana'. This he supplements with laughter and smiling, in a move which could be interpreted as an attempt to save face or recruit his mother to a more playful form of exchange, in order to distract her from the pursuit of the elusive target 'barbecue'. It is not possible to see M's facial expression in order to assess how she responds non-verbally to S's turn. However, linguistically she does not deviate from her own agenda; repeating her question: 'What did he use to cook on outside in the garden?' (line 72) and attempting once again to cue S in with a cloze sentence: 'he had-' (line 73).

This prompts S to candidly admit his defeat: 'I have no idea what's it called' (line 74). But even in the face of this explicit declaration of his word-finding difficulties, M continues to pursue her correct production sequence, redesigning her turn to incorporate a phonemic cue: 'He made a b-' (line 75). This use of hierarchical cueing, or scaffolding, is common in the interactions of Teaching Assistants and their pupils (Bosanquet, Radford, & Webster, 2016). However, it is less common in exchanges between parents and children. What makes this sequence particularly striking is the continued effort M devotes to support S in producing the target noun 'barbecue'. Rather than accepting 'burger' as a plausible alternative, she demonstrates great conversational labour in correcting S's response in line 77 and breaking down the word in order to emphasise its phonological features. S interprets this as a signal for him to repeat back the target word (line 78); finally completing the correct production sequence that began in line 65. Despite all of M's exertion, the linguistic and interactional pay-off is the production of a single word by S. Even when this is achieved, M does not acknowledge the success of her own or S's efforts by explicitly accepting his turn. Instead, she begins what appears to be a further test question: 'And what di-' (line 79), resulting in S attempting to end the conversation by asking to view the video recording (lines 80 and 81).

Whilst Sidney's word-finding difficulties act as a continued 'epistemic engine' (Heritage 2012b), driving his mother to continue the conversation because he is unable to provide the information required to restore epistemic symmetry, there is little progression linguistically or interactionally. S's explicit request to stop the recording perhaps underlines the lack of motivation or impetus for him to expand the sequence, as he does in subsequent extracts. As such, his mother's K- stance, counter-balanced with her clearly signalled K+ status, acts as a barrier to S's participation within this conversation by limiting his opportunity and willingness to contribute.

The question-plus-prompt turn design, which has been explicated above, occurs on multiple occasions across our BCC data set; indicating that parents have expectations as to what their children know and what support they may need to display their knowledge. These expectations are reflected in sequence organisation and the use of both verbal and non-verbal

devices, including gestures. Despite the parents' use of multi-modal resources to help facilitate their child's language production within conversation, the opportunities for language-learning and interactional development remain restricted; resulting in just a noun + determiner: 'a reindeer' or a noun in isolation: 'barbecue'. This raises the question of whether there are alternative turn designs, which provide greater support for children's language and conversation development.

c) Questions with answers provided

A further pattern of test questioning identified within our BCC data is that of a maternal turn which combines a TQ with providing the known answer.

Extract 7, Dyad 1, 'holidays'.

155. M and we had- what did we do to get there °h
 156. [we had to] wake up in the middle of the
 157. S [we had (xx)]
 158. M night didn't [we?]
 159. S [yeah] (0.8) to ↑↓go.
 ((nods))

Here, the mother begins to formulate a comment about their holiday to Devon: 'And we had-' (line 155), before switching to her familiar test question turn design: 'What did we do to get there?' (lines 155-156). Rather than waiting for S to answer (which he begins to do in line 157), M follows her question with the desired answer: 'We had to wake up in the middle of the night, didn't we?' The use of 'we' encourages alignment and supports the project of joint reminiscence. Meanwhile, the tag question and re-cycling of the 'we' pronoun in line 158 serves to invite S's agreement with M's version of events; a move that is met with both verbal and emblematic assent: 'yeah,' accompanied by nodding (line 159). The timing of M's tag question leads to overlap at the transition relevance place (TRP; Sacks, Schegloff, & Jefferson, 1974). S then succeeds in collaborative co-construction across turns by using the elliptical phrase 'to go'; elaborating upon his mother's statement in line 156.

By supplying the answer to her own probe, M has effectively switched from a K- to a K+ stance, thereby removing the pressure on S to retrieve a specific target. This has the effect of opening up the conversation and allowing him to progress the talk using language that he is able to access independently. S's mother frequently constructs this design of test question + answer provided turns across her interactions with her son, which may act as an acknowledgement of his significant word-finding difficulties and the challenges to communication which can result.

Extract 8, Dyad 2, 'Marvel show'.

69. M yeah? .mpt (1.4) and was there f:ire? cause i- i
 70. watched a clip on youtube (1.1) and they had
 71. like um:
 72. C yeah there [was]
 73. M [bikes] jumping through things.
 74. (0.7)
 75. C but on- on, when i was there, they didn't jump
 76. through things

2.00

77. M did they not?
 78. C ((shakes head))
 → 79. M so it wasn't like what was on: the tv?
 80. C ↑↓no.
 81. M ↑↓oh (.) so what did they do?
 82. C they: set fire.
 83. M .HH=
 ((sounding shocked))
 84. C =and- and they- and he was reached all the way to
 ((leans back))
 85. the ceiling! °h captain and america and- and the
 86. wa:sp was on motorbikes and guess what?
 87. M what?
 88. C they went through the fire!
 → 89. M ↑did ↓they?
 90. C ((nods))

This extract begins with the mother asking Caiden about a show, which he attended with his Grandma in London. Unlike earlier extracts of reminiscence, M was not present at the event, a fact which changes the nature of conversational remembering into an instance of recounting. However, as we shall see, she does have some knowledge of what took place and brings this into play as the interaction progresses.

M begins by questioning C as to whether there was any fire on stage (line 69). Despite her apparently genuine enquiry, she quickly reveals the expected answer, which is related to her existing knowledge, based on her viewing of a YouTube video (line 70). C confirms that there was fire (line 72), but goes on to contradict his mother's account of the characters 'jumping through things' (line 75). M expresses her surprise at this lack of congruity between her own understanding and E's account: 'did they not'? (line 77) but accepts his assertion: 'so it wasn't like what was on the TV?' (line 79).

In the event, it emerges that she was right to question C's dissent from her own epistemological position, as he goes on to describe exactly the narrative that she had proposed: 'Captain America and... the Wasp was on motorbikes and guess what... they went through the fire!' (lines 85 - 88). Rather than expose the contradiction that is evidenced in C's prior turns (which could constitute a conversational 'threat to face'; Redmond, 2015), M instead uses the news marker: 'did they?' (line 89) to preserve C's status as a knowledgeable party and allow the exchange to continue smoothly, without the need for repair.

M's multi-layered 'question + answer provided' initiating turn (lines 69-73) effectively resolves the K-/K+ gap without the need for the child to supply a specific target. The typical next turn expected from the child is given within the mother's prior turn; scaffolding not only further turns at talk, but linguistically nutritious ones (Head Zauche et al., 2017). Across this sequence, C takes the opportunity to display a rich and lengthy description across multiple turns, in contrast to the limited linguistic and interactional possibilities offered by more typical test question patterns. M, meanwhile, shows her flexibility and willingness to adopt a K+ or K- stance by taking into account C's event perspective (Cleveland & Reese, 2005) and offering a bridge, or scaffold, to the child's next turn through her use of follow-up questions or change of state tokens. This leads to further elaboration of the topic, which is jointly pursued, and C remains engaged in the interaction across multiple succeeding turns.

d) Questions designed and received as genuine: a shifting epistemological gradient

The recurring theme of epistemic boundaries, which has presented itself throughout this analysis, is further marked by the mothers' use of questions where it is unclear whether the answer is known to them or not. In each case, the parent adopts an 'unknowing epistemic stance' (K-; Heritage, 2012a) by asking a question which invites the child to share their knowledge and experience. Subsequent turns may reveal that the adult has feigned their ignorance in order to elicit the child's participation, though the evidence for this is not always exposed in conversation and therefore remains inconclusive for the analyst and / or conversation partner. Notwithstanding this, the sequential organisation of CP's turns follows that of an answer-not-known question, answer and receipt pattern throughout. Irrespective of the mother's epistemological status, her stance occasions the question as genuine for the child in their moment-by-moment experience of talk.

Extract 9, Dyad 2, 'Marvel show'.

-
- 3.00
107. M and how did you get there?
108. C (0.6) by: a train? (.) and a tu:be.
((pinching cheeks))
109. M wow?
110. (1.6)
111. C but mummy: is ↑scared of a tube.
112. M i am scared of the tube. [why am i scared?]
113. C [even sometimes] nanny
114. (.) becau:se (1.6) the- sometimes a tube? °h ha-
115. lights goe:s off.

This sequence begins with a triad of turns, which are organised according to the standard test question-answer-receipt pattern. M asks C how he and Nanny travelled to the O2 Arena to watch the Marvel performance (line 107), despite the likelihood that she is well aware of the travel arrangements. When C complies with her request to describe his journey on a train and a tube (line 108), M responds with a 'wow' token, which would typically convey a change of knowledge state. However, the utterance is muted and delivered with a questioning tone. The turn is also unaccompanied by a follow-up question - providing evidence that this is not new information, despite M's use of 'wow' to signal her inferior epistemic status.

As in similar examples from conversations between this dyad, the QAR sequence is followed by a mutually-attributable pause, where the talk appears to dry up. However, C is able to make use of the 1.6 second silence (line 110) to form his own novel comment: 'But Mummy is scared of the tube' (line 111). C's use of 'but' enables him to accomplish a stepwise topic shift, away from talk about the O2, and onto a discussion about M's tube anxiety. His turn at 111 possibly functions as the first pair part of an adjacency pair: his tonic stress on 'scared' inviting M's confirmation or rejection of his statement and thereby reversing their conversational and epistemic roles. In her response, M's own tonic stress on 'am' evidences her action of confirmation. This ultimately leads to a fruitful new sub-topic, where C is able to expand on his statement across lines 113-115; revealing that Nanny is also afraid of the underground and explaining that this is because the lights sometimes go off.

Thus, M's initiation of an apparently 'real' question, which is followed by a change of state token, rather than an evaluative response, occasions further progression of talk from C by granting him epistemological authority to expand the train topic. He responds positively, leading to an opening up of the conversation beyond the initial three initial turns and acting as an indirect facilitator for C's communication. By adopting and maintaining an 'unknowing epistemic stance' (Heritage 2012a), M invites elaboration by C and projects the possibility of sequence expansion. This contrasts with speakers who take up and reveal a more 'knowing' position by using a typical test question; a move which characteristically invites confirmation and sequence closure (Heritage & Raymond, 2005; Raymond, 2010).

Extract 10, Dyad 2, 'Marvel show'.

- 1.00
36. M who:'s the bad guy, i don't know any of them.
37. C i don't know one of them.
((...rubs eye...))
38. M i know: iron man. and i know mmn::: the wasp,
 39. cause [i don't] like the wasp.
40. C *[((burps)) ((burps))]*
41. M [Caiden!]
42. C [pardon] me. sorry!
((looking at camera))
43. M erm: spiderman?
44. C °yes°
((tilts head to M))
45. M did i say spiderman already?
46. C you said.
((sounds of baby babbling))
- 48. M who else was there? erm::
- 49. (3.5)
- 50. C OH I JUST REMEMBERED! 'i am groot!'
((finger up; to camera)) ((mimics voice))
51. M ah:! *((clicks fingers))* groot. yeah.

Here, Caiden's mother goes further in feigning her epistemic status by employing a 'claim of insufficient knowledge' (CIK; Sert & Walsh, 2013) to try to elicit the names of Marvel superheroes from C. The design of her turn: 'Who's the bad guy... I don't know any of them' (line 36) is subsequently revealed as a covert test question, as C asserts his own lack of knowledge by echoing his mother's CIK: 'I don't know one of them' (line 37). M's follow-up turn reveals the false representation of her own knowledge state, as C's failure to provide the target information compels her to reveal her ability to access the names she had presented as unavailable to her: 'I know: Iron Man. And I know mmn... The Wasp' (line 38). This links back to M's previous strategy of providing the answer to her own TQ (see Extract 8), though here, M's switch from K- to K+ stance is prompted by C's 'don't know' response. C then produces two burps, an action which effectively hands the conversational floor back to his mother (line 40); prompting her to supply another Superhero name: 'Spiderman?' (line 44). Here, the roles of parent and child are reversed, as M takes on the role of answering her own test question, while C receipts her turn, standing in epistemic authority, with a 'yes' (line 44).

M subsequently tries again to enlist C's support in the recall of Marvel characters by asking 'Who else was there?' (line 48). This time, she follows her question with an elongated 'erm' to indicate that she is thinking, followed by a 3.5 second pause. This subtle redesign of her

'recruitment move' (Kendrick & Drew, 2016) allows C the necessary time to retrieve the name 'Groot' (line 50). He explicitly signals the success of M's strategic pause with his exclamation: 'Oh I just remembered!' immediately before he produces the target word. M's 'ah' and clicked fingers in line 51 appear to provide next turn proof for the genuineness of this part of the question sequence, which is believable following the preceding topic build-up. Having declared she knows some of the Marvel characters legitimises her stance of having forgotten others and not remembering 'who else' there was.

The two extracts, above, demonstrate how fine the tracing of epistemic boundaries can be as a topic unfolds in the 'see-saw' fashion, described by Heritage (2012b). By using and maintaining the design of a 'real' question (whether the mother's stance is feigned or not), the epistemic balance achieved acts to facilitate turn sequencing and turn construction opportunities for the child, which are linguistically fruitful when contrasted with typically-structured TQs.

e) Building sequences of talk across turns: balancing questions with comments

In all of the above sequences, conversational remembering has been built around the mothers' use of questions to help scaffold their child's language and participation. Conversations between speakers have ranged from circumstances where the parent and child have equal experience of an event or topic to those where the child has absolute knowledge and the parent has only partial information, which they may minimise or amplify, depending on their interactional agenda. Questions which are received by the child as genuine, whether feigned or not, change the epistemic balance and seem to facilitate helpful turn sequencing and turn construction opportunities when compared with typical TQs. Sitting in contrast to this set of data are cases where the mother employs more complex scaffolding to help build verbal interaction across turns, e.g by employing comments, as well as questions to help drive forward the shared narrative; providing and soliciting linguistically nutritious input for and from her child.

Extract 11, Dyad 1, 'holidays'.

52. M and d'you remember when we went outside? (.) in
 53. the swimming pool.
 54. S [mmn:]
 [((nods))]
 55. M and the- air was ↑↓↑cold. wasn't it?
 56. S ((nods))
 57. M but the water was warm.
 58. S ((looks confused)) and i was like- freezing,
 59. [wasn't i?]
 60. M [((coughs))] yeah, so we 'ad to go back inside.
 61. S [.k(h)yeah]
 [((smiles))]

Across this extract, M notably deviates from using successive test questions; instead switching between questions and comments as an alternative approach to establishing and maintaining Sidney's engagement in joint reminiscing. At the start of the extract, she uses the

yes/no question: 'Do you remember?' (line 52). Whilst limiting S's immediate opportunities to respond, placing this phrase in turn-initial position marks 'remember' as a way of drawing the child's attention and, as such, helps manage the interaction by focusing on the shared awareness between the two speakers (Tao, 2001; You, 2015). Rather than putting S on the spot to display his knowledge, M then takes a lead in recalling and narrating the details of their family trip. Following her enquiry as to whether S remembers swimming in the outdoor pool, the child responds minimally (line 54). Rather than press him to provide a more content-loaded answer, M tacitly resumes the conversational floor and continues building on her theme: 'and the air was cold' (line 55), employing the tag question: 'wasn't it?' to maintain S's engagement and collaboration in the story-telling pursuit.

Once again, S uses a passing turn to hand the floor straight back to his mother (by nodding in line 56). Unusually, she continues with a comment, rather than a question: 'but the water was warm', line 57. This uncharacteristic turn design may contribute to S's look of confusion (line 58), as it is not immediately clear how he should respond outside the familiar routine of a more directive test question sequence (Grosse & Tomasello, 2013). In the event, he resourcefully develops the mother's account by adding his personal recollection: 'and I was like... freezing!'. Notably, he follows this with his own tag question: 'wasn't I?' (line 59), a move which appears designed to seek his mother's approval, or reassurance, that he has contributed appropriately. She provides this unequivocally with a 'yeah' (line 60), followed by a comment which both validates and supplements what S has said: 'so we 'ad to go back inside'. The 'so' in this instance marks the direct link between S's contribution and M's own recollection, highlighting their alignment and enabling the progressivity of the talk. S responds by reasserting his own orientation to the joint retelling and acceptance of his mother's remark by smiling and mirroring M's 'yeah'.

Taken together, the support which builds across M's turns - from collaborative yes/no reminiscing in line 52 to an elaborative comment plus yes/no tag at line 55 - combine to reveal S's competence as an engaged and engaging communicator. The accumulation of linguistically rich information provided by M, alongside the sequential implication for S to take a next and contingent turn, provides an effective framework to encourage his participation in conversation and thereby increases his access to the language-learning opportunities provided by his mother as the more experienced and communicatively responsive speaker.

4 Discussion:

This article has explored the role of test questions in the shared retelling of past events by parents and their primary-school children with DLD. In their purest form (the typical question, answer and evaluative receipt structure), these commonly-occurring requests can create a problem space for young speakers and may cause breakdowns in conversation by limiting interactional opportunities and undermining their epistemic status. However, the role of both parent and child in shaping and responding to test questions is crucial to the development of talk beyond the QAR sequence and can determine whether questions open up or close down the shared reminiscing space.

Across the extracts above, the mothers initiate talk with their children by employing requests for information, which have the immediate effect of prompting the child to engage in conversation. However, in the traditional test question, answer, accept/reject/embedded receipt formulation (sequence type a), the impetus for conversational progression is quickly

halted once the real or purported knowledge gap between the two speakers is closed (Heritage 2012b). In 'standard TQ' sequence design, there is covert incongruity across first and third turns: the mother's stance of 'not knowing' in the initial turn (K-) becomes counter-balanced with a covert status of 'having known' in the third turn (K+).

Similarly, when mothers supplement an initial test question with an answer prompt (either verbal or non-verbal; sequence type b), there is explicit incongruity within the first turn as well as across first and third turns: the mother's stance of not-knowing (K-) is combined with an overt stance of knowing-but-not-saying (K+), expressed as a prompt. The underlying action of this turn structure is to offer the child an incomplete version of their own next turn, which they are obliged to complete as a competence display. As for typical TQs, the interactional pay-off for this second type of sequence is minimal, with the child typically producing a single word or name following single or multiple prompts from the mother. Arguably, this could result in the child adding a potentially useful new item, or resource, to their vocabulary; a benefit which could form the motivation for employing this sequence type from the mother's perspective.

Careful evaluation of the data from two mother-child dyads has revealed alternative patterns and strategies, which occasion more fruitful opportunities for sequence expansion and extended talk. In 'TQ-with-answer-provided' (sequence c design), there is resolved incongruity within the two-part first turn: mothers' stance of not-knowing (K-) in the first part is amended in the second part through the status of knowing-and-telling (K+), expressed as a candidate answer for the child. Here, the parent effectively carries and displays for them their own next turn; removing the pressure on language-impaired children to produce elusive nouns or phrases. When the parent parcels both 1st and 2nd turns within her 1st turn position (asking a question and providing a candidate answer), she alters the action required of the younger, more inexperienced speaker. In effect, the interactional tables are turned; it is now the child who has sequential opportunity for an evaluative receipt - appraising the mother's candidate answer to the question she responded to on his behalf. Hence, it would appear that by adopting a more overtly knowledgeable position within their opening turn, mothers expand the child's response possibilities; allowing them to display their own knowledge and communicative competence.

Whilst typical test questions are marked by dissonance (whereby mothers present a K- stance in turn 1, set against the revelation of K+ status in Turn 3) for 'genuine' questions (sequence type d) - whether feigned or not - epistemic congruence is maintained across first and third turns. A maternal stance of 'not knowing' (K-) in Turn 1 is congruent with her apparent change in epistemic status to become 'now-knowing' (K+) in the third turn; a shift which is marked by a change of state token, rather than an evaluative receipt. The child, having been credited with imparting some new information to his mother, is cast in the role of the speaker with superior knowledge of the event under discussion. Our data suggests that he is then more likely to continue the conversation by offering further intelligence on the shared topic, or by introducing a stepwise topic shift. This marks a powerful contrast to the sequence-closing effects of typical test question sequences.

Perhaps the most flexible and effective turn construction strategy for parents, which is illustrated within our case studies, is sequence type e) - that of interspersing questions and comments in order to provide nutritious language input, whilst supporting the child to practise and extend their own language and conversation skills. Here, mothers subtly attune and amend their epistemic stance according to their child's contributions to conversation; for

example offering key information when required, whilst claiming inferior epistemic status at other times; treating the experience as the child's to know and describe (Heritage, 2012b). In adapting their own interactional and epistemic position to support their child's emerging language skills, parents are also modelling a range of different turn structures which will, by degrees, facilitate the child's own proficiency in conversation (Roberts & Kaiser, 2011). Hence, these everyday interactions can help promote children's language through conversation and vice versa; encouraging a virtuous circle whereby children contribute more to each exchange and receive nutritive input and feedback in return.

The body of our analysis has focused on the communicative patterns of two children with DLD in day-to-day conversation with their main carers. The use of a CA approach has allowed the investigation of two-way interactions beyond the categorising and coding of individual turns, which is prevalent across the child language literature (e.g. Cleveland & Reese, 2005; Fivush & Reese, 2002). In summary, our data has revealed that sequential progression of child talk and linguistic progression in turn design is influenced by (a) the epistemic nature of M's QAR sequence (b) the linguistic content displayed by M's prior for the child's next turn use (c) the balance of questions and comments within the sequence.

Conversations from two separate dyads reveal the potential of interspersing parental questions with comments as a resource to elicit language and recall from children, without overtly pressing them to display their knowledge. This insight informs the design of interventions which aim to train parents as supportive conversation partners to their children with language disorder. Work has already begun to develop and evaluate the 'Better Conversations with Children' programme, which is targeted at primary school pupils with DLD and their main carers. Findings from this study will feed into the further refinement of the therapy, which Dyads 1 and 2 have already participated in.

Future work is needed to explore potential cultural considerations, which should be taken into account when working with families using a conversation-based approach (Burns & Radford, 2008). For example, therapy goals should reflect the underlying values and beliefs of the people participating in the intervention, especially in relation to epistemic status. Conversation analysis can help support this individualised approach by considering aspects of social organisation related to interaction; the value of talk and how epistemic status is handled in everyday communication. The current study indicates that there is a need to consider both children's strengths and needs and parental style, as well as how these interact to support or hinder the flow of talk. This can lead to a deeper understanding of how children's language and conversation skills develop, in order to find optimal ways to support this.

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