

## **Title: Speaking to twin children: evidence against the ‘impoverishment’ thesis**

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***Abstract:** It is often claimed that parents’ talk to twins is less rich than talk to singletons, and that this delays their language development. This case study suggests that talk to twins need not be impoverished. In a case study, we identify highly sophisticated ways in which a mother responds to her 4-year old twin children, both individually and jointly, as a way of ensuring an inclusive interactional environment. She uses gaze to demonstrate concurrent reciprocity in response to simultaneous competition for attention from both children, and we see how the twins constantly monitor the ongoing interaction in order to appropriately position their own contributions to talk. In conclusion, we argue for the need to take twins’ interactional abilities into account when drawing linguistic comparisons between twins and singletons. Data are in Australian English.*

### **Introduction**

Previous interactional research on children has tended to focus on singletons. This research shows ways in which children competently manipulate interactional resources. In particular, specific analytic emphasis has been placed on children’s display of mutual understanding or intersubjectivity (e.g. Gardner & Forrester, 2010; Jones & Zimmerman, 2003), use of repair and questioning repeats (e.g. Corrin, 2010; Filipi, 2009; Forrester, 2008; Jones & Zimmerman, 2003; Salonen & Laakso, 2009; Sidnell, 2010b; Wootton, 2007), use of gaze as social control (e.g. Kidwell, 2005), and use of interactional devices to co-construct and maintain social order (e.g. Danby & Baker, 1998, 2000, 2001; Goodwin & Kyratzis, 2007).<sup>2</sup>

In contrast, although much has been written on twins, and more specifically on their measurable language delay across a range of linguistic indicators,<sup>3</sup> very little attention has been given to their interactional accomplishments. It is known that twins spend less time alone and that there are important differences in the style and quality of mother-child interaction between twins and singletons (Thorpe et al., 2003). Less attention, however, has been given to the nature of maternal twin interaction and how twins use language as a local accomplishment within their social world (see however, Danby & Thorpe, 2006).

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<sup>2</sup> Cromdal (2009) provides a detailed overview of recent research into children’s social interaction.

<sup>3</sup> For a meta-analysis of twins’ language studies refer to Thorpe (2006).

Yet the rate of US twin births has risen by more than three-fourths over the three decades 1980 – 2009 (Martin, Hamilton & Osterman, 2012).

Twin research to date has mainly focused on quantitative analysis of measurable indices of maternal input and child language development. Such measures include size of vocabulary, MLU (Mean Length of Utterance), appropriateness of syntactic construction, coding of questions, or types of responses. Stafford (1987), for example, analysed the impact of three types of maternal input: discourse features, illocutionary force, and conversational style. The speech of the twins' mothers was significantly less responsive than that of the singletons' mothers—they asked fewer questions, gave fewer acknowledgments, and only produced half the amount of semantically related remarks (imitations, expansions, extensions and topic continuations). Overall, Stafford (1987) concluded that mothers of twins addressed each twin far less than mothers of singletons.

In a US study of twins aged 15 month and 21 months, Tomasello et al. (1986) showed that mothers were more directive in their interactional style and that twin children received less speech directed specifically to them. Conway et al.'s (1980) study of 2 ½ year old twins concluded that the rate of the mother's speech to the child was the most important predictor of child language performance. As a result, singletons talked more, addressed more utterances to their mothers, and combined phrases into subject and verb sentence forms to a greater extent than did twins.

A more recent UK study of 96 twin pairs and 98 singleton pairs at 20 and 36 months, confirmed that maternal input is a contributing factor to twins language delay, of up to 3 months (Thorpe et al, 2003). Through coded interviews and observations, they show that mothers of twins do not encourage the twins to speak as much, compared to singletons, and that they provide fewer elaborated comments. When reading to the twin, in comparison to singletons, parents of twins engage less in reading to the child, and talk less about the story and its illustrations. In addition, parents are more likely to talk to the twins as a pair rather than as individuals. Thorpe et al. (2003) summarize their findings at 20 months by saying “the mothers of twins were less likely to provide a strong, elaborated communicative interaction with twins than with singletons.” (p. 346). They concluded that mother-child interactions “constitute strong contenders for being involved as part of the causal explanation for the twin-singleton difference in language outcome at 3 years.” (p. 348).

Research into parent-sibling interaction in which the mother also divides her attention between two children, shows that younger siblings receive less input from the mother, with input from older siblings not compensating for the decrease in maternal input (e.g Jones & Adamson, 1987; Mandle, Barton & Tomasello, 1991; Martinez, 1987; Rontu, 2007; Tomasello & Mandle, 1985; Woollett, 1986). Due to the fact that twins are co-present with each other most of the time, sibling studies add weight to the argument that maternal input is likely to be a contributing factor to language delay for twins.

This paper provides an alternative view to the traditional perception that poor maternal input is a contributing factor for delay in twin language learning. It argues that traditional,

often quantitative, methods of assessing maternal input and language development do not take into account the sequential and multiparty context of interaction and that the notion of ‘maternal input’, with its emphasis on transmission of input from sender to receiver, does not adequately describe what the mother provides and what the twins are exposed to in ordinary everyday interaction. As the following analysis will show, the children in this study constantly monitor not only the mother’s but also the other twin’s actions, making use of the full range of available resources and constraints to appropriately enter, or withdraw from, a conversation.

Turning the analytic focus on multiparty interaction allows us to examine the benefits of more complex and varied language models within a multi-child context (e.g. Woollett, 1986) with increased opportunities for children to develop their skills at monitoring and joining into ongoing conversations (e.g. Barton & Strosberg, 1997; Dunn & Schatz, 1989; Tremblay-Leveau et al, 1999). Dunn and Schatz (1989), for example, in their work on sibling interaction, show how younger siblings become increasingly effective participants due to their participation in a multispeaker world. At 36 months, younger siblings were more likely to ‘intrude’ into the surrounding conversations, with ‘intrusions’ more likely to include new and relevant information, and more likely to receive a response. Alternative explanations for how children acquire pragmatic competence in non-Western contexts (e.g. Blum-Kulka & Snow, 2002; De León, 2011; Ochs, 1986) similarly argue for the importance of multiparty interaction as a resource for socialization and language development.

This current paper takes into account the participation framework (Goffman, 1981; Goodwin & Goodwin, 2004) inherent in mother-twin multiparty interaction. It allows us to move away from comparing twins and singletons in dyadic conversations (see Tremblay-Leveau et al., 1999) towards understanding the role played by twins, and their mother, within a multiparty setting. The paper is situated within conversation analytic literature that examines young children’s (singletons) ability to mobilise a response from adults within multi-party interactions (e.g. Busch, 2012; Butler & Wilkinson, 2013; Kidwell & Zimmerman, 2007; Wootton, 1994). Conversation analytic research has shown how participants monitor interactions at possible turn transition places and how they use a variety of resources, including talk, gaze, body position and gesture, to ensure they have an attending recipient to their talk (e.g. Goodwin, 1981, 1986).

Thus the paper responds to calls for further research into the social world of twins (Thorpe & Danby, 2006) through an examination of the various conversational opportunities afforded to the participants within multiparty discourse. Given that poor quality maternal input is often cited as one of the contributing factors to twin’s language delay, the paper examines the mother’s talk and action within the multiparty context. Using data from a mother and her 4 year old twin boys, the analysis shows how the mother, within a single interactional sequence, uses gaze to demonstrate concurrent reciprocity in response to simultaneous competition for attention from both children. It also demonstrates how the twins constantly monitor the ongoing interaction in order to appropriately position their own contributions at talk.

## Data and methodology

The data for this study consist of a pair of dizygotic, same-sex, English speaking 4 year old twin boys interacting with each other and their mother. The data, collected with informed consent of the parents of the twins, are part of a longitudinal study of naturally occurring twin interaction. The mother collected 20 hours of ordinary everyday interaction within the home environment over a period of 5 years, from the age of 16 months. The segments of data used for the current analysis are drawn from a 25 minute video recording. Only the twins and their mother were present during the recording.

The twins are sitting opposite each other at the dining room table interacting with their toys (toy cars, play dough, other small toys), talking to their mother, and eating some food. It is breakfast time (7.00am), and the boys often play at the table while their mother works in the adjoining kitchen at this time of morning. The children are seated in high chairs drawn up to the table, and although they are able to climb out of their chairs, this requires some effort. Each child leaves his chair briefly once during the recording. The twins' mother moves around, sometimes fetching objects for the children, sometimes sitting at the table, and sometimes working in the adjacent kitchen area.

The data have been analysed using conversation analysis (CA), a detailed, qualitative analysis of recordings of naturally occurring social interaction (Schegloff, 2007; Sidnell, 2010a; ten Have, 2007). The single case study (Schegloff, 1987; 1993) permits detailed multi-modal focus on talk and nonverbal actions, including gaze, gesture and body position. The extracts have been transcribed using CA transcription conventions, with additional symbols, as required, for the transcription of nonverbal features (gaze, gesture, body movement) (see Appendix for explanations).

In the following transcripts, actions are in italics. The italicized lines either occur beside the relevant line of talk or underneath the line of talk. An asterisk (\*) is used to mark change of gaze direction. A superscripted hatch (#) is used to mark change of action. This enables a clear indication of gaze or action onset within the talk itself. Sometimes the timings of silences are spread over two or three lines in order to show what is happening nonverbally (particularly gaze) during this time. All names and other identifiers have been anonymised. No permission was given to use images or video recordings in presenting the analysis.

## Analysis

The following extracts show the mother and children in a multiparty participation framework. Sometimes, all three are collaboratively pursuing a single interactional activity. More frequently, however, the children are pursuing different activities sometimes resulting in competitive talk as they both try and get the mother's attention in order to pursue their interactional goal. The mother of the twins orients to the children's competitive talk in different ways. Extract 1 shows how she responds separately to two different but concurrent courses of action. Extract 2 shows her bringing two separate courses of action to closure through a single turn at talk. Extracts 3 and 4 illustrate how the mother continues talking to one child, bringing that interactional activity to closure,

before responding to repeated initiation attempts by the other child. Extract 5 shows the mother allocating space for reciprocity for one twin before responding to the other. Finally, extract 6 shows the mother allocating space for reciprocity to both children during an extended sequence.

*Mother's orientation to concurrent courses of action: Allocating separate responses*

In the following extract, the twins are sitting at the table pressing and poking toys and kitchen utensils into their play dough. The mother is sitting beside Zac. Earlier (not shown on the transcript) they had been talking about how they made holes in the ground so that they could plant out their potatoes (see extract 6 that occurs about 2 minutes before this extract). It is possible that Jack's repeated reference to 'doing a hole' in this extract relates to the potato planting.

Extract 1: Doing a hole

*Jack (on the left) gazes at and plays with his own dough throughout the extract.*

- 1 Zac there.  
*Z gazing at own dough; J gazing at own dough*  
*M gazing toward Z*
- 2 M #oh ↑ yeah. \* ↓ you did it.  
*#M leans down \*M toward Z's face*
- 3 (0.8) *M leans back*
- 4 (0.7) *M to left toward table/camera*
- 5 Zac <\*platy\*pus.>  
*\*Z to M*  
*\*M to Z*
- 6 M (#o(h)oh)#ye\*ah.  
*\*Z to own dough*  
*#M strokes Z's back*  
*#J pokes handle of kitchen utensil into dough*
- 7 Jack [ I'm doing a hole. ]
- 8 M [\*hs it got a platypus] pattern on it?  
*\*M toward Z's dough*
- 9 Zac (°yes°) *whispered*
- 10 Jack #°I'm doing a hole.°  
*#Z nods slightly*
- 11 Zac \*#see?  
*\*Z to M*  
*\*M toward J*  
*#Z points to own dough*
- 12 (0.5) *M leans toward J*
- 13 M → \*#oh ↑ yes.  
*\*M toward J*  
*#M leaning toward J*

- 14 M → \*#ye\*ah.  
 \*M toward Z  
 #M leans toward Z  
 \*Z to own dough
- 15 Jack \*I'm doing a hole.  
 \*M toward toy box in front of Z
- 16 M #what about something from here, even.  
 #M stands, reaches over to toy box, puts object on Z's dough

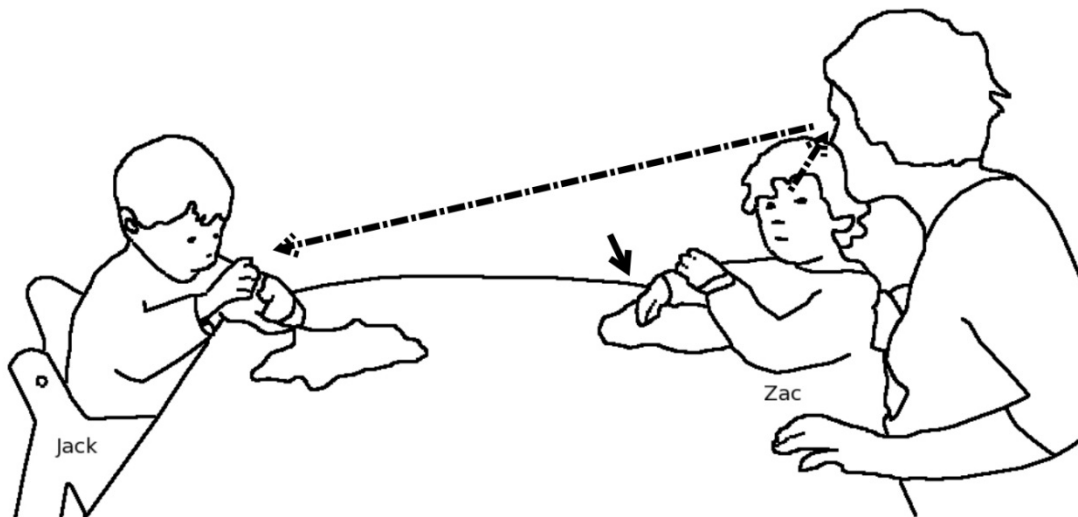


Figure 1: Zac (on the right) looks at his mother just after he says ‘see’ (line 11)

Following two telling-response pairs between M and Zac about platypus patterns in the dough (lines 1 and 2; 5 and 6), Jack commences his own telling ‘I’m doing a hole.’ (line 7). Although this telling is topically relevant and sequentially appropriate in that it follows M’s response to Zac’s second telling, it is said in overlap with M’s follow up question to Zac (line 8), and Jack gives no other bodily indication of competition for next addressed recipient status; he continues to be engaged in his play.

In line 9, Zac provides a whispered response to M’s question while M continues to gaze at him; in line 10 Jack re-states his telling, in the clear this time. Soon afterwards, in line 11, Zac points to his own dough, lifts his face and gazes toward M, saying ‘see?’ and inviting further response from M.

At this point, M is in the position of being a participant in two different child sequences. M responds separately to the children, embodied through gaze and body position. During her initial, intonationally-complete ‘oh ↑ yes.’ (line 13), M gazes and leans towards Jack, providing an acknowledgement of his telling about a hole. She then turns back and gazes toward Zac, providing a response to his ‘see?’, with her separate, intonationally-complete ‘yeah.’ (line 14). This extract provides a good illustration of the mother’s ability to use gaze and body posture to address two recipients separately within a single turn at talk. It

also demonstrates the children's ability to monitor the talk in order to appropriately position their turns, both sequentially and topically.

*Mother's orientation to concurrent requests: Joint response*

The following extract shows M providing a single turn at talk as a joint response to two different but concurrent (and initially apparently similar) requests. Jack and Zac are again sitting at the table with their play dough. M is in the kitchen, and not visible during this extract. Both children want some toast, although Zac wants to eat his mother's toast.

Extract 2: Toastie

- 1 (5.0) *crunching and chewing audible from kitchen*  
*Z and J each gazing at own dough*
- 2 Zac \*#Mumm::y?  
 \*Z towards M in kitchen  
 #Z turns in chair
- 3 M mmhmm? *muffled due to mouth being full*
- 4 Zac mumme- (.) I want some- (.) something=  
 Z kneeling backwards in chair
- 5 Zac =what you're eating.
- 6 M #you want toastie?  
 #Z starts to stand
- 7 (0.5) Z climbs out of chair to stand on adjacent chair
- 8 M mmhm,
- 9 Jack \*cn I've [ some-\* ]
- 10 Zac [ ↑ WHAT ]'RE YOU eating.  
 \*J towards M \*J back to own dough
- 11 Jack [cn I-]
- 12 M [toast]ie.
- 13 Jack \*cn I've some [\*toastie; ]
- 14 Zac [ ↑ CAN I ] eat-  
 \*J towards M \*J to own dough
- 15 Zac (°ga somethi-°)
- 16 M butter:? an toast?
- 17 Zac no- (.) no- (.) no- (.) no- (.) I wan- (.)  
 Z descends from chair and is no longer visible
- 18 Zac (wanna) eat some of yours.
- 19 M → okay- if we're gonna have toastie we need to see-
- 20 Zac some of your toastie.
- 21 M ↑okay, [(y'can ha- )
- 22 Zac [( )
- 23 M ↑okay, you cn have some of that,
- 24 M but- we need to make sure we don't eat our toastie uh on (.)
- 25 M with our pla(h)y do(h)ugh, .hhh M laughing
- 26 M cos toast in play dough wouldn't be very good, would it.

27 Zac ( )  
28 M ↓No.

The extract shows both children using a range of strategies, including gaze, repetition, restarts, and increased pitch and loudness, to persist in the effective production of their own requests (see French & Local, 1983, 1986; Goodwin, 1980, 1981, 1986; Heath, 1984, 1986; Schegloff, 2000). Zac accompanies his address-term summons (line 2) and initial request (lines 4-5) with marked changes in his bodily orientation, turning, kneeling and gazing towards M. M responds both to his summons (in line 3) and to his request (in lines 6 and 8). Her ‘mmhm,’ in line 8 potentially closes this sequence with Zac, but Zac climbs out and stands facing M on the adjacent chair, amplifying his bodily engagement with M.

Shortly afterwards, Jack moves his gaze from his own play to M, and commences his own request (line 9). However, in overlap with Jack, Zac seeks clarification of his previous request concerning ‘what you’re eating’ (line 10). Zac competitively orients to the two concurrent sequences now in progress by speaking loudly and maintaining his bodily stance. Jack drops out and cuts off his request before its completion, lowering his gaze again.

Jack makes another cut-off request attempt in line 11, before successfully producing his full request, accompanied by gaze at M, in line 13. But the end of this is also overlapped by Zac’s continuing talk. The overlapping talk in lines 9 to 14 means that neither child is totally effective in saying what he wants: Jack wants toastie; but Zac wants some of M’s toastie. At line 16, M responds with ‘btter: ? an toast?’, but it is not clear whether this is addressed to Zac, Jack, or both twins, although Zac treats the offer as being addressed to him when he objects with ‘no- (.) no- (.) no- (.) no- (.)’ (line 17), reiterating that he wants some of his mother’s toast.

At this point, she closes both request sequences (Zac who wants to eat her toastie; Jack who wants some toastie) with a single ‘okay’, before making a suggestion ‘if we’re gonna have toastie we need to see-’ (line 19). The inclusivity of her response is suggested through the use of ‘we’, although it is not totally clear who is included in the ‘we’. Subsequent talk (lines 24-25, ‘we need to make sure we don’t eat our toastie ... with our play dough’) suggests that her ‘we’ refers to both twins, since both are playing with dough on the table, though it may exclude herself.

Overall, what is apparent is how the mother’s response can stand as a response to both twins’ actions. However, the difficulty of jointly responding to two concurrent but slightly different requests is clear. In this instance, Zac goes on to confirm with his repair (line 20) that he is included in the joint response. What is also apparent, both in Zac’s competitive stance, Jack’s cut-offs, and both twins’ temporal positioning of their turns, is the twins’ continuous monitoring of the interaction, even when, as in Jack’s case here, they are seemingly engaged in their own play.

*Mother’s orientation to concurrent courses of action: Delayed response*



A different situation arises, however, if the mother is not able to jointly or individually respond to the concurrent courses of action of the twins. In this section, we show two extracts to highlight what happens when one of the children continues talking and the other child is simultaneously attempting to initiate talk on another topic. The issue for the mother is what to do when one child tries to join the interaction in competition with the ongoing talk.

In the following extract, Zac has been pulling the shells off poppy buds that are ready to open. Zac and M have been talking about which ones are ready and he is looking for more; he is gazing at the poppies as the extract starts. Both Jack and Zac still have play dough and toys in front of them. Although M is standing near Zac, her gaze is not visible in this extract. Jack starts a new sequence by asking about buying some more flowers (line 1).

### Extract 3: Poppies

*Zac is gazing at the vase of poppies until line 27*

- 1 Jack: \*cn we go to the markets again an buy  
\* *J down to own play*
- 2 sm more flowers?
- 3 M o::h ye:s
- 4 of course we [ca:n.
- 5 Zac: [#( I:: )see one that's about-  
#*Z reaches for a bud*
- 6 M: ↑course #we can.  
#*Z grasps bud*
- 7 M: [\*That w]ould be good fun wouldn't it.
- 8 Zac: [ (.hhh) ]  
\* *J to M*
- 9 (1.0) *J smiles at M, then nods, moves gaze to own toys*
- 10 M: [what flow]ers d'ya wanna b\*uy next time.
- 11 Zac: [(that one)]  
*\*J to vase of poppies*
- 12 Jack: I wanna buy som:::e (1.0)\*some more poppies.  
*\*J to M, smiles*
- 13 M: ↓that's a good idea.
- 14 I love poppies to[\*o they-
- 15 Zac: [\*this one,  
*\*J toward Z*
- 16 M: \*they're one of my favourite flowers,
- 17 Zac: \*this one?=  
*\*J to window and birds outside*
- 18 M: =is it coming open?
- 19 Jack: .hhhh I'LL buy some\*poppies [with ]\*Zaccie.

20 Zac: [(yes)]  
*\*J downward \*J to M*  
*\*Z to M \*Z to J*

21 M: ↑o:↓:h, okay that would be\*nice=  
*\*J to M's hand*

22 =d'you wanna both come together.

23 Jack: yes. Zac- Zaccie will get some poppies,  
24 \*I will get some flowers.  
*\*J to M*  
*\*Z to own toys*

25 M: \*#↑o↓kay,  
*\*J down to own toys*  
*#M moves to kitchen*

26 Zac: an I'll pick them a:ll a:ll a:ll off- (.) u- up for you

While M is talking to Jack about buying more flowers, Zac continues his own attempts to find another opening poppy bud. Three times he initiates talk on this topic, but it is only his fourth initiation that is responded to by M. His first initiation, '( I: ) see one that's about-' in line 5, overlaps with the end of M's talk (line 4). Although Zac elongates the start of his telling, he abandons it before it is syntactically complete, as M re-cycles her turn in order to continue talking to Jack. Jack gazes at M, and she adds an assessment 'That w]ould be good fun wouldn't it.' (line 7). At the beginning of this assessment, it is possible to hear Zac give an inbreath indicating anticipatory talk, but he does not persist with any actual talk in the face of M's continuation. It can be inferred from Jack's gaze, smiles and nod at M that she continues to gaze at Jack at least at the beginning of line 9; the two maintain their participation until Jack's nodding agreement with M's assessment potentially closes the sequence, whereupon Jack withdraws his gaze from M and looks down at his toys again.

Zac's second initiation demonstrates an orientation to the maximum length of 1.0 second silence (Jefferson, 1989), and perhaps also to this environment of possible closure, with both Zac and M commencing talk in overlap (lines 10 and 11). Again, Zac drops out, allowing M to continue her question to Jack. Zac attempts a third initiation (line 15), at a possible syntactic completion of M's next assessment ('I love poppies too', line 14). However M's talk and her engagement with Jack continues, and Zac drops out again. Finally Zac's fourth initiation ('this one?' line 17), which is both appropriately sequentially placed (after the closing of the sequence in progress) and marked by a questioning upward final intonation, is responded to by M (line 18).

This extract highlights 4 things. First it demonstrates that Zac continuously monitors talk and action in order to appropriately place his initiations within or close to potential transition spaces, that is, at or close to potential completion points in M's talk. He is able to wait for these opportunities to arise, and able to drop out when it becomes clear that there will be no uptake from M for the time being. Second, it highlights the way in which Zac waits and persists with his contribution until it is heard in the clear (line 17) and

responded to, as was also the case in Extracts 1 and 2. Third, it shows M delaying her response to one twin in order to promote or conclude one course of action over another. During this extract, she responds to Jack's suggestion to buy more flowers and she maintains that sequence. Attempts by Zac to revert to his talk on poppy buds are not responded to until after a possible point of closure. In these instances of competitive courses of action, the mother has to make decisions as to how she balances her attention and whether she give equal share toward topics and bids for attention from either one twin or the other.

Fourth, it highlights the inclusiveness of the multi-party interaction. Even though Zac was less successful in getting his contribution on the table and so less successful in his initial attempts at receiving a verbal response, Jack demonstrates his inclusivity in and after line 19. It is at this point that Zac adopts the role of co-participant in this ongoing sequence between Jack and M. Having moved his gaze away from the poppies and gazed at M as he responds to her question, Zac moves his gaze to Jack as the latter adds 'with Zaccie' to his 'I'LL buy some poppies'. Zac maintains his gaze at Jack while Jack closes the sequence with a suggestion that they will get both poppies (Zac) and flowers (Jack) (lines 23, 24). Ultimately, Zac makes his own contribution to the talk about buying flowers ('an I'll pick them a:ll a:ll a:ll off- (.) u- up for you', line 26).

The second extract in this section shows a further example of delayed response to one twin by M in order to take up a course of action initiated by the other. In this extract, M is in the adjoining kitchen preparing food; her gaze is not visible. Jack is facing her; Zac has his back to her. This sequence takes place shortly after extract 3 above.

#### Extract 4: Pecan Nuts

*Zac continues to gaze at the poppies throughout this extract.*

- |    |       |   |
|----|-------|---|
| 1  | M     | oka:y, now,   |
| 2  | Zac:  | what's:: (.)  |
| 3  |       | what's the one that's ready to[( )                                  |
| 4  | Jack: | [*Mummy=<br>[* J to M   |
| 5  | Jack: | =Zaccie doesn't like pecan nuts.                                    |
| 6  | M:    | #doesn't he?<br>#Zac grasps vase                                    |
| 7  | Jack: | he <u>used</u> t*o.<br>*J to window                                 |
| 8  | M:    | #he used to likem did he?<br>#Zac grasps bud                        |
| 9  |       | but he doesn't any more?  |
| 10 | Jack: | °no.°   |
| 11 |       | (0.5)   |
| 12 | Jack: | *.hhh I still <u>like</u> *.hh (pecan nuts)-<br>*J to M *J to table |
| 13 |       | .hh I <u>used</u> to-   |



pursues talk on a new topic launched by Jack over the continuation of an older topic by Zac.

*Mother's orientation to competing courses of action: Allocating space for reciprocity and response*

In the previous two extracts, Zac cuts off all but his last, successful, initiation attempts. In this next extract, he actively competes for M's attention, as he did in extract 2. M is sitting at the table with the two boys. They are both manipulating play dough with various kitchen utensils and toys; they are both, at their mother's suggestion, pressing objects into the dough to see the impressions they leave. M is sitting beside Zac. She looks across the table to Jack and asks 'what's your pattern Jacko' (line 3).

Extract 5: Big Car

- 1 (1.4)  
*M gazing at Z*  
*J gazing at Z*
- 2 (1.1) *M gazes at J*  
*Z gazing at own dough*
- 3 M wh\*at's your pa\*ttern Jacko?  
*\*J to M \*J to own dough*
- 4 Jack oo. (0.2) lo\*#ok at these bits.  
*\*M to J's dough*  
*#M leans over*
- 5 Jack [(see the) patterns,]
- 6 M [ ↑ oo:::~:~:h yes, ]
- 7 M \* ↑ ↑ a:::~:h, I see:,  
*\*M to J*
- 8 makes a\*pattern from\*that does it?  
*\*?M to Z \*M to J*
- 9 Jack cos-
- 10 Zac BIG CAR look.
- 11 (0.8) *J pats table beside dough several times*
- 12 (0.2) *J gazes at M*
- 13 (0.3) *Z gazes at M*
- 14 Jack #there's=  
*#M nods while continuing to hold gaze at J*
- 15 M =[ (it's)- ↑ y\*e::~:~:~:ah.]
- 16 Zac =[ LOOK TH\*ER]E\*S A BIG CA\*:R THERE.  
*\*J to own dough*  
*\*M toward Z*  
*\*Z own dough \*Z to M*
- 17 M → \*#ooh there is.  
*\*Z to own dough*  
*#M leans toward Zac*

18 M a hu:ge car.  
(2.0)

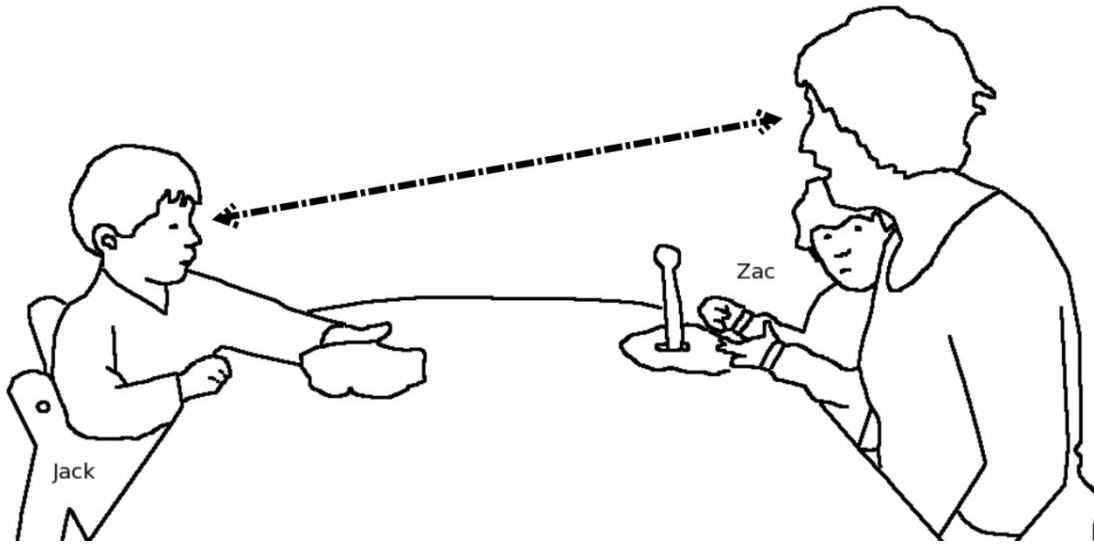


Figure 2: Image is taken as the mother nods (line 14)

In line 10, Zac says ‘BIG CAR look’, using both increased loudness and a post-positioned ‘look’ directive, possibly as a ‘last ditch’ effort to establish reciprocity (Lerner, 2003). But this turn initiation is not sequentially appropriate, as Jack is part way through his response as the recipient of M’s prior question ‘makes a pattern from that does it?’ (line 8), a question that is accompanied by both M’s gaze and her bodily orientation towards Jack.

Jack cuts off his own talk as Zac’s talk commences in line 10. During the 1.3 second gap of silence that follows (lines 11 to 13), Jack and Zac each move their gaze from their respective activities to gaze at M. Their competition for the role of next addressed participant is embodied in their raised eyes and faces, and their held gaze at M. Their almost simultaneous gaze at the mother suggests first that Zac’s talk and post-positioned ‘look’ was a bid for the mother’s attention; second that it is perceived as such by Jack; and third that the outcome of Zac’s competitive bid will be determined by the mother’s gaze direction. However, M holds her gaze at Jack, thereby holding the interactional space open for his response. Zac’s increased loudness and post-positioned ‘look’ have failed to secure, for the time being, his mother’s reciprocity for his competing talk in the face of potentially-continuing talk by Jack. In the context of M’s continuing gaze and bodily orientation towards him, Jack continues his talk, with ‘there’s’ in line 14.

Again, Jack cuts off his talk (line 14). M and Zac then initiate talk simultaneously in lines 15 and 16. M’s acknowledging nod in line 14 (Figure 2) and ‘(it’s-) ↑yeah.’ in line 15, with final intonation and accompanied by continuing gaze at Jack until after the start of the ‘yeah’, closes her sequence with Jack, even though Jack has not produced complete turns in line 9 or in line 14. Meanwhile, in line 16, Zac repeats and upgrades his earlier loud bid for reciprocity, making it stronger by pre-positioning his ‘look’ directive, and holding his gaze at M. In the course of Zac’s talk, during her initially Jack-directed ‘↑

ye:::ah.’, the mother moves her gaze and face toward Zac, and in lines 17 (‘ooh there is.’) and 18 (‘a hu:ge car.’), confirms and upgrades his assessment. Jack has already withdrawn his gaze from his mother and resumed his activity.

In this extract the mother exploits the temporal, sequential and multimodal character of the interaction to progressively display her availability and allow that all participants may be acknowledged a share in the ongoing participant framework.<sup>4</sup> She continues to hold the interactional space open for Jack by using gaze and body position to indicate her reciprocity, despite the non-progressivity of Jack’s talk. Her closing of this sequence with Jack, prior to moving her gaze to Zac, allows her to reframe Zac’s second summons as non-interruptive, and provide an enthusiastic response. Once again, the mother orients to the achievement of a balance between the twins’ competing courses of action.

*Mother’s orientation to participation: Allocating space for reciprocity*

In this final extract the mother provides opportunities for the boys to participate by using her gaze to allocate space for reciprocity and the possibility of a response in an environment where there is no overt competition for her attention. Once again each twin is seated at the table with play dough in front of him.

Extract 6: Potatoes in the garden

- |    |      |  |
|----|------|--|
| 1  | Jack | *I did it *right in.<br><i>J gazing at own dough</i><br><i>M gazing at J</i><br><i>*Z to M *Z to own dough</i> |
| 2  | M    | y’ di::d.  |
| 3  | M    | ↑ that’s like when we were putting po*tatoes<br><i>*J to M</i><br><i>*Z to J</i>                               |
| 4  | M    | into the *garden isn’t it.<br><i>*J to own dough</i>   |
| 5  |      | (0.7)  |
| 6  |      | (0.8) <i>M gazes at Z</i>  |
| 7  | Jack | y*es.= ( <i>whispered</i> )<br><i>*M to J</i>  |
| 8  | M    | =would you like to put some  |
| 9  |      | potatoes in the*garden today?<br><i>*J to M</i>  |
| 10 |      | (4.0) <i>J gazing at own dough</i>   |
| 11 | Jack | (mm.)  |
| 12 |      | (2.0)<br><i>Z at J, with brief glances down to table</i>   |

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<sup>4</sup> See Ochs (1992) for discussion of how the mother orients, through her upgraded assessments, to the cultural script of western, middle-class mothers.

13 (2.0) *M gazes toward Z*  
14 M \*cos we've put in about ten  
\**M toward J*  
\**Z to J*  
15 M and we've still got about forty to go.  
16 (0.4) *Z gazes at table*  
17 (0.6) *M gazes toward Z*  
18 (0.4) *M gazes toward J*  
19 M \*that's quite a\*lot\*isn't it.  
\**Z to J* \**Z to table*  
\**M toward Z*  
20 (1.0) *M gazes at J*  
21 Jack .hhhhh  
22 Jack \*mummy look they cover\*ed up  
\**Z to J* \**J to M*  
23 with \*potatoes i\*n the\*re.  
\**J own dgh* \**J to M*  
\**Z to table*  
24 M \*[ ↑ ye::s.]  
25 Zac \*[did w]e \*alread\*y got out the forty.  
\**J to own dough*  
\**Z to M*  
\**M toward Z*  
26 M well, we've got them ready to go,

In lines 3 and 4 M, gazing toward Jack, follows up her acknowledgement of Jack's talk about his own activity with talk about their joint recent activities ('↑ that's like when we were putting potatoes into the garden'), followed by a tag question (isn't it?), which invites further response from Jack. Soon after M says 'we' (a 'we' which presumably includes Zac, who is also likely to have participated in the potato planting), Zac moves his gaze to Jack and ceases his own play. M gazes at Jack throughout lines 3 and 4 and after their completion, clearly selecting him as addressed recipient and next speaker, but she also gazes briefly at Zac (line 6) who, although not the addressed recipient, monitors the interaction. Such monitoring, and the interactional advantages of monitoring for younger siblings, has been discussed in Dunn and Schatz (1989).

Gaze at this point (lines 3 to 9), between M, Jack and Zac, demonstrates their joint involvement in this multiparty participation framework. All three have the potential to talk and/or the potential to be recipients to the other's talk, just as all three have a stake in the story of planting the potatoes and can be co-tellers of the story (see Goodwin, 1984).

In lines 8 to 9, M maintains her gaze at Jack and latches a question ('would you like to put some potatoes in the garden today?'). After a 4 second gap of silence, in line 11, Jack provides a minimal response ('mm.'), and resumes his engagement in his own activity. Another gap of silence follows, while Jack continues his activity, and M again moves her



gaze to Zac. Once more, she appears to offer Zac her reciprocity, and hence an opportunity to engage verbally in the multiparty interaction underway. Zac, however, continues to gaze at Jack, having perhaps recognised Jack's response to his mother's question as inadequate.

M returns her gaze to Jack and also treats his minimal response as inadequate by pursuing his response in lines 14 and 15, while both she and Zac continue to gaze at Jack. During the following 1.4 second gap of silence M again briefly gazes at Zac, before her further pursuit and tag question in line 19. Once again, during her tag question, she briefly gazes at Zac, before returning her gaze to Jack during the ensuing one second gap of silence. Zac continues to monitor Jack.

Jack's large inbreath in line 21 projects and prefaces a response in line 22, but Jack's talk does not respond to his mother's prior talk—instead, with a pre-positioned address term 'Mummy', and 'look', he draws her attention to his activity once more, thus using attention-getting strategies ('Mummy' and 'look') to shift topic rather than to gain her attention, as also noted by Wootton (1981). Zac, having recognised his mother's selection of Jack as the recipient of her question and pursuit, and having waited for Jack's response, presumably recognises that Jack's talk in lines 22 and 23 does not respond to M's current course of action, despite M's acknowledging response with an agreement token (line 24), which also serves to close the sequence. Zac then initiates his own talk on the topic (line 25), moving his gaze to M as he does so.

M opens the interactional space to both twins by her use of gaze, while nevertheless selecting Jack as the recipient of her questions and as next speaker. Her frequent glances at Zac treat him as a co-participant in both the current interaction and the prior potato planting, even though Zac is not gazing at her. Zac monitors the interaction, but, judging that Jack is the recipient of M's questions, maintains the role of non-addressed participant, even when gaps of silence occur. He waits and observes Jack until it becomes clear that Jack is not continuing M's course of action. He then makes his own collaborative contribution, supplying what Jack missed, and contributing to the development of a possible plan to plant more potatoes.

This extract illustrates the complexity of the multiparty participation framework and how the mother demonstrates her willingness, as a participant, to interactionally involve both of her children, and to facilitate multiparty participation in a course of action. Talking to twins 'as a pair' has been identified as one of a range of maternal interactional behaviours that are thought to result in language delay in twins (Thorpe et al, 2003), yet this extract shows that addressing both twins at the same time need not prevent the children from exploiting their participant role to engage, differentially, in talk. This can also be seen in the 'toasties' extract 2, earlier, in which M addresses her 'okay' response to both twins, but Zac is subsequently able to differentiate his own request from that of Jack.

## **Discussion**

Previous research has suggested that poor quality maternal input is a contributing factor to delayed child language acquisition amongst twins, with mothers of twins being less likely to provide strong, elaborated communicative interaction with twins compared with singletons, and more likely to talk to the twins as a pair rather than as individuals (e.g. Rutter & Redshaw, 1991; Rutter et al., 2003; Thorpe, 2006; Tomasello et al., 1986.) However, the current paper suggests that this type of quantitatively based maternally focused research may not capture what the mother provides and what the twins are exposed to within mother-twin interaction.

This paper provides a snapshot of what interaction with twins looks like within the everyday setting of the home and their play activities. By looking at naturalistic data, we can see how the participants (mother and children) manage multiparty interaction as a regular ongoing activity. This is not something that they do occasionally—this is their norm. The boys are regularly in the company of each other and their mother as caregiver. Through this ongoing contact, they develop interactional skills required for multiparty contexts.

They monitor each other's talk and behaviour. They learn how their brother and mother manage interaction. They learn how to make their contribution to talk relevant in a timely and appropriate manner. They have to take notice of turn construction so that their talk can be heard in the clear. They have to take notice of who is talking and whether their talk is repetitive, how it contributes to the current topic or whether it introduces a new topic. They have to learn how to persevere with a course of action that is not immediately responded to, with multiple attempts to get it 'out in the open'. They need to utilize the full range of reciprocity gaining techniques, such as gaze, gesture, address terms (Lerner, 2003; Schegloff, 2000).

Whereas in these extracts it may look, at times, as if the two boys did not address each other; at other times, they made it clear that they were acutely aware of the interaction happening around them. The twin environment enables children to learn how to monitor interaction, and how to mobilise a response. All of this is part of the interactional socialization of twins. As a result, the complex turn-taking abilities of twins may be more advanced than those of similar aged singletons interacting within a multiparty context, as demonstrated by Trembley-Leveau et al (1999) for 23 month old twins.

The analysis has also demonstrated different ways in which the mother responds to, and interacts with, her twins within their multiparty participation framework. In response to the children's talk, she either responded separately (Extract 1) or jointly (Extract 2) to each child. Extracts 3, 4, 5 showed that when faced with two different but concurrent courses of action by the twins she ultimately responded to both, but delayed her response to one until she had closed her sequence with the other. Finally, the analysis showed how the mother actively opened up a space for interaction, demonstrating available reciprocity and interactional opportunities for both of the twins (Extract 6).

The analysis suggests that the concept of maternal input inadequately describes what is occurring in these interactions. We see the mother in this study juggle her attention to the

concurrent courses of action of one twin or the other, and strive to achieve a balance between the two, while also seeking to facilitate the inclusion of both twins in unified multiparty courses of action. There is an inclusivity evident in these ordinary everyday interactions, with all three participants jointly creating a multiparty participation framework. Participants, including the children, have different conversational opportunities and statuses (such as, that of bystander, overhearer, or unaddressed recipient) (Goffman, 1981) that they can embody, within multiparty discourse, in relation to the ongoing talk. Even if not addressed, participants are still the audience of the talk, as evidenced by the way the twins monitored the interaction and responded appropriately to it. Any utterance has a multiple resonance and multiple recipients (even if not addressed as such). The analysis has shown the interactional space that is created through the multiparty participation framework to ensure each child is an active participant in the ongoing interaction.

We need to examine twins' multiparty interaction and compare it to other types of multiparty interaction, such as child socialization in naturalistic, often non-Western contexts (Schieffelin & Ochs, 1986), sibling talk in naturalistic settings (Dunn & Schatz, 1989), other multiparty interactions such as family meal times showing how children ensure reciprocity and how parents and adults respond to bids for reciprocity (e.g. Busch, 2012; Butler and Wilkinson, 2013; Kidwell and Zimmerman, 2007; Wootton, 1994). Longitudinal studies of twins' multiparty interaction may also yield useful observations on the development of interactional behaviours within twins' distinctive interactional environment.

## **Conclusion**

This case study highlights the need for further research into the interactional capabilities of twins. Twins may have heightened interactional competence that is not being taken into consideration when assessing twins' linguistic ability. The paper demonstrates potential difficulties of analyzing interactional concerns using quantitative analyses. It also shows how the notion of 'maternal input' does not adequately account for what is occurring within these multi-modal multiparty interactions. It is only through detailed analysis of naturally occurring interaction that it is possible to 'see' what is occurring within the home as the mother and children interact within their ordinary everyday lives. This paper complements and supports other twins' studies of younger children (e.g. Barton & Strosberg, 1997; Tremblay Leveau et al., 1999) that argue that the unique dynamics of the triadic conversations differ from singleton dyadic conversations. Twin-mother interactions may resemble sibling-mother interactions (e.g. Dunn & Schatz, 1989), although the two children in the former case are of differing ages.

Given Pulkkinen et al.'s (2003) study of 11 and 12 year old twins, in which they showed that being a twin can lead to more developed social competency, it may be that although twins are initially linguistically delayed, they are not socially delayed from an interactional perspective. We need a better understanding of how twins interact within a range of contexts, both inside and outside the home, and not just during the early pre-school years. Only by fine-grained, multi-modal analysis of mother-children interaction

will it be possible to understand the constraints placed on all members of these multiparty conversations. More research into the interactional context of twins and their primary caregivers is needed in order to more fully understand the developmental context for children born as twins, and the implications this has for their social worlds.

### **Explanation of transcription symbols for nonverbal actions**

In each transcript, nonverbal actions are shown in italics. The italicized lines either occur beside the relevant line of talk or underneath the line of talk. An asterisk (\*) is used to mark change of gaze direction. A superscripted hatch (#) is used to mark change of action. If two actions happen together, the gaze takes precedence. Where there is no indication concerning gaze on the transcript it should be assumed that the participant has held his or her earlier gaze direction. If the transcriber can see the direction of the eyes, then this is demonstrated on the transcript by ‘gazes at xx’; if the transcriber cannot actually see the eyes, and so it is not clear whether the person did actually gaze at the other person, then this is demonstrated on the transcript by ‘gazes towards xx’.

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