An exploration of intersubjectivity in clinical interactions involving children with and without autism spectrum disorder (ASD)

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Abstract

This thesis explores interactional behaviours related to achieving intersubjectivity in clinical interactions involving children with and without autism spectrum disorder (ASD). Intersubjectivity is shared understanding between participants and this study views communication as the site for the establishment, maintenance and restoration of intersubjectivity. The study of intersubjectivity in children with and without ASD is potentially revealing as impairments in social communication are a core component of ASD (American Psychiatric Association, 2013) and difficulties understanding others’ perspectives are well-documented in ASD research (Leslie, 1991).

This study uses a corpus of approximately 60 hours of dyadic interactions involving 40 children participating in standardised cognitive tests administered by a researcher in a laboratory setting. Half the children are typically developing (TD) and half have ASD. Interactions were transcribed and analysed using Conversation Analysis (CA) methodology. The data is established as institutional due to the goal-oriented focus of the interaction and the participants’ prescribed roles as test-administrator and test-taker.

The study presents an overview of interactional behaviours demonstrating problems with intersubjectivity, including repair sequences. Repair sequences containing open class repair initiation (OCRI) (Drew, 1997) are examined in detail. OCRI consists of repair initiated by the other, in the next turn, using a token such as ‘sorry?’, ‘huh?’ or ‘what?’. I identified 27 instances of the adult producing an OCRI; 16 with TD children and 11 with children with ASD. In support of Drew (1997), I found that OCRI often occurs following a sequentially inapposite turn, or a turn where the sequential or ‘activity’ connectedness to the prior talk is problematic. When responding to OCRI both groups of children overwhelmingly produced a repair attempt, usually a re-saying. While subtle differences between the groups are discussed, analysis demonstrates the sophisticated ways both groups of children are able to orient to and respond to OCRI devices.

While OCRI sequences showed similarity between the two groups, analysis of an ambiguous marker of problems with intersubjectivity highlights their differences. This study identified a new phenomenon, prosodically marked ‘yeah’ (PMY), which can signal problems with intersubjectivity but does not always do so. In these sequences, the adult responds to a potentially problematic turn with the response token ‘yeah’, produced with high pitch onset, high rising terminal pitch and interspersed with laughter tokens. I identified 28 excerpts where the adult produced a PMY; 16 with TD children and 12 with children with ASD. I found that TD children usually oriented to PMY as if it
was related to maintaining intersubjectivity, by orienting to it as a repair initiator or a request for confirmation. Conversely, children with ASD rarely oriented to PMY as if it was concerned with intersubjectivity, by orienting to it as a continuer or as not requiring response.

This thesis furthers research on interaction and ASD by demonstrating complex ways that children with ASD can navigate the social requirements of their interactions. However, findings also suggest there are subtle differences in the ways children with ASD interpret specific actions in interaction, when compared to TD children; such differences have been difficult to capture with traditional quantitative research designs typically used in ASD research.
Declaration

I declare that:

(i) the thesis comprises only original work towards the Doctor of Philosophy;
(ii) due acknowledgement has been made in the text to all other material used; and
(iii) the thesis is fewer than the maximum word limit in length, exclusive of tables, references and appendices.

.................................................................

Kerrie Delves
6 September 2017
In Memory of Roger Julyan Wales (1938 – 2011);
without whose support I would never have taken the first step on this journey.
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1 Introduction

Autism spectrum disorder (ASD) is currently understood to be a spectrum disorder with core features in two areas; difficulties with social communication, and the presence of restricted, repetitive behaviour or interests (American Psychiatric Association, 2013). Since the earliest descriptions of ASD, difficulties with language and social interaction have been considered central to diagnosis. While knowledge of some aspects of ASD has advanced remarkably over the last six decades, efforts to understand commonalities in language difficulties across people with ASD, and to explain their underlying causes, have yielded disappointing results. As a whole, research focused on social communication in ASD has produced contradictory and inconclusive findings, largely due to the wide individual variation which exists across individuals with a diagnosis of ASD (Tager-Flusberg, 2017). Such heterogeneity has not been well accounted for in traditional quantitative research paradigms and tools typically used in this field of research.

Difficulties with social communication have often been linked to problems understanding other’s perspectives. This is often characterised as a deficit in attaining a Theory of Mind, or the ability to ‘conceive of mental states or, to attribute thoughts and emotions to others’ (Premack & Woodruff, 1978; 515). Theory of Mind ability can be tested using a false belief task which assesses the ability to identify a differing mental representation of a situation in another person, and to predict their behaviour based on this. There are well-documented difficulties for children with ASD passing false belief tasks (Baron-Cohen, Leslie, & Frith, 1985; Leslie & Frith, 1988; Leslie, 1991). However, research from interactional studies using naturalistic data suggest that children with ASD can demonstrate perspective taking abilities beyond those predicted by results on standard false belief tasks, when outside the constrains of a standardised test (Kremer-Sadlik, 2004).

In this thesis, I use the concept of intersubjectivity to explore demonstrations of understanding others’ perspective, which is broader than that captured by false belief tasks. In particular the focus is on the achievement of establishing, maintaining and restoring intersubjectivity by children with and without ASD. To do this I use a corpus of approximately 60 hours of clinical interactions involving 40 children interacting one-on-one with a researcher. All interactions take place in a laboratory setting, where children are participating in a battery of standardised psychological tests, which assess cognitive abilities including intelligence, executive function and pretence abilities. Half of the children in the corpus are typically developing (TD) and half have a diagnosis of autistic disorder or ASD. By current diagnostic criteria, all children previously diagnosed with autistic disorder now classify as having ASD. All the children with ASD in this study are considered high functioning with
intelligence in the normal range and no comorbidity. The thesis establishes the data set as institutional owing to the goal oriented focus of the interaction and the constraints on participation due to participants’ prescribed roles as test administrator and test taker.

I use the methodology of Conversation Analysis (CA) to analyse the interaction. CA is a fine-grained, qualitative method of analysis which is well equipped to account for both individual variation and trends within a group. It is also highly valuable for analysing human behaviour as it uses evidence from participants themselves to form understandings about pursued social actions within interaction rather than relying on external interpretations of the social actions related to certain behaviours. This study contributes to research aimed at building a more complete understanding of how children with ASD manage both their everyday interactions and their broader social world.

In this chapter I provide an introduction to CA, and discuss reasons why it is well suited for researching both language use in people with ASD and the unfolding establishment and maintenance of intersubjectivity through interaction. The chapter ends with an overview of the thesis.

1.1 Conversation Analysis

Conversation Analysis (CA) is a way of analysing interaction which originated from the discipline of sociology and more specifically from the tradition of ethnomethodology. A predominant feature of CA is the use of naturally occurring conversation as data, as this is seen by conversation analysts as the fundamental domain of interaction and the primary means through which a child is socialised (Heritage, 1995; 394). While the data used in this thesis features an institutionalised activity involving the administration of standardised tests to measure children’s cognitive abilities, from the standpoint of CA it is still naturalistic as such tests are interactional activities carried out recurrently in certain settings, including laboratories, clinics and classrooms, and worthy of study as a specific type of interaction.

CA aims to be somewhat free from influence by, or constraint within a theoretical structure or model, and thus strives to be empirically-driven (Heritage, 1995; 397). Emphasis is placed on having highly detailed transcripts of interaction to capture multiple aspects of verbal and non-verbal communication (Wooffitt, 2001; 64). ‘Hunches’ about a specific phenomenon are developed from an analyst’s knowledge as a competent speaker of the language (Heritage, 1995; 399), and also from the way that the participants in the conversation appear to understand the phenomenon to be working (Gardner, 2001; 4). Transcripts are then searched for multiple examples of similar patterns of behaviour, as well as cases which digress from these patterns, and highly detailed accounts about
a phenomenon’s use are formulated by examining a maximum number of these case studies (Heritage, 1995; 399). One such phenomenon which is particularly relevant for this thesis is that of repair; the act of amending misunderstanding in conversation.

1.1.1 An emic perspective

CA offers a methodological framework which is well suited to researching interaction involving children, and/or those with language impairment, as it takes a distinctly emic perspective. Much research in the past has approached child language from a psychological, developmental perspective, in which child language is viewed as an incomplete version of adult language (Danby, 2002). However, there is an increasing trend to view child language from a sociological perspective and to perceive children as competent users of language in their own social world (Danby, 2002). This latter view is the approach taken within CA. Participants in a conversation understand the talk on a turn-by-turn basis which demonstrates to the analysts the way they have understood an utterance. In CA, interpretation of the talk is formed through analysis of such demonstrations of understanding (Sacks, Schegloff & Jefferson, 1974). The methodological prerequisite to focus only on orientation to demonstrated actions makes this form of analysis particularly well suited to studying groups for which the researcher does not have in-group status, such as childhood and, potentially, language disordered groups.

1.1.2 Intersubjectivity

The term Intersubjectivity refers to shared subjectivity, or joint perception, of the world from multiple individuals. The question of how multiple individuals come to know (or think they know) a joint reality has been a problem of concern to social theorists and one that CA has been able to shed some light on (Schegloff, 1992). By the use of fine-grained transcription and analysis, conversation analysts have demonstrated conversational participants’ adherence to systematic aspects of talk which display the establishment, maintenance and restoration of intersubjectivity (Sidnell, 2010a; 136). For example, participants adhere to the sequential organisation of turn-taking, where a participant’s orientation to a previous turn demonstrates their understanding of it, both in terms of the content exchanged and the turn’s intended action. This display of understanding becomes a resource for other participants to design their next turn in line with the needs of the recipient.

Additionally, through the interactional mechanism of repair, speakers can maintain and restore intersubjectivity. For instance, when a speaker anticipates a misunderstanding, they can perform self-repair on their own talk to avoid a breakdown in intersubjectivity taking place. When a recipient does not understand a prior utterance, they can initiate repair on the prior talk to seek to re-
establish intersubjectivity, and when a recipient’s response to a prior turn demonstrates a breakdown in intersubjectivity, the original speaker can initiate repair to re-establish intersubjectivity. Thus interaction is a site for the local creation, maintenance and restoration of intersubjectivity, through the interactional mechanisms of turn-taking and repair. Throughout this thesis, I use both displays of intersubjectivity and orientations to its breakdown in repair sequences to explore intersubjectivity in interactions involving children with and without ASD.

1.2 The structure of this thesis

In this chapter, I have provided an introduction to this study exploring displays of intersubjectivity in clinical interactions involving children with and without ASD. This chapter has begun to introduce the methodology of CA and provide an indication of why CA is well suited to further our knowledge of the abilities of children to establish, maintain and restore intersubjectivity. These concepts are further examined in chapter 2.

In chapter 2, I focus on the relevant literature on which this study has drawn and to which it contributes. The chapter describes studies from both traditional quantitative approaches to human behaviour and those that are qualitative and emic in nature. It begins by providing an overview of ASD. This includes a brief history of the recognition of the disorder and our understanding today of ASD as a spectrum disorder. I outline the current diagnostic criteria and discuss the prevalence and any known causation of ASD.

I then provide an overview of language abilities and impairments in people with ASD. While language impairments are not considered a core component of ASD in current diagnostic criteria, difficulties with social communication are a core deficit. Many children with ASD experience significant language delays and many adults with ASD experience pervasive difficulties with communication throughout their lifetime. This chapter explores current research arranged by the linguistic areas; prelinguistic communication, echolalia, syntax and morphology, phonetics and phonology, semantics and pragmatics. Pragmatic aspects of language, or the use of language in context, are seen as particularly impaired in people with ASD, and include specific difficulties initiating and maintaining conversation.

The chapter then turns to research undertaken in the CA tradition, focusing on intersubjectivity, misunderstanding and repair. I begin by providing a brief history of CA and discussing its underlying assumptions. This includes the use of naturally occurring recorded data, a focus on action within interaction, attention to sequence organisation and how CA conceptualises context. Here I introduce the literature in CA on institutional interactions, and also the emerging body of work in CA on
analysis of interaction involving people with communication impairment, particularly ASD. The remainder of the chapter focuses on repair. This begins with findings on repair generally, and moves on to findings on repair in interactions involving children and people with aphasia and ASD. When discussing the literature on repair, research conducted in both CA and developmental frameworks is considered.

In chapter 3, I provide a description of the corpus of interactions analysed in this study. I describe the original study for which this data set was collected and the process of accessing, transcribing and analysing the data for the current study. I discuss how this study differs from a pure CA approach to analysis, and provide justification for quantifying the data and using comparisons of groups in chapters 5 and 6 of this thesis.

Chapter 4 provides an overview of the data set from a CA perspective. I argue that this is a type of institutional data and thus imposes constraints on and provides opportunities for participants’ involvement in the interactions. This chapter includes an overview of participation asymmetry and common Initiation-Response-Evaluation (IRE) sequences in the interactions, which vary according to the clinical task underway. The chapter ends by looking at sequences related to intersubjectivity in the data set. This includes an overview of repair sequences, as well as excerpts which feature negotiations over pretend objects and actions and the practice of ‘letting it pass’ (Firth, 1996), where misunderstanding evidently occurs, but neither participant orients to this as being problematic.

Chapter 5 focuses on open class repair initiation (OCRI) which is a type of repair sequence where an ‘other’ initiates repair in the next turn with a token such as ‘what?’, ‘huh?’ or ‘sorry?’ (Drew, 1997). This was one of the more frequent types of repair sequence identified in the data set with 27 excerpts isolated where the adult produces an OCRI. The chapter begins by analysing the environments preceding the initiation of repair, with various features identified which may lead to repair initiation. These include a lack of orientation by the adult, the presence of overlapped speech, misspeaking on the part of the children, and the presence of sequentially inapposite turns. The second half of the chapter focuses on the ways in which the children respond to the repair, which is most commonly by producing a repair attempt. Different repair strategies are identified including a complete repetition of the trouble source with same and altered intonation, a partial repetition of the trouble source with reduced and additional content and an ‘other’ category. Two excerpts in which the children resist repair are examined as deviant cases. These confirm the preference for the self to repair a trouble source after an other produces an OCRI device in these interactions. Excerpts
from TD children and children with ASD are discussed separately throughout the chapter to highlight similarities and differences.

In chapter 6, I examine a phenomenon which I have termed ‘prosodically marked yeah’ (PMY), where the adult responds to a potentially problematic turn with a marked form of the response token ‘yeah’. This is produced with high pitch onset and high rising terminal pitch and is typically produced interspersed with laughter tokens. In line with the analysis in chapter 5, I first examine the environment preceding the PMY produced by the adult, with various features identified which may influence the maintenance of intersubjectivity. These are a lack of orientation by the adult, the presence of overlapped speech, the presence of sequentially inapposite turns and misspeaking on the part of the children, including the presence of untranscribable speech, and the presence of unclear referring expressions. The second half of the chapter focuses on the turns following a PMY. While I was first interested in the token because of its use as a repair initiation device, on further analysis I found that it also served other functions, including acting as a request for confirmation and acting as a continuer. Unlike after an OCRI, a non-response is found to be permissible after a PMY. Excerpts from TD children and children with ASD are again discussed separately throughout the chapter to highlight similarities and differences.

Finally, in chapter 7, I provide an overview of the thesis and discuss conclusions. The limitations of the study are discussed and the chapter concludes by exploring thesis contributions to three areas. These are the CA work on communication disorders, CA work on intersubjectivity, by providing a description of a new phenomenon, and our knowledge of interaction in ASD.
2 Literature review

2.1 Introduction

This chapter provides an overview of previous research which is relevant to this study. It consists of an overview of research on ASD and also relevant research findings from a CA perspective. These are diverse research areas, however, they create the starting point of this research and outline the assumptions on which I have based the research design and later the findings.

In section 2.2, I provide an overview of ASD as a recognised and distinct disorder. I explain the history of the identification of autistic disorders, and touch on the evolution of our understanding of them. In section 2.2.2, I give an overview of the diagnostic criteria as they have been defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM), 4th and 5th editions and briefly discuss diagnostic tools. In sections 2.2.3 and 2.2.4 I give an overview of the prevalence and aetiology of the disorder. In section 2.2.5 I provide an overview of language abilities and impairment in autism. This section covers findings concerning language abilities from clinical and experimental research, for the most part conducted by psychologists and speech pathologists using quantitative frameworks.

The chapter then gives an overview of CA in section 2.3. It begins by providing some background information on the development of CA in section 2.3.1 and then describes four underlying assumptions of CA in sections 2.3.2 to 2.3.5. These are; the use of naturally occurring recorded data; a focus on action; a focus on sequence organisation; and a description of the CA conceptualisation of context. In section 2.4, I discuss how the traditional approach to CA has broadened from it being a tool to analyse everyday mundane interaction to it being applied to institutional contexts, and I discuss definitions of institutional interaction, as I argue in chapter 4 that the data used in this study is a form of institutional interaction. In section 2.5, I provide an overview of the CA literature which examines interactions involving people with communication disorders, beginning with key studies in aphasia, and then focusing on studies involving children and adults with ASD in 2.5.1.

In section 2.6, I provide some background on the study of intersubjectivity, and how this has been conceptualised within a CA framework as created and maintained through interaction. One conversational phenomenon which is central to the way conversation analysts have examined intersubjectivity is the mechanism of repair. Repair behaviours present a window for analysts to examine the achievement of shared understanding as it occurs within interaction. Thus, I discuss the origins and progression of how repair sequences are analysed in CA in section 2.7.1 and also present some main findings from among neurotypical, English-speaking adults. Finally, I consider major
findings from the examination of repair in children and in individuals with communication disorders, especially those with ASD. In section 2.7.2 I examine findings from a developmental perspective and in section 2.7.3 I examine findings from a CA perspective.

2.2 Autism spectrum disorder
This section provides an overview of ASD as a separate and distinct disorder. It draws on literature from a wide range of disciplines, however the majority of the ASD research to date has been carried out in clinical domains and from medical or psychological perspectives. Research on ASD conducted in interactional paradigms will be discussed later in section 2.5.1, where an introduction to CA and a literature review of CA and ASD is provided.

2.2.1 History
ASD was first documented by Leo Kanner and Hans Asperger in the 1940’s. While there were undeniably earlier references to autism-like traits from a range of sources, Kanner’s paper “Autistic Disturbances of Affective Contact” (1943) is the first systematic description of ASD as we understand it today. In this paper, he documents the behaviour of eleven children with ‘autistic disturbance’, aged between 2 and 11 years.

While Kanner was conducting this work in the United States of America, Asperger was studying children in Austria whose behaviour bore remarkable similarities to those in Kanner’s research. His paper “‘Autistic Psychopathy’ in Childhood” (1991[1944]) describes generalisations about the disorder developed from his work with children at the University paediatric clinic, Vienna.

Kanner and Asperger were working independently and were originally unaware of each other’s work, however they described the central features of autism similarly. The term ‘autistic’ had already been used by Swiss psychiatrist Eugen Bleuler to refer to a subgroup of schizophrenic patients who gradually lost contact with reality (from the Greek word autos, meaning self). Kanner and Asperger independently chose the word ‘autistic’ to characterise the disorder they described, indicating that they both saw the primary feature of autism as being cut off or withdrawn from others, and somewhat self-sufficient in emotional needs. They both describe their patients as exhibiting a lack of social interaction and a failure to adequately communicate, as demonstrating stereotypical behaviour and resistance to change, while also having isolated skills and abilities (Frith, 1991; 10).

Asperger’s description largely agrees with Kanner’s picture of the socially awkward, emotionally detached and markedly egocentric child with obsessive interests over a narrow range of topics.
However, the two accounts differ regarding language abilities. While Kanner described children with delayed and highly limited use of language, Asperger described children who learnt to speak early and had good grammar and extensive vocabulary, but with literal, pedantic or inappropriate usage and unusual use of intonation.\(^1\) Both agreed that the use of non-verbal communication was atypical, and that their subjects performed poorly on pedagogical tasks. However, Asperger emphasised the impressive creative abilities and original ideas of the children in his care, while Kanner described a lack of imagination.

Following Kanner’s and Asperger’s first descriptions of autistic traits, there was much confusion in the field of autism research and treatment. The disorder was given a range of labels, including *infantile autism, infantile schizophrenia, infantile psychosis* and *Kanner’s syndrome*. There was also debate over whether autism was a discrete disorder, separate from disorders such as schizophrenia, and if this was the case, what the defining features of the disorder were. In 1978, Michael Rutter attempted to establish a definition of autism and outlined the three key areas of deficit which he isolated as impaired social development, delayed and deviant language and insistence on sameness, displayed in stereotyped play patterns, resistance to change and abnormal preoccupations (Rutter, 1978). He also specified that the age of onset needed to be before 30 months of age. His criteria informed the first categorisation of the disorder in the Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM-III; American Psychiatric Association, 1980). With its publication in 1980, researchers and clinicians had a robust and consistent set of criteria on which to base diagnosis, and consequently treatments, of the disorder.

However, debate continued over whether these criteria were the most accurate, and in line with updates of the DSM, occurring in 1994 and 2013, diagnostic categories and criteria for ASD have been substantially modified. Most notably, Lorna Wing and Judith Gould introduced the modern conceptualisation of autism, first as a continuum (Wing & Gould, 1979) and then as a spectrum (Feinstein, 2010). Wing & Gould carried out an epidemiological study (1979) screening children for at least one impairment described in the existing autism literature. They examined these children’s patterns of behaviour using interview and observational techniques and mapped the distribution of

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\(^1\) This difference led to the diagnostic distinction between children exhibiting autism-like symptoms with language delay and those without language delay. From 1994 to 2013, the DSM-IV specified that those with language delay receive a diagnosis of ‘autistic disorder’, while those without language delay receive a diagnosis of ‘Asperger’s disorder’, named in Asperger’s honour. These disorders are increasingly viewed as part of the one spectrum of autistic disorder and with the release of the DSM-5, ‘Asperger’s disorder’ ceased to exist as a separate diagnostic category. Asperger maintained until his death in 1980, that the disorder he described was different to that of Kanner’s.
these behaviours across the group. Kanner’s description of autism could be reliably identified in a subset of these children, however, the distribution of the symptoms across multiple subgroups of children, suggested that the disorder formed a continuum of severity rather than discrete diagnostic entities (Wing & Gould, 1979).

The conceptualisation of autism as existing on a continuum has since been revised. As Judith Gould explains, the realisation that the word ‘continuum’ had an implication of discrete descriptions along a two dimensional scale, encouraged them to revise the terminology; ‘It was not a question of moving in severity from very severe to mild... The concept is more like a spectrum of light, with blurring.’ (Feinstein, 2010; 153). The use of the word ‘spectrum’, reflects the wide range of symptoms, skills, and levels of disability seen in autism and the uneven spread of such features in relation to one another across different individuals with ASD. In line with this current perspective, the latest edition of the DSM, the DSM-5, incorporates all manifestations of autistic traits under the umbrella term ASD.

2.2.2 Diagnosis

Today there are two main resources which outline classification systems for ASD which are used by clinicians, researchers and policy makers. The first is the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5; American Psychiatric Association (APA), 2013) and the second is the International Statistical Classification of Diseases and Related Health Problems, 10th edition (ICD-10; World Health Organisation (WHO), 1993). The DSM-5 is the current version of DSM in use, however, the children in the corpus used in this thesis were diagnosed using criteria from the DSM-IV, and so this is discussed below, in addition to the criteria outlined in the DSM-5.

2.2.2.1 DSM-IV and ICD-10

Unlike previous editions of these manuals, the DSM-IV and ICD-10 included similar definitions of autism, which the DSM-IV lists as autistic disorder and the ICD-10 calls childhood autism. Both classify autism as a pervasive developmental disorder, a category which also includes Rett’s disorder and childhood disintegrative disorder, and both classify it separately from Asperger’s disorder and pervasive developmental disorder-not otherwise specified (PDD-NOS), which is also called atypical autism (APA, 1994; WHO, 1993).

2 Asperger’s disorder is commonly referred to as Asperger syndrome, however to keep terminology consistent with the DSM-IV, I have used the term Asperger’s disorder.
To meet the diagnostic criteria for autistic disorder in the DSM-IV, a child needs to exhibit a minimum of six atypical behaviours in three domains:

1. impairment in social interaction;
2. impairment in communication; and
3. the presence of restricted and repetitive patterns of behaviour.

Two impairments need to manifest within the domain of impaired social interaction, while at least one behaviour needs to be present from each of the other two domains. Both the DSM-IV and ICD-10 specify that there must be identification of impairment in all three of these areas before the age of 3 years. Features of each domain are outlined in table 2.1.

<table>
<thead>
<tr>
<th>Features/symptomology</th>
<th>Impairment in social behaviours</th>
<th>Impairment in communication</th>
<th>Restricted and repetitive pattern of behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>• qualitative in nature;</td>
<td>• qualitative in nature;</td>
<td>• qualitative in nature;</td>
<td>• a preoccupation with very few, very narrow interests such as memorising dates, facts about meteorology, baseball statistics or train timetables;</td>
</tr>
<tr>
<td>• a marked impairment in nonverbal behaviours, such as eye-to-eye gaze, facial expression, body postures and interactional gestures, used to regulate and sustain communication;</td>
<td>• a delay in, or, an absence of, language acquisition including an absence of nonverbal communication attempts;</td>
<td>• an impairment in initiating or sustaining conversation;</td>
<td>• a strong insistence on routines or rituals;</td>
</tr>
<tr>
<td>• a lack of shared attention or enjoyment;</td>
<td>• an impairment in initiating or sustaining conversation;</td>
<td>• a lack of language use for social means;</td>
<td>• stereotyped and repetitive use of language;</td>
</tr>
<tr>
<td>• a lack of social or emotional reciprocity, evidenced in a lack of actively engaging in social play or preferring solitary play;</td>
<td>• when speech is present the pitch, intonation, rate, rhythm and/or stress may be abnormal;</td>
<td>• stereotyped and repetitive use of language;</td>
<td>• when speech is present the pitch, intonation, rate, rhythm and/or stress may be abnormal;</td>
</tr>
<tr>
<td>• an inability to make friends; or</td>
<td>• lack of awareness of other people and/or understanding of social conventions.</td>
<td>• lack of imaginative play and/or creative thought processes.</td>
<td>• a heightened interest in parts of objects or the non-functional elements of objects.</td>
</tr>
</tbody>
</table>

Table 2.1 Features within each domain of diagnostic criteria in the DSM-IV

2.2.2.2 DSM-5

The DSM-5 was published in May 2013. In this edition, the pervasive developmental disorders of autistic disorder, Asperger’s disorder, childhood disintegrative disorder and PDD-NOS are now combined under the one diagnostic category of autism spectrum disorder. Another major change in diagnostic criteria from DSM-IV to DSM-5 is that the discreet domains of impairment in language and
social behaviours are now combined to form a single domain of persistent deficits in social communication and social interaction. These changes reflected the growing conceptualisation of autism as a spectrum of related traits, and the perception that language difficulties present in people with ASD have an underlying social foundation. The features present in the two diagnostic domains in the DSM-5 are summarised in table 2.2.

<table>
<thead>
<tr>
<th>Features/symptomology</th>
<th>Persistent deficits in social communication and social interaction across multiple contexts</th>
<th>Restricted, repetitive patterns of behaviour, interests or activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Deficits in social-emotional reciprocity, (e.g. abnormal social approach and failure of normal back and forth conversation; reduced sharing of interests, emotions or affect, failure to initiate or respond to social interactions)</td>
<td>• Stereotyped or retentive motor movements (e.g. motor stereotypies), use of objects (lining up of toys, flipping objects) or speech (e.g. echolalia, idiosyncratic phrases)</td>
</tr>
<tr>
<td></td>
<td>• Deficits in nonverbal communicative behaviours used for social interaction (e.g. poorly integrated verbal and nonverbal communication, abnormalities in eye contact and body language, deficits in understanding and use of gestures)</td>
<td>• Insistence on sameness (e.g. extreme distress at small changes, difficulties with transition), inflexible adherence to routines (e.g. rigid thinking patterns, need to take same route) or ritualised patterns of verbal or nonverbal behaviours (use of ritualized greetings)</td>
</tr>
<tr>
<td></td>
<td>• Deficits in developing, maintaining and understanding relationships (e.g. difficulties adjusting behaviours to suit various social contexts, difficulties in sharing imaginative play, absence of interest in peers and difficulties making friends)</td>
<td>• Highly restricted, fixated interests that are abnormal in intensity or focus (strong attachment to unusual objects, excessively circumscribed or perseverative interests)</td>
</tr>
<tr>
<td></td>
<td>• Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of the environment (e.g. apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects)</td>
<td></td>
</tr>
</tbody>
</table>

*Table 2.2 Features within each domain of diagnostic criteria in the DSM-5*

The overview of features in table 2.2 is not exhaustive and not all symptoms will be present in any one person with ASD. Thus, there is a wide range of ability and impairment within people diagnosed with ASD. The DSM-5 allows for ‘severity levels’ to be associated with each of the diagnostic domains of social communication and restricted, repetitive behaviours. Severity levels range from ‘requiring support’ to ‘requiring very substantial support’.

While the DSM-IV and ICD-10 contained comparable diagnostic definitions of pervasive developmental disorders, with the release of the DSM-5 and the changes to its diagnostic definition
this uniformity has been reduced. Currently the ICD is under revision and, at the time of writing, the next edition is due for release in 2018.

### 2.2.2.3 Diagnostic tools

A diagnosis of ASD is made on the basis of behaviour, either by parental- and/or self-report, or by direct observation. Best practice is for diagnosis to be made by a multidisciplinary team with expertise in relevant domains; typically a speech pathologist, child psychiatrist and paediatrician. The DSM and ICD diagnostic criteria for ASD are rarely the only instruments a clinician, or team of clinicians, will draw on to make a diagnosis. Supplementary assessment items, such as tests of intelligence and language abilities are often used, as are tools specifically tailored to identify ASD. Tools for the diagnosis of ASD generally fall into three categories:

1. Rating scales, such as the Childhood Autism Rating Scale (CARS; Schopler, Reichler & Renner, 1986);
2. Diagnostic interviews, such as the Autism Diagnostic Interview-Revised (ADI-R; Le Couteur, Lord & Rutter, 2003); and
3. Direct observation scales, such as the Autism Diagnostic Observation Schedule, 2nd edition (ADOS-2; Lord, Rutter, DiLavore, Risi, Gotham & Bishop, 2012).

The nature of ASD as a heterogeneous disorder which presents differently in each individual makes diagnosis a complicated process and each tool available has limitations. There is currently no set standard for diagnosing ASD and recent research in Australia suggests wide variation among clinicians on their diagnostic practice, including which tools they use (Taylor et al., 2016). As with diagnostic criteria, diagnostic instruments continue to evolve alongside our understanding of ASD.

### 2.2.3 Epidemiology

Once considered a relatively rare disorder, the prevalence of ASD has been steadily increasing, with a particularly rapid rate of diagnosis occurring over the last two to three decades. Recent studies from the US and UK suggest the prevalence of ASD to be approximately one in 100, or one per cent of the population (94/10 000 in Baron-Cohen et al., 2009; 98/10 000 in Brugha et al., 2011; 110/10 000 in Kogan et al., 2009; 113/10 000 in Centers for Disease Control & Prevention, 2012; and 116/10 000 in Baird et al., 2009). In Australia, data from Barbaro & Dissanayake’s large-scale early identification study supports this rate, finding an estimated prevalence rate of one in 119 in Melbourne (2010; 381).
The increased rate in the diagnosis of ASD has been alarming, however, it can be attributed to a broadening of the definition of autism, including the conceptualisation of autism as a spectrum, which has led to more people qualifying for a diagnosis of ASD, especially at the ends of the spectrum (Gernsbacher, Dawson & Goldsmith, 2005; Grinker, 2007). Additionally, a growing awareness of behaviours associated with ASD among the general public, especially parents and care professionals, means that more cases are being referred to health professionals which has led to both earlier diagnosis and an increase in the numbers of children diagnosed (Liu, King & Bearman, 2010). These factors have influenced the overall make-up of the group of people with ASD and the profile of ability and impairment in ASD is now more heterogeneous than for a diagnosis of autistic disorder in the past.

Individuals diagnosed with ASD often also have intellectual impairment, or an IQ of less than 70. The rate of intellectual impairment is often found to be approximately three quarters of all individuals diagnosed with ASD (Tager-Flusberg, Joseph & Folstein, 2001; Fombonne, 2005). However, with an increase in high functioning people with ASD being diagnosed, this rate appears to be reducing. Recent research has found the rate of intellectual impairment to be approximately two thirds (Dykens & Lense, 2011), or even as low as two fifths (Centers for Disease Control & Prevention, 2012), of all those diagnosed with ASD. ASD appears to affect males more than females, with prevalence rates consistently finding approximately four males diagnosed to every one female (Fombonne, 2005; Williams et al., 2008). However, recent research questions whether this reflects lower rates of ASD among girls and women, or widespread under-diagnosis and misdiagnosis due to comparably poor understanding of the presentation of ASD in females (Gould & Ashton-Smith, 2011). Rates of diagnosis of ASD vary greatly around the world (Elsabbagh et al., 2012). This pattern appears to be based more on culture than occurrence, as the incidence of ASD bears no relationship to social class or ethnicity (Fombonne, 2005).

### 2.2.4 Aetiology

It is generally agreed that a small percentage of cases of ASD are caused by known medical conditions. This figure is usually placed at 10-15 per cent of cases and the conditions implicated include genetic conditions, such as cytogenetic and single-gene disorders, and less commonly non-
genetic conditions, such as congenital rubella, and maternal thalidomide, valproic acid or alcohol use during pregnancy (Freitag, 2007).

For the remaining 85-90 per cent of people diagnosed with ASD, there is currently no known cause. There is, however, a large body of research which suggests that ASD is highly heritable, indicating a strong genetic component to its occurrence. Results examining the rates of ASD in monozygotic (MZ) and same-sex dizygotic (DZ) twins have consistently found a higher concordance of ASD in MZ twins rather than DZ twins (Folstein & Rutter, 1977; Ronald & Hoekstra, 2011), giving an estimated heritability of around 90 per cent (Freitag, 2007). Additionally, studies have found higher rates of ASD in children with a sibling already diagnosed with the disorder (Lauritsen, Pedersen & Mortensen, 2005) and that relatives of people with ASD are more likely to have autistic traits than those without relatives with ASD (Bolton et al., 1994; Piven et al., 1997). This heritability appears to be especially strong for the social and communication traits of ASD (Ronald, Happé & Plomin, 2005).

These studies all suggest that ASD and broader autistic traits are genetic in origin. Thus, much research has been devoted to investigating genetic links to ASD (Tager-Flusberg, Joseph & Folstein, 2001). While many studies have identified rare mutations associated with ASD (Abrahams & Geschwind, 2008), the ability to isolate specific genes has been hampered by the complex behavioural variation within ASD and the large number of gene variations involved. For instance, a recent study, using a database of over 2500 families, grouped individuals by diagnosis, IQ and symptomology to look for correlations between genetic profile and autistic traits (Chaste et al., 2015). They found no such correlations, highlighting the complex symptomology and genetics of ASD, and also the potential for environmental factors to influence ASD presentation.

If genetics was the only factor determining the occurrence of ASD, concordance rates of ASD between monozygotic twins would be 100 per cent, rather than around 90 per cent. Thus, in addition to a complex interplay between multiple genes, there is growing support for the idea that an interaction with environmental factors plays a role, at least in triggering, if not causing ASD (Chaste & Leboyer, 2012). While research continues in this area, there is currently very little evidence for which environmental factors may be implicated.

There is no known cure for ASD; it is a lifelong disorder. However, it is also a developmental disorder which means a person’s profile of ability and impairment changes and progresses over their lifetime. Factors which can influence the course of development include environmental factors such as culture, the development of compensatory strategies, and co-morbidity with other disorders. Most
prominently, there is now a very wide variety of therapies and interventions in use and these have significant influence on a person’s long-term outcomes (Luyster & Lord, 2009).

2.2.5 Autism spectrum disorder and language

Language delay, slow or regressive language development and/or atypical use of language are features of ASD. However, the nature and extent of language delay and impairment is extremely varied between individuals. Until the move to the DSM-5, the presence of language delay was a key distinction in receiving a diagnosis of autistic disorder rather than Asperger’s disorder. With a more holistic understanding of autistic traits, it is now understood that all people with ASD have some degree of difficulties with social communication, even if this is not identified by standardised language tests.

The delay in language acquisition in children with ASD can be striking. First words have been found to be produced at an average of 24-38 months in children later diagnosed with ASD (which is a 12-26 month delay compared to Typically Developing (TD) children) and first phrases have been found to appear at 48-52mths (18-28 month delay) (Howlin, 2003; Mitchell et al., 2006). 25-30 per cent of children diagnosed with ASD will not develop any functional language (Anderson et al., 2007; Anderson, Liang & Lord, 2014), although with increasingly early detection and improved therapies and intervention this figure has been in decline (Tager-Flusberg et al., 2005; 342). Approximately 25-32 per cent of children diagnosed with ASD learn a degree of language which then regresses (Lord, Shulman & DiLavore, 2004; Barger, Campbell & McDonough, 2013), with regression taking place at an average of 1.78 years, or 21.35 months (Barger et al., 2013). This pattern of language regression appears to be exclusive to ASD and does not occur in other developmental disorders (Lord et al., 2004).

Another feature of language development in people with ASD is that receptive language is often impaired to a greater extent when compared with expressive language abilities (Charman et al., 2003; Ellis Weismer et al., 2010; Barbaro & Dissanayake, 2012a; Hudry et al., 2014). In typical development, at all stages of development, there is a 3-6 month lag between comprehension of a language form and being able to produce that same form. This lag is usually shorter in children with ASD (Hudry et al., 2014).

There is debate as to whether atypical language exhibited by people with ASD is deviant in specific aspects or non-deviant but delayed relative to the child’s chronological and/or verbal mental age (Wilkinson, 1998). With an uneven spread of abilities across different areas of language in individuals
with ASD, the answer to this question depends on the area of language development under scrutiny. For instance, lexical knowledge appears to be a relative strength of people with ASD, with high functioning individuals with ASD found to have an equal ability to comprehend and produce words as their peers (Tager-Flusberg, Paul & Lord, 2005). Some studies suggest this is an area in which children with ASD may excel, for example, Eigsti, Bennetto, & Dadlani (2007) found that the children with ASD exhibited a higher number of different words in their vocabulary than both TD and developmentally delayed control groups. However, even for those who do achieve language abilities equal to their TD peers when measured by standardised language tests, there is evidence that subtle linguistic anomalies persist throughout their lifetime (Boucher, 2012).

In the following sections I discuss the language exhibited by people with ASD in a number of linguistic domains. These domains are; prelinguistic communication, echolalia, syntax and morphology, phonetics and phonology, semantics and pragmatic use of language. The studies reviewed in this section broadly include participants diagnosed with autism disorder, Asperger’s disorder, PDD-NOS or ASD. In line with the current conceptualisation of ASD as encompassing all these disorders, I refer to all participants in these studies as having ASD. Individuals in older studies will be observed to have a more narrow range of abilities, due to the more constrained historical diagnostic criteria.

2.2.5.1 Prelinguistic communication

Historically, little has been known about very early language development in children with ASD, particularly pre-verbal aspects of language, due to the tendency for diagnosis of ASD to occur in the child’s third or fourth year of life. With research now suggesting that autistic symptoms can be identified in children as young as 12 mths of age (Barbaro & Dissanayake, 2012b), along with a recognition of the importance of early detection and access to early intervention services, we are now gaining a clearer picture of how early behaviours, including communicative behaviours, in preverbal children may be different when compared to their TD peers.

Early research on young children with ASD has been conducted using retrospective analysis either by surveying parents or analysing home video footage. However, research has more recently expanded to study children at high risk of ASD, such as younger siblings of children with an ASD diagnosis. Findings include evidence that when compared to typical development, children later diagnosed with ASD exhibit decreased use of social gestures, including pointing, waving, imitation, social smiling and eye contact (Barbaro & Dissanayake, 2012b; Mitchell, et al., 2006); are less responsive to their own names (Osterling & Dawson, 1994; Barbaro & Dissanayake, 2012b); and less responsive to
their mother’s voice (Klin, 1991). Additionally, children with ASD initiate and respond to joint attention bids less than their TD peers (Mundy et al., 2010) and such difficulties are linked to poor language outcomes (Luyster, Kadlec, Carter & Tager-Flusberg, 2008).

2.2.5.2 Echolalia

An aspect of language which has long been strongly associated with ASD is echolalia, or the rote and literal repetition of the speech of others. This can occur as a direct repetition of an utterance, known as ‘immediate’ echolalia, or with a time lag between when an utterance is heard and echoed, known as ‘delayed’ echolalia (Kanner, 1943). Echolalia may constitute an exact repetition or be slightly altered in some way.

Echolalia has often been perceived as one of the most salient features of atypical language development in children with ASD. However, echolalia is not present in the speech of all children with ASD and is not exclusive to ASD, also occurring in blind children and in adults with Tourette’s syndrome and schizophrenia. Echolalia also occurs in typical development, however TD children generally outgrow this between 2½ and 3 years of age (Howlin, 1982). While it can take children with ASD longer than this to outgrow echoing, they usually do so eventually. Hence this characteristic may represent delayed development rather than atypical or deviant development.

In the past, echolalia was viewed as a form of self-stimulatory behaviour, and was often seen as a form of language which was meaningless, interfered with opportunities for learning and was generally to be discouraged (Lovaas, Schriebman & Koegel, 1974). However, more recent research shows that echolalia is often used by children, with and without ASD, to serve a range of important communicative functions and may even play an important role in language processing and development.

Prizant & Duchan (1981) found that immediate echolalia can be used by children with ASD to manage turn-taking and self-regulatory functions, as well as to issue requests, make assertions and give affirmative responses to questions. Violette & Swisher (1992) demonstrated that echolalic responses by children with ASD were used in systematic ways which were highly sensitive to their immediate context. Thus, for any child who is linguistically impaired, echolalia can be used to successfully fulfil communicative needs which they are unable to achieve using more typical linguistic routes.

It has also been suggested that echolalia is a device which aids the acquisition of language. Baltaxe & Simmon (1977) demonstrated that frequent delayed echolalia in one child’s bedtime soliloquies was
a useful mechanism to assist in analysing linguistic forms which the child was in the process of learning, while Charlop (1983) showed that children with ASD could use immediate echolalia to improve their performance on a receptive labelling task. Many studies on echolalia have suggested the significance of their findings for the facilitation of cognitive processing and acquisition (Charlop, 1983; Rydell & Mirenda, 1991; Prizant & Duchan, 1981).

Roberts (2014) proposes that for verbal children with ASD the ability to understand and learn linguistic rules may be deficient, so echoing and imitation can be used for longer than in typical development, both as a functional tool to facilitate communication and also as a scaffold to assist in language learning. When language skills advance and the child has more linguistic resources at their disposal, there is less need to rely on echolalia. However, for less verbal children with ASD, they may need to rely on echoing over their lifetimes to facilitate communication, as the development of other linguistic resources plateaus (Roberts, 2014). The contribution CA has made to understanding echolalia in people with ASD is discussed in section 2.5.1.

### 2.2.5.3 Syntax and morphology

Syntactic and morphological aspects of language have traditionally been perceived as largely unaffected by ASD, although it is generally agreed that their acquisition is often delayed when compared to typical development (Tager-Flusberg et al., 1990). However, more finely grained analysis suggests that some differences in developmental trajectory exist. For instance, Scarborough et al. (1991) found that, even when accounting for developmental delay, children with ASD used a more restricted set of grammatical constructions when compared to TD children and those with Down’s syndrome. In support of this, Eigsti, Bennetto & Dadlani (2007) found significant delay in the acquisition of grammatical structures by children with ASD and that morpho-syntactic abilities were acquired unevenly, suggesting that the profile of acquisition of grammatical structures in children with ASD is more complex than simple delay.

Research focused on the acquisition of grammatical morphemes has found more compelling evidence of atypical language development. Bartolucci, Pierce & Streiner (1980) and Howlin (1984) found a significant difference in the use of morphemes by children with ASD and TD children, with the children with ASD more likely to omit obligatory grammatical morphemes including the articles ‘a’ and ‘the’, some auxiliary and copular verbs and verb morphemes encoding person, tense and aspect. The atypical use of verb tense markers, particularly past tense markers, appears to be widespread in children with ASD (Tager-Flusberg, 1989; Botting & Conti-Ramsden, 2003; Roberts, Rice & Tager-Flusberg, 2004), prompting discussion on an overlap in some symptomology between
at least a subset of children with ASD and those with Specific Language Impairment (SLI) (Kjelgaard & Tager-Flusberg, 2001). While Roberts et al. (2004) found the frequency of omission of past tense markers was very similar to the rate seen in children with SLI, they also found errors specific to ASD in the use of both third person and past tense markers. Eigsti & Bennetto (2009) found that subtle differences in the use of past tense still persist in the language of older children and adolescents with ASD.

In conclusion, morphological and syntactic development in people with ASD appears to be a relative strength in the domain of language acquisition. While this area appears to be more similar than dissimilar to typical development, more sensitive tools of analysis have shown subtle differences in the acquisition and use of morphological and syntactic features. Particularly striking is the implication that a subset of children with ASD have specific and persistent difficulties with marking tense. Further, there is some suggestion from the uneven spread of ability and impairment that this aspect of development may be a result of atypical language rather than delay.

2.2.5.4 Phonetics and phonology

The majority of studies examining phonetic and phonological abilities in children with ASD have found that production of speech, or articulation, is largely typical (Boucher, 1976; Rapin & Dunn, 2003; Kjelgaard & Tager-Flusberg, 2001), albeit delayed (Bartak, Rutter & Cox, 1975; Bartolucci, Pierce, Streiner & Eppel, 1976). For instance, Bartolucci, et al. (1976) found a marked delay in phonological production, when compared with both TD children and children with intellectual impairment (matched on mental age). However, they concluded that development in this area basically followed the same path as typical development and the distribution of the nature of the phonological errors was very similar across the groups (Bartolucci et al, 1976; 312).

However, more recent research has produced more complex results. Cleland, Gibbon, Peppé, O’Hara & Rutherford (2010) reported that for children with ASD and language abilities in the normal range when tested on standardised measures, 41 per cent had at least some articulatory errors and for 12 per cent of the total group, these were clinically significant impairments. While the majority of these were classified as developmental errors, non-developmental errors were also produced consistently by individuals, indicating that errors were not just due to delayed development.

There is also evidence that for a minority of children with ASD, poor articulation is a major barrier to communication. Wolk & Edwards (1993) and Wolk & Giesen (2000) describe case studies where children with ASD with very limited linguistic ability, demonstrate features which exhibit both
delayed and atypical phonology. However, this cohort is so frequently excluded from language research that little is known about the nature of the problems they display (Tager-Flusberg, Paul, & Lord, 2005). Shriberg, Paul, McSweeny, Klin & Cohen (2001) found that articulatory difficulties on sounds such as /r/, /l/ and /s/ continued well into adulthood in the speech of approximately one third of people diagnosed with ASD.

Additionally, prosody in the language of children with ASD is often unusual (McCann & Peppé, 2003). ‘Prosody’ is used to refer to the range of suprasegmental parameters which include fundamental frequency (f0), segmental duration, pause, loudness, and voice quality (Peppé, 2009). These prosodic features are responsible for the perception and production of rhythm, pausing, stress, duration, tone and intonation in speech (Peppé, 2009). Atypicality in all types of prosodic modulation has been documented in people with ASD, however, no single area of specific difficulty has been isolated as problematic among all people with ASD (McCann & Peppé, 2003).

Having acknowledged that, the atypical use of stress has been found to be a fairly consistent feature among people with ASD in the relevant literature. Shriberg et al. (2001) isolated misplaced lexical stress as being particularly problematic for the 30 adolescents and adults with ASD in their study. In support of this, Baltaxe (1984) found that children with ASD often assigned stress to more than one stressable syllable; an error type not found in typical development.

Shriberg et al. (2001) also found that non-fluent phrasing and difficulties modulating loudness and pitch were areas of difficulties in the speech of people with ASD. Baltaxe & Simmons (1985) suggest that unusual prosody persists throughout the child’s lifetime, even when other areas of language ability may vastly improve.

While prosodic impairments have often been noted in the language of people with ASD, the nature and prevalence of these remain difficult to determine and warrants further research. Additionally, the majority of research on prosody has concentrated on production rather than comprehension. In a rare study focused on comprehension of prosody in people with ASD, Diehl et al. (2008) found that high functioning adolescents with ASD were less able to use prosodic cues to disambiguate syntactically ambiguous sentences than their age and IQ matched peers.

2.2.5.5 Semantics

Since Kanner’s first descriptions of the disorder, ASD has been noted for its association with irrelevant, or idiosyncratic, uses of language (1943; 1946). This includes the use of neologisms, use of incorrect but meaningful word choice (i.e. ‘cuts and bluesers’ for ‘cuts and bruisers’) and also use of
words out of context (this includes echolalia, discussed in section 2.2.5.2). Many studies have confirmed the presence of idiosyncratic, inappropriate or incorrect word use by people with ASD (see Tantam, 1988; Volden & Lord, 1991; and Mayes & Calhoun, 2001), however research on the ways that words are used inappropriately has been limited.

One area of incorrect use of words long associated with ASD is the atypical use of deictic expressions, particularly the reversal of first and second personal pronouns ‘I’ and ‘you’ (Kanner 1943; Tager-Flusberg, 1994; Lee, Hobson & Chiat, 1994). Difficulty with pronoun use by people with ASD is now generally viewed as part of a broader difficulty with the linguistic or information processing demands in having to mark and shift reference between the speaker and the listener (Evans & Demuth, 2012). Tager-Flusberg (1994) found that while children with ASD went through a stage of pronoun reversal, as they got older and more linguistically competent, children ceased reversing pronouns. It is not unusual for TD children to also go through a stage of pronoun reversal, however, they usually outgrow it at an earlier age.

Similarly, pedantic and overly precise language is often discussed in relation to the speech of high functioning children with ASD, however, efforts to find commonalities in this use of language have been largely unsuccessful (Tager-Flusberg et al., 2005). The use of pedantic speech in high functioning children with ASD appears to be unrelated to chronological age or verbal IQ (Ghaziuddin & Gerstein, 1996). Such language could be a consequence of the majority of language input to some children with ASD coming from adults rather than age-appropriate peers.

Some research has isolated some aspects of semantics as being an area of strength for people with ASD. Dunn, Gomes & Sebastian (1996) reported a high number of low frequency responses to a cued word fluency task when compared to a group matched on language ability, indicating a larger vocabulary for this cohort. Similarly, Walenski, Mostofsky, Gidley-Larson & Ullman (2008) found that people with ASD show superior speed in naming low frequency items on a naming task signalling faster recall of uncommon lexemes when compared to IQ matched controls. Recall speed between groups was comparable for high frequency items.

While lexical knowledge appears to be a relative strength, there is evidence to suggest that not all categories of words are acquired evenly by children with ASD. In particular, mental state terms, such as ‘believe’, ‘desire’, ‘think’ and ‘pretend’, (Tager-Flusberg, 1992) and socio-emotional terms (Hobson & Lee, 1989) can be difficult for children with ASD to fully acquire. Further, the overall picture that emerges from semantic research is that as the comprehension demands of a situation increase in complexity, individuals with ASD often perform comparatively poorly. Thus, performance
is often comparable to peers on ‘simple’ tests, such as letter-cued word fluency tasks, but impaired on ‘complex’ tests, such as reading comprehension or recognising verbal absurdities (Minshew, Goldstein & Siegel, 1997; Williams, Goldstein & Minshew, 2006).

2.2.5.6 Pragmatics

The aspect of language which is commonly acknowledged to be the most impaired in people with ASD is pragmatics (Baltaxe, 1977; Wetherby, Prizant & Hutchinson, 1998), often described as ‘language use in context’ (Bates, 1974). The primacy of pragmatic difficulties in people diagnosed with ASD is demonstrated by Kelley Paul, Fein & Naigle (2006), who found that a group of high achieving children with ASD in mainstream schooling was indistinguishable from their peers on most language and cognitive measures, however, on tests assessing pragmatic abilities, they profiled consistently poorly. Due to the pervasive nature of pragmatic impairments in people with ASD, research in this area has become a strong focus over the last few decades (Tager-Flusberg et al., 2005; 351).

Specific difficulties in how to organise conversation have been documented in people with ASD, particularly problems associated with initiating conversation and with topic maintenance (Tager-Flusberg & Anderson, 1991; Ghaziuddin & Gerstein, 1996). Tager-Flusberg & Anderson (1991) demonstrated in their longitudinal study that children with ASD failed to expand, challenge or build on topics introduced by their caregivers, even when they had fairly sophisticated structural language skills. While verbal children and adults with ASD are able to use language to achieve certain ends, they rarely do so to share extraneous information, explain events, build social rapport or acknowledge their listener (Tager-Flusberg, 1993; Tager-Flusberg et al. 2005; 352). Studies have shown that participants with ASD are less likely than neurotypical participants to correctly identify topics being initiated and are more likely to respond to a participant’s remarks, or requests, with irrelevant information (Paul & Cohen, 1984; Paul & Cohen, 1985). It has also been shown that people with ASD tend to have unrealistic ideas about what their listener can be expected to know, or want to know, and have difficulty gauging how much information a hearer requires when they are answering questions, often replying with far too much or far too few details (Lord et al., 1989; Tager-Flusberg et al., 2005; 352). These studies suggest that children and adults with ASD have difficulties with the social reciprocity and coordination required to engage in conversation. However, other areas of conversation appear to be relatively intact such as the ability to understand and engage in turn-taking (Tager-Flusberg & Anderson, 1991).
Another area of conversation which has yielded interesting results when considering the language of people with ASD, and which is a focus of this thesis, is that of conversational repair. Whenever misunderstanding occurs in speech and a speaker has the need to repair a previous utterance, they have a range of methods at their disposal to do so. Research has isolated this as an area of particular difficulty for children with ASD ranging from a failure to initiate repair (Geller, 1998), to requiring multiple attempts to achieve successful repair (Stirling, Barrington & Douglas, 2007) to frequently providing inappropriate responses as repair attempts (Volden, 2004). Current research suggests that the difficulty, at least for high functioning children with ASD, lies in the ability to achieve successful repair, not to recognise there is a need to repair. This research will be discussed in more detail in sections 2.7.2.2 and 2.7.3.3.

Impairments in pragmatic aspects of language present particular difficulties for analysis, not only because of the heterogeneous nature of ASD but because of the high levels of variation amongst neurotypical children and adults. Endeavours to find means, mediums or even common themes in language use by people with ASD have, on the whole, demonstrated inconsistent and disappointing results (Tager-Flusberg, 2017). Additionally, the relationship between language use and context in ASD has been particularly challenging for researchers to grapple with and, somewhat ironically, research into pragmatics has often been conducted in socially meaningless contexts (Plumet & Veneziano, 2015). Findings from research which attempts to limit contextual variables do not necessarily depict a true representation of the disorder in real-life, everyday settings, where additional contextual cues are the information participants use to construct meaning and create shared understanding.

2.2.5.7 Summary

Broadly speaking, the aspects of language which are most intact in people with ASD are the structural aspects, including morpho-syntactic knowledge, phonetic and phonological development and semantic knowledge. However, each of these involve areas of specific difficulty for children and adults with ASD, including; constructive morphology, particularly use of past tense markers; difficulties with prosody, particularly stress; and the acquisition of some semantic categories, particularly mental state terms and socio-emotional terms. It is commonly agreed that the area with most deficits in ASD is the domain of pragmatics, or the use of language in context. This includes difficulties with various aspects of using language to achieve social ends, including difficulties in initiating and maintaining conversation, and in repairing misunderstanding. Difficulties in communication are identifiable early in children with ASD, often before verbal language has arrived, and some communication problems remain with individuals throughout their lifetime.
Across all areas of language research in ASD, there is a trend that as the instruments used to measure language features become more finely tuned, more subtle differences can be identified (Boucher, 2012). However, even with the use of more advanced measures of linguistic features, differences are yet to be found uniformly in groups of people with ASD. Further, difficulties described are increasingly understood as not being unique to ASD (Gernsbacher, Geye & Ellis-Weismer, 2006). There are a number of confounding factors in the analysis of language in ASD, including the wide variation which occurs in language development and usage among people diagnosed with ASD (Tager-Flusberg, 2017), the variation which exists in typical language development and use, and the contextual sensitivity of the use of language. This suggests that the tests, tools and instruments used to elicit and measure such things are insufficient. There is a need for qualitative and quantitative approaches to complement one another, in order to build a fuller picture of language use within ASD (Tager-Flusberg, Joseph & Folstein, 2001; Tager-Flusberg, 2004).

This thesis takes a different approach to examining language use and social behaviours in children with ASD than most of the studies so far discussed in this chapter. It uses naturalistic data analysed in context, rather than elicited data, and a data-driven approach to analysis, rather than relying on the accuracy of pre-constructed tools or instruments to determine findings. The methodology used to undertake this research is Conversation Analysis which is the focus of the remainder of the chapter.

### 2.3 Conversation Analysis

#### 2.3.1 History

CA is a way to analyse interaction which originated in the late 1960’s within the discipline of sociology and, more specifically, the tradition of ethnomethodology. At that time Chomsky’s approach dominated linguistic theory and practice. Linguistic data used for analysis was often contrived, as naturally occurring conversation was believed to be too disorganised to yield consistent results from structural analysis (Heritage, 1995; 395). However, sociologist Harvey Sacks realised while working on a suicide helpline, that the conversations he typically had with callers had a systematic structure which the participants both adhered to and helped generate (Sacks, 1992). Sacks saw conversation as a site for social action and realised that in-depth analysis of the sequential organisation of interaction could be revealing of social procedures (Woolfitt, 2001; 49). Thus he began to develop a method to systematically analyse these seemingly mundane social routines in life and to attempt to find ‘order’ in the messiness of everyday conversation (Sacks, 1992; ten Have,
After Sacks’ death in 1975, CA was further developed by his associates, most notably Emanuel Schegloff and Gail Jefferson. It continues to grow and evolve, and has become a highly influential method of analysis across a wide range of disciplines, especially sociology, linguistics and, increasingly, psychology.

2.3.2 Use of naturally occurring, recorded data

Sacks (1984) stressed the value of basing findings on naturally occurring instances of talk, rather than imagined, remembered or experimentally produced instances of talk. Naturalistic data is infinitely richer in detail and complexity than invented or remembered talk and the authenticity of real language has the ability to challenge widely-held beliefs about how people talk (Sacks, 1984; Heritage, 1995; Sidnell, 2010a; 21). Additionally, a core aim of CA is to analyse social action as co-constructed by two or more participants, and unfolding incrementally in locally situated, and temporally and sequentially organised ways (Mondada; 2013). Such a pursuit can only be achieved through the analysis of interactional data within its naturally occurring context.

In order to adequately study naturalistic conversation, Sacks (1984) found the use of audio recordings to be an essential ingredient for analysis. Silverman summarises the three key advantages of using recorded data (2001; 161):

1. It creates a public record of ‘raw’ data which makes the data and its analysis accessible to other researchers.
2. The data is replayable which allows the researcher to repeatedly access the data, increasing the detail and the accuracy of analytic observations.
3. The sequences of talk are preserved which is essential as the understanding of our talk is created by reference to its sequential positioning.

The use of naturally occurring recorded data has remained a core component of CA and, in some ways, has become more robust as technology has advanced. It has now become commonplace for conversation analysts to use audio-visual recordings as the primary source of data, which has allowed detailed analysis of non-verbal, embodied interactional practices, alongside verbal practices. Additionally, the accessibility of the internet has enabled researchers to more quickly and easily share their data, strengthening the public record of raw data and helping to validate findings.

2.3.3 ‘Why that now?’: A focus on action

Sacks’ (1984) interest in recording conversation did not come from a specific interest in language, but grew from an attempt to capture how social actions are performed through day-to-day life.
practices. When analysing interaction within the CA tradition, a key question to ask at every point is, ‘Why that now?’ (Schegloff & Sacks, 1973). This reflects the primary concern of CA of examining the social action accomplished through talk, rather than the content of the talk. CA is better equipped to analyse what talk is doing than what it is about (Schegloff, 2007).

CA studies are typically concerned with actions such as asking, answering, promising, offering, teasing, performing, telling, disagreeing, and complaining. Rather than beginning with an action and deconstructing the example into essential components which make up that class of action, conversation analysts look to the other participants within an interaction to define action (Schegloff, 2007). Evidence on action formation is constructed from the participants within the interaction by drawing on the participants’ demonstrated understanding of a turn and how well this understanding is validated by the speaker’s next turn.

Actions within interaction occur grouped together in various ways. Answers, for example, often occupy a slot after a question and together they make a paired unit. CA refers to such units as adjacency pairs, with the first of these, the question, becoming the first pair part (FPP) and the answer referred to as the second pair part (SPP). In the case of questions and answers, the question creates an environment where an answer is ‘conditionally relevant’ in the next turn and its absence is noticeable (Schegloff, 1968; 1083).

2.3.4 ‘Order at all points’: Sequential organisation

Sacks (1992) viewed conversation as inherently organised and saw the analyst’s job as being to uncover such order within an interaction, rather than to impose an order on it formed from preconceived ideas. The organisation of turn-taking is one mechanism which provides a structure to maintain the orderliness within conversation (Sacks, Schegloff & Jefferson, 1974). Sacks et al. (1974) demonstrate that participants finely coordinate their talk with other parties and identified 14 features, or rules, of the turn-taking system common to any conversation. Some of these turn-taking rules include that speaker change recurs (or at least occurs); overwhelmingly one participant talks at a time; occurrences of more than one speaker talking at a time are common but brief; and that transitions with no gap and no overlap are common (Sacks et al., 1974; 700-701). That speakers can coordinate their turns-at-talk so well gives rise to the question of how this is managed.

To account for this, Sacks et al. (1974) state that turns are made up of turn constructional units (TCUs), which can signal to a listener when a turn is complete, using grammatical, semantic, pragmatic and intonational information. TCUs are the minimal unit which a turn at talk can
comprise, be it lexical, phrasal, clausal or sentential. The possible completion of a TCU leads to a potential transition relevance place (TRP), where the opportunity to change speakership arises. Listeners monitor talk, drawing on such information, to project and anticipate possible points of completion for a possible speaker transition to occur.

The organisation of repair is another form of sequential organisation which is especially relevant for this study. Repair refers to the ‘practices for dealing with problems or troubles in speaking, hearing and understanding the talk in conversation’ (Schegloff, 2000; 207). It is a mechanism used to ensure intersubjectivity is maintained or restored so that the turn, sequence and activity underway can progress to possible completion (Schegloff, 2007; xiv). The relationship between the sequential organisation of repair and who (speaker or listener) initiates and carries out the repair is discussed in further detail in section 2.7.

2.3.5 The conceptualisation of context

CA views each contribution to talk as occurring within a locally constructed context. For example, and as already mentioned in 2.3.3, a question creates a local context where an answer is conditionally relevant in the next turn. Local context in this sense is both backwards and forwards looking, meaning that whatever occurs is a result of the turn(s) that came before it, and also creates the environment for the next turn to take place (Heritage, 1984b; 242). This makes every turn at talk both ‘context-shaped’ and ‘context-renewing’.

More broadly, context can refer to factors external to talk, such as gender, age, race and socio-economic class, as well as participants’ orientations to certain institutions, including education, medicine and law. Such aspects of social life are not traditionally a focus of CA. As Schegloff (1992) notes, the range of attributes you can ascribe to an individual is almost unlimited. Ascribing a relationship between an interactional phenomenon and one specific social feature risks the analyst drawing a link between two concepts which was not present for the participants involved in the interaction (Schegloff, 1992).

However, participants do draw on their social identities within interactions, at times, to say something ‘as a women’ or ‘as a doctor’. The sense of particular ‘social identities’ within institutional settings can be especially strong and it can be a challenge for analysts to resist the urge to ascribe certain characteristics as highly relevant (Drew & Heritage, 1992). If there is good empirical evidence that social factors external to an interaction are relevant to the participants themselves, external
social factors can be considered relevant to the analysis. Heritage refers to such actions as ‘talking context into being’ (1984b).

2.4 Institutional interaction

Traditionally CA has been used to study everyday, mundane conversation, however, increasingly it is being used in applied contexts, especially to study the talk in institutional environments. Drew & Heritage characterise institutional interaction as task-related and involving at least one participant who represents a formal organisation (1992; 3). Tasks are achieved in the interaction through the talk between the professional participant(s) and other participants. CA studies which analyse institutional data still follow the basic tenets and analytical methods of CA, however, they use these to explore how turns and actions are implemented to accomplish institutional objectives (Drew & Heritage, 1992; 4-5; Heritage & Clayman, 2010; 17).

There is not always a clear distinction between institutional and conversational interaction and this can be dynamic and changing within an interaction exchange. For instance, people in a work setting may intersperse ordinary conversation with talk to complete work-related tasks. However, interaction can be seen as institutional when at least one participant’s institutional status or professional identity is made relevant to the activities they are achieving (Drew & Heritage, 1992; 4).

While careful not to be prescriptive, Drew & Heritage (1992) outline three features which may be seen as ‘family resemblance’ features among cases of institutional talk. These are:

1. An orientation by at least one participant to some core goal, task or identity (or a set of them) conventionally associated with the relevant institution.

2. The present of ‘special and particular constraints’ on what at least one participant will treat as acceptable contributions to the talk.

3. Association of ‘inferential framework’ or procedures which are particular to the specific institutional context, noting that reasoning, inferences and implicatures may be unusual in institutional contexts.

An overview of features which make the data set used in this study institutional is provided in chapter 4.

Analysis of institutional interaction within CA has thrived as a distinct area of study over the last few decades, and it is arguably a bigger area of research now than research in pure CA. In part this is due to the increased level of understanding we now have regarding the organisation of everyday mundane conversation. However, the importance of interaction in different settings has always
been important in CA. Conversation analysts have always used a wide variety of data sources and some of these have been institutional in nature, such as Sacks’ early work on data from a suicide prevention hotline, mentioned in section 2.3.1.

Institutional CA still views mundane, everyday conversation as the primary medium of interaction in the social world (Drew & Heritage, 1992) and it is the difference between this and the institutional data that the analyst is most concerned with. While much the same methods of enquiry apply to institutional CA and pure CA, the objectives differ, with institutional CA concerned with accessing institutional processes and describing these in terms of how particular institutional activities are achieved or enacted as accountable patterns of meaning, inference and action (Drew & Heritage, 1992; 5).

The organisation of ordinary conversation has remained relatively stable over time, while the introduction of new technologies and changing workplace practices and culture has meant that institutional talk has changed greatly over time (Heritage & Clayman, 2010). This creates a rich area for research in CA. One area of institutional talk within which this study falls is interactions relating to medical and clinical settings which is further discussed in section 2.5.

2.5 Conversation Analytic approaches to communication disorders

There is an emerging body of work which does not necessarily analyse interaction in institutional settings, but which involves participants with medical conditions or disorders which affect communication. Some of this work analyses medical or therapeutic interactions, however most focusses on interaction which takes place in mundane settings, between friends and family members, including a participant with a communication disorder.

The pioneering work in this area was undertaken by Goodwin (1995) who studied the conversational competency of one man with aphasia. Aphasia is a language disorder acquired after brain injury, often caused by stroke, which affects the grammatical and/or lexical aspects of language, rather than pragmatic aspects (Wilkinson, 2011). The aphasic man in this study, Rob, could use only three words; ‘yes’, ‘no’, and ‘and’ (Goodwin, 1995). However, he was able to convey complex and nuanced information through the way he expressed these words, including with changes in volume, use of sound stretches and different intonation contours, and through his coordination of these words with non-verbal actions, such as facial expressions, gesture and orientation. Furthermore, Goodwin (1995) shows that through the collaborative support of Rob’s interactional partners, his wife and nurse, meaningful exchanges are co-constructed and he is able to be an active participant in the interactions. For example, through the use of extended ‘search sequences’ where participants ask
stacked yes/no questions, speakers orient to Rob as a competent and knowledgeable co-participant and together they co-construct understanding.

Another area where CA has been used in disorders affecting communication is those focused on intervention. Perhaps the most advanced in this area is the work of Wilkinson and colleagues (see Lock, et al., 2001; and Wilkinson, 2011) who have been working with people with aphasia and their conversational partners since the 1990’s. This programme collects recordings of people with aphasia interacting with those close to them and uses a CA analysis to identify problems in the talk. Findings from the analysis are then used to develop an intervention plan, usually aimed at the conversational partner rather than the person with aphasia, to guide how they can make their interactions more successful. Interventionist work such as this is beyond the scope of this literature review, however, it is mentioned as an aspect of CA research on communication impairment with potentially important applications.

2.5.1 Conversation Analytic literature on autism spectrum disorder

Following on from Goodwin’s (1995) work in aphasia, much CA and ethnographic research in ASD has also focused on efforts to better understand the ways in which people with ASD are active participants within their social world. Many studies have focused on well-established ASD symptomology to determine how our understanding of this is changed when a symptom is analysed in naturalistic interactional contexts. One of the larger projects of this type to date is the ‘Ethnography of Autism Project’ conducted by Elinor Ochs and colleagues (Ochs & Solomon, 2004; and the special issue of Discourse Studies which this introduces). This study incorporated CA with ethnographic practices to analyse children with ASD interacting in different everyday settings. Their findings suggest that children with autism have fewer pragmatic difficulties in naturalistic settings than experimental research suggests (2004; 139). For example, by analysing question and answer sequences recorded over family meal times, Kremer-Sadlik (2004) demonstrated that children with ASD understood turn-taking conventions, could engage in joint-attention, and understood perspective taking in sophisticated ways. By investigating narrative abilities in a naturalistic setting, Solomon (2004) was able to isolate specific aspects of narrative in which children with ASD were proficient, such as introducing narratives, and which areas were more impaired, such as staying on task with the storyline and globally organising their narrative. This project highlighted the ways in which children with ASD were competent social actors and, in line with Goodwin (1995), emphasized the role that family members and other interactional participants, played to support the children’s communicative competence.
Echolalia is one symptom of ASD which has been re-examined using CA to successfully illustrate some of its possible interactive and functional uses. Tarplee & Barrow (1999) analysed the use of delayed echoing from one child with limited language abilities. They found that he used echoes from a cartoon video, with coordinated eye gaze toward his mother, to initiate interaction with her. Such initiations would be used to elicit an exact repetition of the echo from his mother and if she failed to provide such a reply, the child would recycle his opening echo until she produced the desired response. Tarplee & Barrow conclude that although such sequences were formulaic and had limited value in terms of information exchange, child-initiated reciprocal echoing produced sustained and coordinated sequences of interaction for a child who had limited communicative resources at this disposal. Further, Tarplee & Barrow showed that the child’s mother could draw on the cartoon echoes as a device to initiate interaction with her son when he was withdrawn. In such cases, the mother treated echolalic responses from her child as appropriate and communicative, thereby valuing his status as a communicative partner.

A number of other CA studies support the idea that echolalia can be used as a communicative strategy or resource. In line with Tarplee & Barrow (1999), Stribling, Rae & Dickerson (2007) also conclude that for one child with limited language abilities, echoing is a valid interactional technique to communicate with those around her. Wootton (1999) also shows one child deploying echoing when his interactional participants are attempting to end the interaction. Thus, he argues the child demonstrates sensitive monitoring of the interactional and contextual environment and uses echoing as a device to extend interactional exchanges. Muskett, Perkins, Clegg & Body (2010) demonstrate the use of repetitive speech by one child with ASD to gain control of an interaction and as resistance to an adult’s attempt to interrupt her play. Sterponi & di Kirby (2016) even suggest that the repetition of others’ words can be used to experience the other, or as a type of perspective-taking, in children with ASD.

In addition to echoing, Sterponi & di Kirby (2016) also analyse the symptom of pronoun avoidance in one child with ASD. They demonstrate that the child’s use of third person constructions, rather than first and second person constructions, occurs after his caregivers switch to the use of third person forms of reference (e.g. ‘can you help dad?’). They suggest that in this child’s speech, pronoun avoidance was better understood as a form of accommodation to the frame of personal reference established by his interactants, rather than a feature or symptom of ASD (p. 399). Stribling, Rae & Dickerson (2009) examined topic perseverance in one child with ASD who was taking part in a research project involving a robotic driving platform. They found that the child’s tendency to
continue to raise the topic of ‘steering’ was directly related to the robot’s actions in the platform and likely exacerbated by his interactive partners’ lack of uptake on his introduction of this topic.

Other studies have focused on the structural organisation of interaction more holistically to examine interaction involving people with ASD. Dobbinson, Perkins & Boucher (1998) used CA to study the speech of one adult with ASD interacting with a researcher. They characterised some structural aspects of her speech as atypical, including her perseveration on certain topics, repetitious use of syntactic constructions, unusually placed latching and overlaps and very long pause lengths. Rendle-Short (2003) also examined structure more broadly in her CA analysis of a telephone conversation involving an 8 year old girl with Asperger’s disorder, speaking first to her friend’s mother and then her friend. In this study, Rendle-Short found that the girl was largely able to manage the conversation and obtain all the information she was seeking. However, the conversation featured long pause lengths, often after a FPP was directed towards the girl with Asperger’s disorder, and the girl exhibited difficulties ending the conversation. Both Dobbinson et al. (1998) and Rendle-Short note that the success of these interactions can partly be attributed to compensatory behaviours of the neurotypical interactants.

More recent studies on children with ASD have also focussed on the role of interactional partners. Solomon et al. (2016) uses CA, alongside discourse analysis, to demonstrate how medical professionals and parents facilitate children’s inclusion in medical interactions. They focus on interactions with children with and without ASD to examine the opportunity for inclusion afforded by medical staff when greeting their clients and by parents to include their children in co-constructing the relaying of medical symptoms. Maynard, McDonald & Stickle’s single case study (2016) of one family’s visit to a diagnostic clinic illustrates the extraordinary interactional work sometimes required of parents of children with ASD. They examine the coordinated, persistent and, at times, innovative effort required by both parents to successfully divert their child’s attention away from a spinning toy he is keen to take home from the centre.

There is additionally an insightful body of work on children with ASD undertaking assessments by Maynard and colleagues (Marlaire & Maynard 1990; Maynard 2005; Maynard & Marlaire 1992). This is discussed in chapter 4 in the context of the clinical nature of the corpus used in this study.

Together these studies suggest a level of coordination on the part of individuals with ASD; both with the contributions from their interactional partners and between their own verbal and non-verbal contributions. They suggest that some behaviours commonly seen as symptoms of ASD can be respecified in context as serving communicative needs; this is particularly well established in relation
to the use of echolalia in children with ASD. Further, these studies highlight the important role that interactional partners play in interaction; both in facilitating communicative competence (e.g. Kremer-Sadlik, 2004) and in the presentation of some behaviours associated with ASD (e.g. Sterponi & di Kirby, 2016). Some of these studies (e.g. Tarplee & Barrow, 1999; Stribling, Rae & Dickerson, 2007) highlight the value of CA in demonstrating the interactional competency of children with very limited language abilities. This is a group for which it has been challenging to conduct language research within more traditional research paradigms and, as a result, little is known about their use of communication skills (Tager-Flusberg, Paul & Lord, 2005).

Research conducted within a CA framework therefore furthers knowledge on ASD in two main ways. Firstly, CA shows that observed ‘symptoms’ of ASD may actually be compensatory adaptations to underlying difficulties, rather than features of the disorder themselves. Secondly, the various ways that these studies show individuals with ASD attempting to interact, suggests that a lack of desire for interaction is not a core feature of ASD.

CA has been a useful approach to increasing our understanding of some aspects of ASD. It has also been a useful tool to show evidence of understanding of others’ perspective-taking by participants and further our understanding of the concept of intersubjectivity.

2.6 Conversation Analytic approach to studying intersubjectivity

The term ‘intersubjectivity’ was first used by philosopher Edmund Husserl in his development of Phenomenology at the turn of the twentieth century. Phenomenology can broadly be defined as the study of structures of experience, or consciousness, as experienced from the first-person point of view. Husserl was interested in the fact that the world appears to each individual experiencer in a particular way, while still being experienced as a common world by multiple participants (1931). This notion of joint perception, or common subjectivity, is what he called intersubjectivity. According to Husserl, intersubjectivity gives rise to empathy which he describes as the experience of participating in the actions and feeling of another without becoming the other (1969: 233).

The term has been used in the diverse fields of philosophy, psychotherapy, psychology, neurology, sociology and anthropology and a range of different definitions of intersubjectivity have arisen, most more narrow in scope than Husserl’s original concept (Duranti, 2009; Duranti, 2010). Sterponi & Fasulo (2010) state that two distinct conceptualisations of intersubjectivity have developed. The first views intersubjectivity as a pre-condition for successful communication to occur and the second views intersubjectivity as the locally-created, embodied, communicative achievement of shared understanding (p. 117). These viewpoints are discussed below.
Traditional methods of developmental research approach intersubjectivity as a pre-condition for communication, viewing it as a necessary milestone on the way to becoming a competent adult speaker of a language (Sterponi & Fasulo, 2010; 117). Intersubjectivity is viewed as an individual cognitive skill for which researchers can access evidence through standardised tests or, less commonly, analysis of language or behaviours. This approach relies on the assumption that cognitive skills develop from the ‘inside out’ and that the brain is the only bodily structure relevant to acquiring an understanding of an other’s mental state. In particular, this conceptualisation can be seen in the extensive research over the last three decades on Theory of Mind (ToM) abilities in people with ASD.

The classic definition of ToM is ‘the ability to conceive of mental states or, to attribute thoughts and emotions to others’ (Premack & Woodruff, 1978; 515). ToM abilities can be assessed using false belief tasks which present scenarios where a person’s belief differs from reality and the test-taker is required to predict the person’s behaviour based on their false belief. Research in this area has demonstrated that TD children can pass simple false belief tasks at four years of age and acquire more complex ToM abilities around the age of six. The passing of ToM tasks is seen as evidence that the child has reached the stage of cognitive maturation to begin to make judgements about others’ behaviour by understanding their perspective, and thus this cognitive skill is reflected in the language they use. It can take children with ASD much longer than four years to pass simple false belief tasks (Baron-Cohen, Leslie, & Frith, 1985; Leslie & Frith, 1988; Leslie, 1991).

The second conceptualisation of intersubjectivity views the body’s interaction with the external world, both objects and subjects, as the primary ingredient in developing a shared world with others. This is particularly evident in the work of Merleau-Ponty (1968) who views intersubjectivity as the last step on a perception continuum. Philosophers and social scientists have attempted to understand intersubjectivity by positing ‘common culture’ through which individuals come to understand reality (Sidnell, 2010a; 136). Conversation analysts comprise a subset of these researchers, who have found an organised means by which intersubjectivity is established and maintained through finely detailed analysis of interaction (Sidnell, 2010a; 136). For conversation analysts, intersubjectivity is locally-created through the collaborative exchange of social actions. The actions of every participant in an interaction both demonstrate shared understanding and help to generate it. Rather than viewing communication as a reflection of cognitive skills relating to intersubjectivity, CA views communication as the site for the creation and maintenance of intersubjectivity. It is this conceptualisation which I adhere to within this thesis.
The concept of intersubjectivity is often implicit in CA analysis and some studies, such as Pike (2010), examine it in-depth. Pike (2010) uses a CA-style analysis to demonstrate a breakdown in intersubjectivity between an adult and a 6-yr-old child using a computer estimation task. Pike analysed four sessions with himself (the adult) and the child doing a computer-based maths task where the child was required to estimate where certain numbers would occur on a line on the computer screen. Throughout each session, he gave the child ‘scaffolding’ to complete the task in the way which would produce the most accurate results. He was surprised to find that after four sessions the child was still not completing the task in the order which he had been teaching.

A retrospective analysis of the interaction found that his use of the word ‘next’ had been unclear to the child throughout the sessions. After the child had completed a turn, the adult would often prompt the following turn by using the word ‘next’, such as ‘next one?’. However the child often interpreted this as referring to the next number on the line on the computer screen, which was almost always the wrong one to move according to the teaching method being implemented. Thus throughout the interactions, the adult had used the word ‘next’ in an abstract sense to refer to the following turn while the child had been understanding the word to mean the adjacent position on the visual representation in front of them. While participating in the interaction the adult was unaware of the misalignment of participants’ understanding of the task and neither participant explicitly oriented to it as being problematic. This breakdown in intersubjectivity interfered with the child’s ability to perform the estimation task in the order which would produce the most accurate results and their inability to establish intersubjectivity was initially interpreted as the child’s inability to learn the task.

Pike’s study (2010) demonstrates how CA can be used to monitor intersubjectivity throughout an interaction or, in this case, across multiple interactions. It also highlights the potential ‘cost’ of a breakdown of intersubjectivity, particularly for speakers deemed less competent in an interaction, such as children or those with communication impairments. Breakdowns in intersubjectivity can occur, and can be identified for analysis, without participants explicitly orienting to them as problematic. However, more often when conversation analysts have examined intersubjectivity it has been through examinations of participants orienting to its breakdown as problematic, through the presence of repair sequences.

2.7 The mechanism of repair

The mechanism of repair has been an important avenue to study intersubjectivity in the CA literature. Schegloff defines repair as ‘the practices for dealing with problems or troubles in
speaking, hearing and understanding the talk in conversation’ (2000; 207). As an emic approach to analysis, CA studies typically only identify a misunderstanding, or ‘trouble source’, occurring if there is evidence within the data to support this. Most commonly, the evidence comes from participants themselves orienting to the talk as being problematic through the initiation of a repair sequence. There are however, rare studies which used other evidence, for example Pike (2010), discussed in section 2.6, used the consistent wrong ‘next’ move in a math game as evidence that misunderstanding had occurred.

2.7.1 Types of repair

Problems or troubles in talk are referred to as ‘trouble sources’. Problems with speaking can arise when a speaker uses an incorrect word, mispronounces a word, uses atypical grammatical constructions or has difficulties finding the correct word or phrase to use. Problems in hearing can occur if a turn is produced in overlap with another person’s turn or with noise external to the conversation, such as traffic noise, or a participant is not orienting to their conversational partner when talk is produced. Difficulties in understanding can arise when a listener does not understand a word or phrase or cannot make sense of how a turn relates to the local speech context. Schegloff specifies ‘talk in conversation’ to limit the definition of misunderstandings to the way something has been said and to exclude misunderstandings in conversational content, such as problems understanding how the internet works (2000; 207). When misunderstandings arise in talk there are repair procedures available to participants to help to restore understanding.

The repair activity consists of two separate parts; the initiation and the outcome. The initiation is the highlighting by a participant that a misunderstanding has occurred, while the outcome can refer to a resolution of the misunderstanding or, less often, an abandonment of the problem. In discussing the repair sequence, conversation analysts refer to the producer of the trouble source as the ‘speaker’, or the ‘self’, and the ‘addressee’ is referred to as the ‘other’. This is regardless of which participant appears to have ‘caused’ the misunderstanding. It can be very difficult to judge which speaker is at ‘fault’ and CA views communication as a collaborative process where meaning is created and maintained by all participants in an interaction.

CA describes repair with reference to who initiates the repair and who carries out the repair. Repair can either be initiated by the speaker of the trouble source, or the ‘self’, or another participant in
the conversation, an ‘other’. Likewise, repair can be carried out by the ‘self’, or the ‘other’. Schegloff et al. (1977) identify four possible types of repair sequences, demonstrated in excerpts (1) to (4).  

(1) Example of self-initiated, self-repair

1  N:  he was givin me a:ll the people that
2  ->  were go:ne this yea:r I mean this
3  ->  quarter y’know
4  J:  yeah

(Schegloff, Jefferson & Sacks, 1977; 364)

(2) Example of other-initiated, self-repair

1  Ken:  Is Al here today?
2  Dan:  yeah
3  (2.0)
4  ->  Roger: he is? Hh eh heh
5  ->  Dan:  well he was.

(Schegloff, Jefferson & Sacks, 1977; 364)

(3) Example of self-initiated, other-repair

1  B:  he had dis un mistuh w- whatever k- I can’t think of his name,
2  ->  Watts on, the one that wrote that piece,
3  ->  A:  Dan Watts.

(Schegloff, Jefferson & Sacks, 1977; 364)

(4) Example of other-initiated, other-repair

1  B:  where didju play ba:sketbaw
2  A:  the gy:m.
3  B:  in the gy:m?
4  A:  yeah like grou(h)p therapy. Yuh know [half the group thet we
5  B:  [oh:::
6  ->  A:  had la:s term wz there en we jus’ playing arou:nd.
7  ->  B:  uh- fooling around.
8  A:  eh- yeah

(Schegloff, Jefferson & Sacks, 1977; 365)

In excerpt (1), the ‘self’, N, repairs their own use of the word ‘year’ with the word ‘quarter’ in line 3, explicitly marking it as a repair with the use of the term, ‘I mean’ in line 2. In excerpt (2), Roger, an ‘other’, initiates repair on Dan’s confirmation that Al is here today, by questioning this in line 4 with the phrase, ‘he is’, produced with questioning intonation. This initiation causes Dan, the ‘self’, to revise his affirmative response from line 2, by stating that ‘he was (here)’ in line 5. In excerpt (3), B, the ‘self’, appeals to his listener for a person’s name when he states he ‘can’t think of his name’ and provides a description of the person. The ‘other’, A, produces a candidate name in line 3, which acts as an other-repair. In excerpt (4), the ‘self’, A, is telling B about playing basketball with a group of people and states they were ‘jus’ playing around’. A does not appeal to B for a repair, however, B offers an alternative to ‘playing around’ in line 7 by producing, ‘fooling around’, which acts as an other-initiated, other-repair. A accepts this repair in line 8 by producing an agreement token.

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4 Transcripts have been simplified for consistency with transcription conventions used in this thesis.
Schegloff et al. (1977) state that all four sequences of repair are possible, however, they do not occur with the same frequency. Schegloff et al. (1977) found a ‘strong empirical skewing’ towards self-repair sequences (excerpts (1) and (2)), which they described as a ‘preference’ for self-repair. They argued that rather than this being a psychological preference, there is an organisational preference in the way that turns at talk are arranged that potentially leads to this bias. For instance, the turn-taking system affords the self the first opportunity to both initiate and carry out repair on a trouble source. This is reflected in the fact that self-initiated, self-repair appears to be the most common repair type. Similarly, when others initiate repair this is overwhelmingly done in the next turn after a trouble source. Schegloff et al. (1977; 374) state that next turn repair initiation typically occurs after a longer gap, which potentially provides the self with greater opportunity to repair. Typically the other only initiates repair in this turn and leaves the self the opportunity to carry out the repair in the following turn. Finally, when others do carry out repair, it is typically produced as a dispreferred response.

The work of Schegloff et al. (1977) highlights the relationship between who initiates repair and where it occurs in terms of turn sequencing. Much CA work on repair since Schegloff et al. (1977) has described repair in terms of its sequence organisation. For example, self-initiated repair is usually initiated in the same turn as the trouble source, however, it can also occur in the third turn (Schegloff, 1997). Third turn repair occurs when an addressee responds to the speaker’s original utterance without orienting to a need to repair, typically by use of a ‘quasi-turn’, such as a continuer which passes up the opportunity to take a full turn. However, the speaker uses the third turn to repair the original utterance (Schegloff, 1997).

Other-initiated repair is typically begun in the next turn after a trouble source, but also occurs in the third position. This is when an other responds to a turn produced by the self without indicating any need for repair, however their response demonstrates to the self a misunderstanding of the original turn has occurred, and the self then uses the third position to repair the trouble source (Schegloff, 1992).

The repair types discussed in this section are displayed in table 2.3. For each repair type the table shows a schematic representation of it’s structure, an example from the data set used in this study and a description. Further discussion on repair types within this data set occurs in chapter 4.
There is now four decades of CA research into the interactional behaviours related to repair. However, much of the work has been based on naturalistic mundane conversation between neurotypical, English-speaking adults. Less is known about repair behaviours in children or in groups of people with communication difficulties, such as those with ASD. Developmental researchers have been curious about repair behaviours in children and people with communication disorders, and have adapted the CA concept of repair to quantifiable frameworks to examine repair behaviours among these groups. In section 2.7.2, I outline some key studies on repair in children from the developmental literature. This section first discusses repair in typical development in 2.7.2.1 then discusses studies examining children with ASD in 2.7.2.2. I then provide an overview of research undertaken within CA, first looking at studies focused on repair in TD children in section 2.7.3.1, then in people with aphasia in 2.7.3.2 and finally in people with ASD in 2.7.3.2.

### 2.7.2 Developmental literature on repair

#### 2.7.2.1 Repair in children

Developmental researchers are interested in repair behaviours as they are seen as dependent on, and reflective of, a child’s social awareness and emotional regulation, and can serve as an ‘index of the degree of intentionality or goal directedness’ in communication (Wetherby, Alexander & Prizant, 1998; 136). In line with this, a focus of the developmental literature on repair has been on the repair strategies used by the children to achieve successful repair. Findings from the developmental

<table>
<thead>
<tr>
<th>Repair type</th>
<th>Same turn repair</th>
<th>Next turn repair</th>
<th>Third turn repair</th>
<th>Third position repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-initiated, self-repair</td>
<td>T1 A: x, x=y</td>
<td>T2 B: repair initiation</td>
<td>T3 A: x</td>
<td>T1 A: x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T2 B: quasi-turn</td>
<td>T3 A: x=y</td>
<td>T2 B: x=y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>T3 A: (not y,) x</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Repair type</th>
<th>Schematic representation of repair structure</th>
<th>Examples (from current study)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-initiated, self-repair</td>
<td>T1 A: x, x=y</td>
<td>A: he could be: (1.2) he could be a lion?</td>
<td>Repair is completed by the self of their own volition</td>
</tr>
<tr>
<td></td>
<td>T2 B: repair initiation</td>
<td>B: sorry? A: there’s no nose there.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T3 A: x</td>
<td>A: a light X. B: “yeah,” A: I mean- I mean then you push the button and then the light comes on</td>
<td>Repair is completed by the self after the other initiates repair</td>
</tr>
<tr>
<td>Other-initiated, self-repair</td>
<td>T1 A: x</td>
<td>A: What does polite mean. B: Means so you can see. A: Oh, that’s what a light is. Do you know the word polite?</td>
<td>Repair is completed by the self after the other demonstrates lack of understanding</td>
</tr>
</tbody>
</table>

Table 2.3 Types of repair sequences with descriptions and examples
literature indicate that the ability to repair emerges in children before language does, with children able to effectively repair conversational breakdown before they are even a year old (Wetherby, Alexander & Prizant, 1998; 138). Preverbal repair strategies include pointing, reaching, giving, showing, eye gaze, vocalising and idiosyncratic gestures.

Golinkoff (1986) studied emerging repair strategies in three TD prelinguistic children, from whom data was collected three times from 12 months of age to 16 months. She found that prelinguistic children of 12 months of age were very limited in their repair strategies but by 16 months a range of repair strategies had developed. Children also became much more persistent in their use of repair over this time period, so that if the repair did not succeed the first time, they would keep trying.

Alexander’s 1994 doctoral thesis (cited in Alexander, Wetherby & Prizant, 1997), appears to be the only large scale research into repair strategies in TD children. In this study, Alexander examined 120 children; 30 from each of the four developmental groups of prelinguistic (mean age 12.1 mths), early one-word (mean age 14.8 mths), late one-word (mean age 17.4 mths) and multiword (mean age 21.1 mths). Supporting Golinkoff’s (1986) findings, Alexander found that all children, except for the youngest two, continued to persevere with repair attempts when they had failed to adequately repair in their first attempt.

Gallagher (1977) examined repair in verbal children and found that six children from each of Brown’s first three developmental stages made an equal effort to repair, however strategies used varied. Children from Brown’s stage I (mean age 21 mths; mean Mean Length Utterance (MLU) of 1.5) relied on phonetic change and including additional information, while children from stage II (mean age 23 mths; mean MLU of 2.2) mainly used additional information and reducing the previously given information, and finally the children from Brown’s stage III (mean age 29 mths; mean MLU of 2.9) also used addition and reduction of given information, while also being able to substitute problem words for different ones.

2.7.2.2 Repair in children with ASD

Developmental researchers have also been interested in repair behaviours in atypical development. In line with the research conducted on typical development, studies on children with ASD have focused on their ability to produce repair strategies. Volden recruited nine children diagnosed with ASD or PDD-NOS and nine language-age matched controls (2004; 176). Volden used an experimental design where a researcher interacted with the children and deliberately issued requests for clarification as stacked sequences. For example, in response to something a children had said the
researcher would issue an open class repair initiator, ‘huh?’. When the child responded to this with their first repair attempt, they were again met with another repair initiation by the researcher, ‘what?’. Following the child’s second repair attempt the researcher produced their final request for clarification by saying, ‘I didn’t understand that’. Children’s verbal responses were categorised into five groups based on strategies used. These were repetition, revision, cue, meta-comments and inappropriate. Volden found that the children with ASD recognised the need to repair and used a variety of strategies to do this at similar levels to their language-matched controls. As the sequence of requests for clarification progressed, so too did the strategies of repair that both ASD and TD groups used. However, children with ASD were much more likely to respond to a repair initiator with an inappropriate response, or a response which did not comply with or respond to the repair initiation.

Geller (1998) examined interactions with five children diagnosed with ASD ranging in age from 7.1 years to 12.9 years. The children were individually engaged in free play with an adult and the adult was not attempting to elicit repair sequences. Unlike other developmental approaches to repair, the type of communication breakdown which occurred was also analysed. Geller found that 34 per cent of breakdowns occurred from problems in language form (unintelligible or inaudible speech, and syntactical errors), 17 per cent were attributed to problems in content (confusing lexical choices and unclear referents) and 15 per cent were due to problems in language use (unclear intentionality and confusing topic shifts). This study also examined the type of request from the adult which Geller broke into requests for confirmation (40 per cent), specific requests for information (33 per cent), indefinite requests (23 per cent) and comments (4 per cent). The children’s responses to repair initiation were categorised as ambiguous (26 per cent), acknowledgements (25 per cent), informatives (21 per cent), no attempt (14 per cent), indeterminate (13 per cent) and non-linguistic repairs (1 per cent). The children made some attempt at repair in 73 per cent of instances however were only successful at resolving the listener’s confusion in 35 per cent of utterances.

Keen (2003, 2005, 2014) has explored the relationship between repair ability and problematic, or challenging, behaviours in children with ASD. In Keen (2005), she analysed six spontaneous interactions in the home between mothers and their children with ASD, aged 2 to 5 years, with limited verbal ability. Keen noted a high frequency of conversational breakdown in the interactions and found that children with ASD attempted to repair breakdown using both conventional repair strategies, such as repetitions, augmentations and substitutions, and problem behaviours. She found some types of problem behaviours used as repair strategies, particularly those which used increased or exaggerated prosody. This was often used when other strategies had failed to repair the
misunderstanding, potentially indicating the communicative function of problem behaviours for children with limited verbal ability.

Taken together, these studies build a picture of children with ASD being eager to attempt to repair breakdowns in understanding, however often trying to achieve repair using atypical strategies. This is reflected in Volden’s (2004) high number of ‘inappropriate’ responses to repair, Geller’s (1998) high rate of unresolved listener confusion and Keen’s (2005) high number of problem behaviours as repair responses. However, a lack of a control group in both Geller (1998) and Keen (2005) make the labelling of certain frequencies as ‘high’ somewhat problematic.

2.7.3 Conversation Analytic literature on repair

2.7.3.1 Repair in children

With the growth of CA as a robust methodology to study interaction, interest has grown in applying CA to better understand typical and atypical language acquisition. Findings from these studies have broadly supported results from the developmental literature, while adding a level of nuance to these findings. For instance, Forrester’s (2008) longitudinal research on self-repair acquisition by a single child supports the finding that children are able to carry out repair before they are verbal and that repair behaviours become more complex as the child develops (Golinkoff, 1986; Alexander, Wetherby & Prizant, 1997). However, he also demonstrates that the preference for self-repair which has been demonstrated in the talk of adults (Schegloff et al., 1977) is evident in child interactions from a young age.

Laakso (2010) tracked the emergence and fine tuning of repair abilities in nine Finnish-speaking children. In line with Golinkoff (1986), Laakso found that basic repair abilities appeared before the age of 12 mths; before the children produced verbal communication. In this study, repair was only conducted to restore understandings of object requests, but Laakso demonstrates that children understand the possibility for failures in communication from a very young age. In line with Forrester (2008), Laakso found that self-repairs dominated the first year or so of repair emergence. She also found that repair behaviours were constrained by language ability. For example, at the one- and two-word stages of acquisition, repair can only be phonological revision and lexical replacements, however, as the child is capable of producing more complex utterances, there is broader scope for the repair strategies to become more elaborate. This study followed the children up to the age of 4 years, by which time they were quite skilled at employing repair for various socio-interactive purposes.
Laakso concludes that for the most part self-repairs are employed by children to restore and maintain intersubjectivity between participants. Further, the ability of children to self-repair before the age of one year demonstrates some very early understanding of their own speech and how others interpret it.

Sidnell (2010b) compared interactions between 4 year old children playing together and 5 year old children playing together. He found other-initiated repairs which take the form of questioning repeats to be a particularly prevalent repair type in the interactions involving 4 year old children while 5 year old children displayed a much wider range of strategies to initiate other-repair. While it is tempting to view this as a developmental difference in cognitive capacity between the two groups, Sidnell concludes it is reflective of the specific contingencies of interaction for children of different ages. He characterises the use of repair by the 4 years old children as displaying a pervasive concern with the linguistic conduct of others and specifically their pronunciation, grammar, precision and accuracy. In contrast, the 5 year old children demonstrated very few other-initiated repairs addressed to rectify problems of this sort. Uses of repair by the 5 year old children are engendered by complex practices of reference and object transfer and were most often used to rectify problems with recipient design.

2.7.3.2 Repair in aphasia

Some of the original CA research focused on communication disorders were analysing interaction involving participants with aphasia. In line with this, CA studies focused on repair in communication disorders are more advanced in aphasia, when compared to those focused on ASD and can still be valuable in understanding interaction involving participants with other communication disorders.

In interactions involving people with aphasia, the need to repair can occur more frequently. While repair in neurotypical populations is usually conducted quickly, research shows that in aphasic populations, repair sequences can be extended and repair is often ultimately unsuccessful (Perkins, 2003; Wilkinson, 2007). Self-repair by people with aphasia is particularly problematic and the preference for self-repair in the organisational structure of repair (Sacks et al 1977) can additionally highlight this as a deficit in interactions. Thus, in her study of aphasic speakers, Perkins found that the achievement of repair is more likely to become a collaborative work between all participants rather than purely a self-repair. In support of this, Laakso’s study (2003) of Finnish aphasic speakers found that repair was much more successful in interactions between patients with Wernicke’s aphasia and their therapists when the therapists assisted in carrying out the repair.
2.7.3.3 Repair in ASD

Very little research has taken place in the CA tradition specifically focused on repair sequences in the language of individuals with ASD. As discussed in section 2.5.1, Dobbinson, Perkins & Boucher (1998) and Rendle-Short (2003) have both conducted holistic structural studies on interactions involving a participant with ASD, which have highlighted potential difficulties in talk, which could lead to an increase in the need for repair. In Rendle-Short’s (2003) CA analysis of telephone conversations involving an 8 year old girl diagnosed with Asperger’s disorder, she found that the participant was largely able to manage the interaction and obtain all the information she was seeking. However, she also had a tendency to take unusually long pauses at atypical times in the interaction, such as when questions had been directly asked of her. This behaviour sometimes created trouble or breakdown in the conversation. Dobbinson, Perkins & Boucher’s (1998) study was focused on topic initiation and maintenance so they did not explicitly analyse repair, but in support of Rendle-Short (2003), they found that the unusually long pause lengths by the participant with ASD contributed to creating trouble in the talk. Additionally, they found that the participant with ASD produced overlapping speech in atypical environments which also contributed to trouble sources and increased the potential for repair to be required.

2.8 Conclusion

This chapter has provided an overview of the various literature which is relevant for this study. It began with an introduction to ASD as a disorder, first with a brief overview of the history of its identification and then a focus on the disorder as it is understood today, including the current diagnostic criteria and diagnostic tools in use and its current prevalence and known aetiology. I then gave an overview of the profile of language abilities and use in children and adults with ASD. The literature reviewed here focused mainly on research conducted in the traditions of medicine, psychology and speech pathology. This research has an emphasis on experimental, quantitative research designs to both elicit and analyse data, and generally has a focus on determining deficits across whole groups, rather than abilities in individuals.

The literature indicates that pragmatic aspects of language, or the use of language in context, are especially impaired in people with ASD, however, research to better understand the nature of this impairment has, on the whole, provided inconsistent findings. Structural aspects of language appear to be comparatively intact. However, specific areas of difficulty persist for people with ASD, such as difficulty with past tense markers, problems using and understanding some aspects of prosody (particularly stress), and delayed acquisition of mental state and socio-emotional terms.
I then provided an overview of the methodology of CA which provides a different perspective to understand and analyse intersubjective behaviours by people with ASD. In this section I provided a brief history of CA and outlined four of the core features of CA. These include the use of naturally occurring recorded data, a focus on action formation in talk, an emphasis on sequence organisation and the conceptualisation of context as a locally developed construct within interaction. I then discussed CA work on interactions which take place in institutional settings, and provided an overview of the interactional literature focused on conversation involving people with communication disorders, particularly ASD. On reviewing the small but growing body of literature, I concluded that interactional studies show that people with ASD can exhibit coordination of (verbal and non-verbal) turns and actions with their interactional partners. Additionally, this work shows that some traditional symptoms of ASD can be re-contextualised as strategies to serve local communicative needs. Finally, Interactional research highlights the important role that interactional partners play in interaction to influence how interactive behaviours manifest, and to create opportunities for individuals with ASD to participate.

I examined CA’s conceptualisation of intersubjectivity and a phenomenon which has been the focus of the majority of the CA studies on intersubjectivity; the mechanism of repair. I reviewed the CA findings on repair established from English speaking neurotypical adults, before examining the phenomenon in children and people with communication impairments. In my description of repair I reviewed research from developmental traditions which have used the CA concept of repair to explore development in both TD children and children with ASD. Finally I discussed literature carried out in the CA tradition, focusing on findings related to repair in three groups: TD children, people with aphasia and people with ASD. Key findings from this review includes that children and people with ASD appear to understand the need to repair, however, often choose a strategy to repair which does not resolve the misunderstanding. Additionally, some aspects of interaction with people with ASD may increase the need to repair, including long and awkwardly-timed pauses in interaction.
3 Data, method and analysis

3.1 Introduction
The data set examined in this study is a corpus of approximately 60 hours of audio-visual recordings of interactions between 40 children and an adult researcher in a clinical testing setting. This data was collected in 2005 and 2006 by developmental psychologists Dr Rachel Kelly and Prof Cheryl Dissanayake at the Olga Tennison Autism Research Centre (OTARC; formerly the Child Development Unit) at La Trobe University, Melbourne, Australia. The data was collected as part of a research study examining the relationship between executive functioning and pretend play abilities in children with and without ASD (see Kelly, 2007). It has not previously been used for linguistic or interactional analysis. In section 3.2, I describe this corpus including the participants and data collection process. In section 3.3, I discuss my role in accessing, transcribing and analysing the data set for the purposes of this study.

3.2 Original research project
Pretend play, also called symbolic play, involves misrepresenting reality for the purposes of fun or enjoyment and can include actions ranging from using an object for reasons other than its intended purpose, such as using a banana as a telephone, to role-playing, for example a child pretending to be a doctor (Chaudry & Dissanayake, 2015). Executive function is a broad term encompassing a range of cognitive abilities including planning, working memory, impulse control, inhibitory control and the generation of novel behaviours (Pennington & Ozonoff, 1996). This study was specifically concerned with examining whether inhibitory control and generativity were associated with pretend play abilities (Kelly 2007). It was hypothesized that pretence may require both inhibitory control to suspend belief of reality and generativity to apply behaviours from known situations to novel situations. The study found no significant differences between the children with ASD and TD children in terms of either executive functioning abilities or pretend play abilities and no correlation between executive functioning and pretend play abilities (Kelly, 2007).

3.2.1 Participants
The participants involved in this study consisted of one adult researcher and 40 children; 20 TD and 20 with ASD. Children with ASD had all received a diagnosis of either autistic disorder or autism spectrum disorder, based on the DSM-IV or DSM-IV TR criteria (American Psychiatric Association, 1994; 2000) from a registered psychologist or psychiatrist. Additionally, after recruitment for this study, the researchers used the Childhood Autism Rating Scale (CARS; Schopler, Reichler & Renner, 1986) to confirm the child’s diagnostic status at the time of testing. All children with ASD achieved a
CARS score greater than 30 which places them within the autism spectrum (Schopler, Reichler & Renner, 1986). All child participants spoke English as their main language in the home. During testing all children were administered a shortened version of the Wechsler Preschool and Primary Scale of Intelligence, third edition (WPPSI-III; Wechsler, 2002) and received a score in the normal range (above 70). For the children with ASD, having an IQ in the normal range places them at the high functioning end of the autism spectrum. The two groups were group-matched on chronological age, overall mental age, verbal mental age, performance IQ, full scale IQ and basic information processing speed.

Child participants ranged in age from 4 years, 0 months to 7 years, 5 months at the time of testing and included nine females and 31 males across both groups. All lived in the Greater Melbourne area, Australia. Child participants were recruited through various methods including the distribution of invitations to take part in the study in preschools, kindergartens, primary schools, and early intervention centres, advertisements in ASD-specific organisation newsletters and through a child research register which OTARC maintains. This register includes participants who have taken part in previous studies at the centre. Child participant details can be found in table 3.1, where gender is differentiated by shading and groups are ordered from youngest to oldest.

This study obtained ethics approval via the La Trobe University Human Ethics Committee (Ethics ID number FHEC04/R73) and parents of all children signed a ‘statement of informed consent’ which consented to potential future analysis of all data collected.
<table>
<thead>
<tr>
<th>ASD</th>
<th>Gender</th>
<th>Age</th>
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Table 3.1 Child participant details

3.2.2 Data collection

Data collection took place at OTARC, La Trobe University, for all but one of the children. Child participant 38-PO was tested at home in his lounge room as his family had difficulty attending the centre. Testing occurred between 11 August 2005 and 3 June 2006 and was conducted individually in a single session which took approximately 90 minutes, including breaks. For the most part, only the child participant and the adult researcher were present in the room when testing was taking place, however an exception to this was 33-JR, who requested his mother be present in the testing room. She stayed for the first 40 minutes of testing. Although she was asked not to contribute to the session, her laughter, coughing and, occasionally, talk features in the recording and at times these become interactionally relevant. Additionally, during transitions in and out of breaks and the
beginning and ending of sessions, parents and, less frequently, siblings can also appear in the recordings. All of the sessions which took place at OTARC were videotaped using cameras and microphones built into the testing room. The one session which was recorded in the child’s home was filmed on a single portable video camera with external microphone. All children were aware that they were being filmed and recording equipment occasionally becomes interactionally relevant during the sessions.

The sessions include a shortened version of the Wechsler Preschool and Primary Scale of Intelligence, third edition (WPPSI-III; Wechsler, 2002), which consists of the following subtests:

- The vocabulary subtest - providing definitions of words.
- The information subtest - answering general information questions.
- The block design subtest - copying a picture of small geometric designs with four plastic cubes within a specified time limit.
- The object assembly subtest - assembling pieces of a puzzle to form a meaningful whole picture within a specified time limit.

Verbal IQ was calculated using the vocabulary and information subtests and Performance IQ was calculated using the block design and object assembly subtests.

Additional tests were administered to child participants to measure the executive functioning abilities of inhibiting a natural response and generation of ideas. These are skills which are understood to be related to pretend play so were deemed relevant for the original study. To measure inhibition the sun-moon stroop task (based on Archibald & Kerns’ (1999) variation of Gerstadt, Hong & Diamond’s (1994) day-night stroop test), and the Tigger-Piglet inhibition task were conducted. To measure generativity, a semantic fluency task and the generation of object substitutions task (variation of one used in Jarrold, Boucher & Smith, 1996) were carried out.

Tests were also administered to measure the pretend play abilities of the child participants. The test of pretend play (Lewis & Boucher, 1997) was conducted, involving a structured play session where the researcher guides the child through various pretend play scenarios. These are designed to assess the child’s ability to substitute one object for another object or person, attribute an imagined property to an object or person, and make reference to an absent object or person. The session additionally included a 20 minute free play session where toys and various other items were made available for the child to use in whatever way they chose. The researcher was present during this session to facilitate the play by asking questions about what the child was doing and providing encouraging feedback, however the researcher took care not to guide the play. The sessions were
later coded for instances of pretence. The session also included a false belief task to assess Theory of Mind abilities, which consisted of pretending to paint a toy car a different colour.

The order in which the testing occurred varied to minimise test ordering biasing the results, however, sessions never began with either of the play sessions, and the test of pretend play was always administered before the free play session to establish rapport. All tasks are discussed in more detail in chapter 4, where the sequence organisation each task typically elicits is described. The same adult researcher conducted all 40 of the sessions. She was not blind to diagnosis when she interacted with the children.

In addition to these tasks, two questionnaires were given to caregivers to assess how they felt their child acted outside of a laboratory condition; one reporting on executive functioning abilities (the Behaviour Rating Inventory of Executive Function-Preschool (BRIEF-P; Gioia, Espy & Isquith, 2004) and the other reporting pretend play skills (based on the types of pretend play tested in the test of pretend play; Lewis & Boucher, 1997). Parents completed the questionnaires off camera in parallel to the child testing. Data from these questionnaires are not used in the current study.

3.3 The current study

This study used the video recordings from the original study to analyse behaviours related to intersubjectivity demonstrated by both children with and without ASD within this clinical testing environment. There are two main advantages to using pre-recorded data. Firstly using data for multiple research projects maximises the contribution of research participants and their families, and minimises the imposition placed on them by research. This is especially important when working with participants from a clinical group, such as those with ASD, who may be regularly approached to participate in research. Secondly, the researcher performed all data collection without any knowledge of my research project and so was naïve to my study’s focus on interaction and intersubjectivity. For a methodological approach which favours naturalistic data, this ensures that the interaction would have taken place, and would have unfolded in the way that it did, regardless of the existence of my research project (Potter, 1996; 135).

3.3.1 Accessing the data

I met with Prof Cheryl Dissanayake, director of OTARC in early 2008, and she suggested data from three different research projects she had previously conducted, as relevant to my research interests. I reviewed video recordings from each of these projects to determine which corpus would be best suited for my project. I looked for long stretches of naturalistic conversational data and took a
preliminary count of sequences exhibiting trouble and repair as a basic indicator of breakdowns in intersubjectivity. The corpus I chose, described in 3.2, included the most conversational data and the most examples of trouble and repair. Additionally, it had not been previously transcribed and no linguistic or interactional analysis had been carried out on the corpus.

Approval to conduct the current study was obtained from the University of Melbourne Human Research Ethics Committee (Ethics ID number 0826871) in April 2008. After gaining ethics approval, I digitised all the analogue recordings using a USB audio interface and a laptop computer, with the audio editing and recording software Audacity (Mazzoni & Dannenberg, 2002). Limited access to the data was granted due to ethical constraints, so I was able to remove only audio files from OTARC. However, I was able to access the audio-visual recordings by attending OTARC and viewing the recordings on site. On finalising analysis for this study, I provided OTARC with orthographic transcriptions of each of the testing sessions and gave a presentation on findings to their research community in July 2013.

3.3.2 Transcription

Once digitisation was complete, a basic orthographic transcription of each of the sessions in their entirety was done. I then reviewed each of these, using both transcripts and audio files, to isolate sequences of interest. These included repair sequences and also any sequences which indicated breakdowns in intersubjectivity where repair was not overtly carried out. These excerpts were transcribed using standard CA transcription conventions developed by Jefferson (2004) and further refined by Gardner (2001). CA transcriptions capture minute aspects of interaction such as overlaps, pauses, hesitations, audible inhalations and exhalations, stress, emphasis and changes in speaking volume, as well as non-verbal aspects of the interaction such as gesture, eye gaze and body orientation. A summary of transcription conventions used in this thesis is in appendix A.

In the transcripts, I refer to the adult research as ‘A’ and child participants are represented using the letters in their participant codes, outlined in table 3.1. Where family members appear in the data, these are referred to as ‘Mum’, ‘Dad’ and ‘Sib’.

For the most part, in transcripts I have used standard orthographic spelling of words, rather than attempt to present words phonetically, as Jefferson suggests (2004; 19-21). The English orthographic system is poorly equipped to represent the English sound system and when words are written using the alphabet in a phonetic sense, excerpts can prove very difficult for the reader to decipher. Additionally, when speakers use non-standard forms of English, as most speakers commonly do, the
participant can come across as looking uneducated or unintelligent, and the reader can be left with an unfair and derogatory impression of the participant/s. For ease of reading, I have also avoided specialised notation systems, such as the International Phonetic Alphabet (IPA).

When common colloquialisms are used, such as ‘gonna’ for ‘going to’, ‘wanna’ for ‘want to’ and ‘cause’ for ‘because’, I have transcribed the contracted or abbreviated version of such phrases, as these are now widely used and understood. Additionally, when an atypical mispronunciation of a word has been interactionally significant for the participants within the interaction, I have transcribed the word as it sounds. For instance, in some excerpts, mispronunciation of a word leads to a repair sequence which is important for the reader to know to understand the nature of the misunderstanding.

I have departed from using CA transcription conventions when I have not been able to decipher syllables in an excerpt. In standard CA conventions, unheard syllables are represented with blank spaces positioned within parenthesis, with the number of spaces (spacebar) used to represent the number of syllables which the transcriber has failed to decipher. In my transcriptions, I have drawn on Du Bois’ transcription conventions (DuBois, Scheutze-Coburn, Cumming & Paolino, 1993) in using ‘X’ to account for unheard syllables, whereby one ‘X’ represents one unheard syllable. Thus for three syllables missed, the CA convention would transcribe as ‘(   )’, however I have transcribed such instances as ‘XXX’. The reason for this is ease of reading as it is more intuitive to quickly understand three symbols as representing three misheard syllables rather than three spaces.

In line with CA methodology, transcripts were developed by repeated listens to excerpts to capture increasing levels of detail within the interaction. This process is important to build the researcher’s understanding of the salient features within an interaction, on which to build their analysis. I have taken every effort to produce transcripts which are accurate and complete, however, a ‘perfect’ physical depiction of an interaction can never be attained. Rather than the transcript acting as a ‘mirror’ of the interaction, it serves as a representation of the conversation (Moerman, 1988). Such representations necessarily encode analytical assumptions and can focus attention towards certain phenomena, sometimes unintentionally (Ochs, 1979; Hutchby, 2007). In line with this, the data used for analysis in this thesis are the audio-visual recordings of the interaction, not the transcripts I have produced.
3.3.2.1 The presentation of excerpts

When excerpts occur in the body of this thesis they occur with the following heading:

(1) ID 501: 8-LS. 9:44 (TD: 6;6) [– abridged]

All excerpts are numbered beginning from one as they appear in each chapter. This number is the bracketed number on the left and will be referred to in the text as the ‘excerpt number’ (for the example above, it’s the first excerpt to occur in the chapter). The ‘ID number’ is the unique ID number allocated to each excerpt which appears in chapters 5 and 6, for analysis purposes. The first number in the sequence shows in which chapter this excerpt occurs (for this example, chapter 5). The heading then shows the child’s individual ID number (for this example, 8-LS), followed by the time signature where the excerpt occurred in the testing session (for this example, at 9 min and 44 seconds). In brackets at the end is the child’s group status (TD or ASD), followed by the child’s age at the time of testing (for this example, 6 yrs and 6 mths of age). If the excerpt is in a shorter format than the version in the appendix the word ‘– abridged’ appears at the end of the excerpt heading. This is often used when the excerpt has previously appeared in the chapter, or will be discussed in more detail later in the chapter. Excerpts which are analysed in chapters 5 and 6 are additionally presented in Appendices B and C, respectively.

3.3.3 Methodology

In approaching this data set, I adhered closely to a CA approach to analysing interaction. I had an interest in behaviours which exhibit intersubjective breakdown, maintenance and repair from the outset of this project. However, I still took a data-driven approach during this search. This means that I attempted to analyse the data without preconceived ideas of what I would find with the aim of focusing on aspects of the breakdown, maintenance and restoration of intersubjectivity which appear to be notable.

As I collected excerpts of interest, I started to accrue a large and varied collection, so I began to categorise them as one of the four repair sequences which Schegloff et al. (1977) identified and an ‘other’ category. I additionally began to separate out sequences initiated by the researcher and those initiated by the child. Excerpts from this analysis are the basis for the overview of repair in the data set presented in chapter 4. It became apparent that open class repair initiations, produced by the adult participant, were the most numerous type of repair sequence occurring in this data set, so this phenomenon was selected for in-depth analysis, presented in chapter 5. Almost a quarter of the way into this analysis I also began to notice a distinctive form of ‘yeah’ spoken by the adult participant with high onset, high rising terminal intonation and laughter tokens, which appeared to
be doing the work of a repair initiator, at least some of the time. Analysis of this group of excerpts is presented in chapter 6. The first ten sessions were reviewed again on completion of this process, to ensure instances for ‘prosodically marked yeah’ had not been missed. To improve validity of findings, excerpts from this data set have been presented to researchers with expertise in CA at meetings of the Melbourne CA Group and at various academic conferences and workshops.

3.3.3.1 Quantification and comparison in CA research

Many aspects of this study closely align with traditional CA practice, however, this study does not use a pure CA approach. In chapters 5 and 6, where I examine larger numbers of excerpts, I include basic quantitative information and I also compare two groups of children based on diagnostic attributes which are exogenous to the interactions captured in this data set.

As CA is a qualitative analytical framework, the decision to quantify within CA is controversial and also contributes to the argument that CA is ill-equipped for comparison. Quantitative frameworks of analysis are designed to use group sizes large enough to reach statistical significance and to limit variables within these groups (Jarrold & Brock, 2004; Burack, Iarocci, Flanagan & Bowler, 2004). Such an approach means that differences found are great enough to support claims of a tangible difference between groups and the limiting of variation means that the difference can be attributable to the variable isolated, such as diagnostic status, rather than some other variable. Qualitative, data-driven research makes no such allowances and the codification and quantification of complex human behaviour can lead to a reduction and flattening of findings (Stivers, 2015).

However, the notion that CA does not quantify is too simplistic. CA publications constantly use quantifying language such as ‘regularly’, ‘frequently’, ‘often’, ‘generally’, ‘rarely’, ‘commonly’ and ‘absent’ (ten Have, 1999). Schegloff states that, far from the two fields being mutually exclusive, quantification is ‘built on the back’ of single case-studies and points out that quantification is simply multiples or ‘aggregates of single instances’ (1993; 102). Stivers (2015) states there are two key aspects of CA which create a strong foundation on which to base an interactionally grounded approach to codification. The first is the focus on the features which make multiple cases similar, rather than what makes them unique and the second is the use of distributional evidence to arrive at findings. There is increasing support for CA studies to now use quantification with some success, when approached with caution (Stivers, 2015; Heritage, 1999; Drummond & Hopper, 1993; Zimmerman, 1993). The substantial and growing body of work on single or multiple case studies on interactional phenomenon, such as repair behaviours, makes their codification and quantification appropriate, and even timely, to extend our knowledge of such phenomenon.
Forrester’s longitudinal research on the acquisition of repair in a single child demonstrates the value of blending qualitative and quantitative approaches within a well-researched topic area (Forrester, 2008; Forrester and Cherington, 2009). His initial analysis is qualitative and adheres faithfully to the CA tradition. This approach demonstrates a bottom-up approach to codification where categories are based on the data rather than dictated by theory or pre-conceived expectations of findings. When quantification occurs, Forrester limits this to raw token counts and only quantifies features relating to the structure of the repair sequence (i.e. person and turn) rather than attempting to quantify information of a more subjective nature, such as repair strategy. This results in an analysis which is both thorough and objective and also gives the reader a solid sense of the development of complexity in repair acquisition. Benefits of such an approach include that the findings are more accessible to audiences unfamiliar with CA and that comparison of data sets can then take place, which in Forrester (2008) is comparison of one child’s use of repair over time.

The notion that CA is ill-equipped for comparison is currently being tested. Using CA for comparative studies has been successfully demonstrated in cross-linguistic studies (see Sidnell, 2009; and Enfield et al., 2013). To a lesser extent, comparative CA has also been applied to disorders which affect communication. Using CA for comparison of the language of patients with epileptic seizures and those with non-epileptic seizures has produced particularly promising results (see Schwabe, Howell, & Reuber, 2007; Plug, Sharrack & Reuber, 2009; and Ekberg & Reuber, 2015). Reuber and colleagues use CA to demonstrate that patients with epileptic seizures can fluently provide full and detailed descriptions of their seizures while those with non-epileptic seizures produce talk filled with disfluency, lacking in detail and use terms such as ‘I don’t recall’ in response to probing questions. Differentiation between the disorders is crucial as they lead to different treatment options but is currently very difficult to gain medically, with a correct diagnosis taking an average of seven years to achieve. Translating research findings into clinical practice could result in improved diagnosis and outcomes for seizure sufferers (Ekberg & Reuber, 2015), suggesting that the practical benefits of comparative CA outweigh the methodological shortcomings.

Comparative approaches have also been applied to ASD by Solomon el at. (2016). By examining medical interactions, these researchers were able to compare the different ways in which medical staff and parents orient towards TD children and children with ASD as social actors with epistemic and interactional ‘rights’ to express their medical problems. They specifically focus on greetings by doctors directed towards children and parents’ attempts to include their children’s experiences in discussions of their medical problems. They emphasise that such a comparison is not a ‘matching’ of
two groups, in the way that quantitative research demands. However, it is useful to uncover trends in the data by isolating interactional practices that ‘often’ happen in one group, but ‘rarely’ happen in another group. This is similar to using established CA findings from neurotypical English-speaking adults as a basis for understanding findings on disordered groups.

The corpus used in this study has some features of a quantifiable study. As a product of the quantitative research design of the original study, some of the variables pertaining to the data are restricted. For example, the groups are restricted by age and IQ to reduce the effect of developmental and intellectual difference. While this corpus includes sufficient numbers of participants to reach statistical significance (20 in each group), the way I have used this corpus by isolating excerpts of interest across the whole data set means that the numbers of cases in each group of children do not reach statistical significance. Not every child in the study demonstrates an instance of each phenomenon examined and some children demonstrate multiple instances of the same phenomenon. This imbalance means that identified phenomena cannot be attributed directly to a diagnostic group.

In chapters 5 and 6 of this thesis, I provide numbers when I present my findings. In line with Forrester (2008) I have limited quantification to raw numbers and aspects of the interaction which are objective. My findings and the arguments based on them do not rely on those numbers, however they show tendencies within this data set of the occurrence of repair behaviours, especially when comparing across groups. In line with CA methodology, each excerpt is examined individually in detail, demonstrating a bottom-up approach to grouping cases together. The inclusion of numbers results in transparency of findings and shows that no single case is treated as irrelevant. We now have a good understanding of how repair is carried out in interactions, particularly those involving English-speaking neurotypical adults, and it is this body of work I draw on to contextualise my findings in chapters 5 and 6 of this thesis. I additionally draw on the literature of communication difficulties in people with ASD, summarised in chapter 2 to guide my conclusions. I view the work on similarities and differences between groups as exploratory and as creating avenues for further research, rather than as a conclusive account of interactional practices in either group.
4 Participation asymmetry and sequence organisation in a clinical testing setting

4.1 Introduction

The purpose of this chapter is to provide the reader with an overview of the nature of the interactions analysed in this thesis by describing the data set with reference to participation frameworks and sequence organisation, including repair sequences. While examining instances of breakdowns in intersubjectivity within this corpus, it became apparent that the clinical nature of the interactions, including the laboratory environment, the nature of the relationship between the participants and, perhaps most importantly, the task-based goals of the interactions, were highly relevant to the way the interaction was organised.

This chapter describes the testing environment which is similar for all children in the study, regardless of diagnostic status. Thus, in this chapter the two groups of children are not differentiated or compared, as they are in the next two chapters. Diagnostic status is somewhat irrelevant in the context of examining the possible interactional sequences which come about from this clinical testing environment. I argue that the interactional setting and resulting sequencing is influenced by the clinical nature of the tasks and setting, regardless of the participants involved. However each excerpt used is coded as TD or ASD, so diagnostic information is still available to the reader.

The aim of this chapter is to describe the organisational structure of a clinical testing situation. It is not intended as a critique of the child’s level of ability to complete the tasks, the clinician’s competence in administering the tasks or either participant’s level of sensitivity to the interactional setting. Quite contrary to this, I hope to demonstrate that, regardless of the participants involved, the boundaries of the testing situation and the constraints of the tests themselves, create and maintain a specific structural and sequential organisation within the interactional environment. This organisation both differs from ordinary conversation and is unique to this setting. Having been trained and employed to administer standardised tests (the Woodcock Johnson Psychoeducational Battery), I have personal experience with the tension of attempting to simultaneously be a good interactional partner and a good administrator of clinical tasks.

As outlined in chapter 2, institutional interactions are those which are organised differently to mundane conversation due to the institutional context in which they occur. In this data set, this difference can potentially influence breakdowns in communication between the adult and the child undergoing testing. This chapter contributes to the few accounts of child-adult interactions in clinical
testing environments, and also offers a description of the data set to contextualise the following two chapters which are more directly focused on breakdowns of intersubjectivity. It begins with an overview of Goffman’s participation frameworks (1963, 1981) to provide a backdrop to explain the asymmetrical nature of the interactions. I then discuss a number of features of this data set which could potentially contribute to the participation asymmetry in the interactions. These include the:

1. predominance of child-adult dyadic interaction;
2. presence of institutional roles of researcher and research participant;
3. laboratory setting in which interactions take place;
4. evidence of uneven epistemic status between participants;
5. clinical nature of the tasks participants are completing.

While features 1-4 can and do influence aspects of the interaction, feature 5 becomes the main focus of this chapter. The tasks conducted within this corpus, by their nature, lack flexibility and it is this rigidity that constrains and establishes the sequence organisation in the interactions.

There are a number of different tasks in this corpus. This chapter aims to describe these tasks by describing the type of sequence organisation they elicit. Many of the tasks rely on Initiation-Response-Evaluation (IRE) sequences, in a number of variations, for successful completion. IRE sequences are also common in classroom settings and discussion of these form the bulk of this chapter. In section 4.3.2, I outline standard IRE sequences in the information and vocabulary subtests of the WPPSI-III and the breakdowns in intersubjectivity that result in these contexts. In section 4.3.3, I examine a type of IRE sequence which has a list in the response slot in the IRE sequence. This is present in the semantic fluency and generation of object substitutions tasks. In section 4.3.4, I examine IRE sequences with nonverbal initiations which occur in the sun-moon stroop task. In section 4.3.5, I provide an overview of IRE sequences which have actions in the response slot. This includes the WPPSI-III, object assembly and block design subtests, the Tigger-Piglet inhibition task and the test of pretend play. In section 4.3.6, I discuss the child-led free play session which does not necessarily feature IRE sequences. While these sessions appear to have fewer restrictions on the sequencing participants typically produce, there are constraints on the adult’s participation as she is instructed not to direct the play.

In section 4.4, the chapter focuses on sequences that demonstrate problems with intersubjectivity. As discussed in chapter 2, repair sequences provide conversation analysts with insights into the establishment, maintenance and restoration of intersubjectivity within talk. For this reason, a
summary of repair sequences related to intersubjectivity which are found in the data set is provided in sections 4.4.1 to 4.4.4. These sequences include same turn repair, next turn repair, third turn repair and third position repair. This section also includes other practices in the data set which can impact on achieving intersubjectivity or may demonstrate problems with intersubjectivity. In section 4.4.5, I discuss instances where participants negotiate over pretend items or actions. These can prove particularly challenging for participants to establish intersubjectivity as referents of the talk are not within their shared play space. In section 4.4.6, I discuss a practice known as ‘letting it pass’ which occurs when misunderstanding takes place but neither party orient to it as problematic.

4.2 Institutional features of the data set

Goffman (1981) notes that the words exchanged within institutional interaction are not ‘doing conversation’, but rather they form part of the achievement of a coordinated task activity, in which all parties present, usually but not always, have a shared interest in assisting to accomplish. Drew & Heritage (1992) define institutional talk as talk occurring in a restricted environment, where the talk which occurs is limited by the goals of the situation and participants, there are restrictions on the contributions of the participants as they have clearly defined roles, and the discourse is understood in the context of the institutional and activity-specific framework. However, just because the talk occurs in an institutional setting it does not mean it is institutional talk. For instance, work colleagues may talk about things other than work while at work and this type of talk looks more like mundane everyday conversation. In line with this, a case must be established for claiming that talk is institutional in nature.

A number of features of the interactional setting of this data set potentially give rise to conversational asymmetry and establish it as institutional data. These features were listed in 4.1 and each will be discussed in turn.

4.2.1 Child-adult dyadic interaction

During these interactions, for the most part, the adult researcher is interacting with one child participant, with no other participants present. This potentially adds to the asymmetrical nature of this interaction. In isolation, child-adult dyadic talk does not build a case for being institutional data, as adults and children interact in many environments. However, the difference in age between the participants may influence the contribution each participant makes to the interaction, especially when participants are unfamiliar with one another.
When interacting with children, adults often alter their speech in various ways. These variations are particularly pronounced when a child is young and become less common and less exaggerated as the child grows older. Thus, adults tend to design their speech to be suited to the linguistic capabilities of the child, or at least what they judge to be the child’s capabilities. While the majority of work on child-directed speech has been conducted on the language of primary caregivers, typically mothers, towards their own children, it has been found that other speakers, such as childcare workers, also alter their speech in similar ways when conversing with children (Anderson & Johnson, 1973; Sachs & Devin, 1976). In line with this, findings on English child-directed speech have been included here, if they appear to be relevant for this data set.

Research has shown that speech directed towards young children is often higher in pitch and contains exaggerated intonation (Garnica, 1977). This includes speech produced at a higher mean fundamental frequency and an intonation range which is on average double that of adult-directed speech (from three quarters of an octave to one and a half octaves), with higher intonational peaks, and steeper intonational rises and falls (Clark, 2009). Higher pitch is used especially on words to which adults want children to attend and on such words there is additionally evidence of lengthening of vowel sounds (Garnica, 1977). Child-directed speech has also been found to feature a slower speech rate which is achieved through longer pause times between words and phrasal boundaries (both pauses and gaps, using CA terminology), rather than through lengthening of words (Broen, 1972; Fernald & Simon, 1984). Pauses are especially prominent after final falling intonation contours (or at the end of a TCU), with Broen (1972) finding that mothers paused at the end of sentence boundaries 93 per cent of the time when directing their language towards 2 year olds, 76 per cent of the time when directing their language towards 5 year olds and only 29 per cent of the time when directing their talk towards other adults.

Syntax and semantics can also be altered in child-directed speech when compared to adult-directed speech. This includes shorter sentence length and simplified sentence structure (Phillips, 1973; Sachs, Brown & Salerno, 1976), use of a more limited vocabulary, and topics focused on the here and now (Phillips, 1973). In addition to this, child-directed speech also contains frequent repetitions and a high frequency of questions (Clark, 2009). Adults also tend to provide encouraging feedback to children and scaffold the interaction by doing much of the interactional work to facilitate conversation (Camaioni, 1979). Curiously, there is evidence that child-directed speech is also more fluent, with fewer false starts, mispronunciations and hesitations (Broen, 1972; Clark, 2009).
The main function of child-directed speech appears to be to engage children in communication as there is evidence that children pay more attention to child-directed speech compared to adult-directed speech (Snow, 1977). It is less well understood how children may alter their language when they interact with adults compared to their peers.

4.2.2 Institutional roles of researcher and research participant

During the course of the testing sessions, participants orient to their predetermined roles of researcher and research participant, or more often, test administrator and test taker. Goffman first described the idea of participation frameworks in seeking to understand changing participant dynamics within interaction (1963, 1981). When a turn is produced each participant present attains a ‘status’ or ‘role’ in relation to that turn. At the most basic level these roles can be categorised into those of speaker and hearer, and they then can be further distinguished as ratified vs unratified hearer, addressed vs unaddressed hearer, and further categorised still using descriptors such as eavesdropper, overhearer etc. These roles are relative to each moment in the interaction. Thus in an ongoing interaction these status roles alter and evolve in the moment-by-moment unfolding of actions, and thus participant relationships, within the interaction.

Goffman states that participation roles may be in line with, or influenced by, institutional roles and illustrates this with the example of a paediatric physician’s consultation with a mother and child (1981; 142). In such a situation, Goffman suggests, the physician’s actions, including asking questions of the mother, physically examining the child, note-taking, giving instruction to students and nurses, and making movements away from his desk to access files and equipment, are all actions which are warranted by his institutional role within the setting of a doctor-patient consultation (1981;142). In contrast to this the mother’s movements are much more restricted; her only notable contribution to the interaction is to answer questions which are asked of her by the physician. This circumstance where participants exhibit unequal participation in the interaction has been referred to as 'asymmetrical' participation in interaction (ten Have, 1990) and has been noted as a feature of child-adult interaction independent of institutional context (Kaye & Charney, 1981; Elbers, 2004).

The interactions analysed in this study demonstrate institution-specific participation roles. The adult participating in the interactions is a female psychology researcher and was unknown to the child prior to the day of testing5. Thus, before the interaction has even begun, there is already an

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5 Throughout this thesis, the researcher conducting the testing is always referred to as ‘the adult’. This decision was made to avoid confusion with myself, the researcher conducting the current study. Other adults present in recording are always family members and will be referred to by their relationship to the child (i.e. ‘mum’ or ‘dad’).
asymmetry involved in participation in the session. The context where the child is brought to the laboratory to participate in research lead by the adult influences how the participants orient to and also construct their institutional identities of ‘researcher’ and ‘research participant’. At a lower level, while engaged in tasks, the adult frequently orients to her role as test administrator and the children frequently orient to their roles as test taker. In orienting to such roles, the adult gains considerable control over the direction that the interaction takes.

Occasionally another person or persons are present who are always members of the child’s family. Most often this is the child’s mother but sometimes it’s the child’s father and/or a sibling. Sequences involving one, or more, third party frequently occur during the transition to or from a break. There is one exception to this. In one session (33-JR), the child’s mother was present for 40 minutes of the session at the child’s request, and it is perhaps notable that this child, at times, demonstrated participation status more equal to the adults, when compared to the other children in the study.6

4.2.3 Physical environment

With the exception of one session which was recorded in the child’s home, the data was collected in a laboratory environment. While the room is set up specifically for child testing and has children’s posters on the walls and size-appropriate furniture, it still has a feel which is somewhat reminiscent of a clinical setting. This is characterised by a lack of natural light, painted brick walls and video cameras and microphones built into the ceilings of the testing rooms. All children have been informed that they are being filmed and some occasionally orient to this as relevant within the interaction. When considering the laboratory space, perhaps most important of all for the children who visit it, is that it is a completely unfamiliar environment. To the adult the space is familiar. That these interactions are operating within the adult’s known environment, give her an additional ‘privilege’ in terms of participation (Drew & Heritage, 1992). Tasks took place at a table or on the floor on a play mat. These two physical contexts are discussed and illustrated below.

4.2.3.1 At the table

Half the testing took place with the participants sitting across from each other, face-to-face, at a small table. Within this arrangement the child is positioned facing the camera and the adult is mainly off camera to the left within the camera view with the right side of her back and head usually, but not always, partially visible in the camera view, as shown in figure 4.1. There was some variability

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6 ID 512, examined in chapter 5, is an example of this. In this excerpt 33-JR is unable, or unwilling, to repair his problematic turn and his mother produces a repair.
across sessions regarding how much of the adult’s body was visible on camera within this arrangement. This set up was used for the more structured standardised tests, as opposed to the play-based tests which took place on the play mat. Tests which took place at the table were all subtests of the WPPSI-III, the sun-moon stroop task, the semantic fluency task and the false belief task.

![Figure 4.1 Room set up 1: Adult and child sitting at the table](image)

**4.2.3.2 On the mat**

The more play-based tasks took place on the floor. Again the child was face-to-face with the adult with both parties sitting on a white mat on the floor. The mat was used to give the participants a clear and contained ‘play space’ and also provides a white background so that the play objects the participants are using are visible on the video footage. In this setting the child was on the left hand side with more of their face and the play area in front of them captured by the camera angle. The adult always sat on the right-hand side of the mat and as the camera was angled to see more of the child’s face and play space, the adult was sometimes partially off camera. This view is shown in figure 4.2. While care was taken to enable the camera to capture the majority of the testing and play sessions, when play was energetic or the child was restless there were parts of the sessions which were only captured on audio. Additionally the child did not always stay facing the adult during these sessions. The tests which took place on the mat were the Tigger-Piglet inhibition task, the generation of object substitutions task, the test of pretend play and the free play session.
4.2.3.3 Use of mutual objects

During the course of the interactions, participants are often orienting to toys or objects which are important to understand the talk underway. Goodwin has extended Goffman’s work (1963, 1981) on participation frameworks to emphasise embodied nonverbal aspects of interaction as a central site for understanding the ‘hearer’s’ role in interaction (Goodwin & Goodwin, 2004; Goodwin, 2007a). For example, Goodwin (1981) demonstrates the coordination of mutual gaze between participants as a resource for hearers to contribute to the organisation of turns-at-talk in conversation. For instance, gaze towards another participant can be used to select the next speaker in an interaction. Additionally, Goodwin (2000) has demonstrated the importance of participants attending to ‘mutual objects’, or objects of interest to multiple participants. For instance, in analysing the focus of multiple participants’ joint attention in an archaeological team’s work activity of matching soil colour to a universal colour chart, Goodwin demonstrates that participants’ orientation to both the soil sample and colour chart was fundamental in the achievement of moment-by-moment shared understanding and ultimately in completing the workplace activity of matching a soil sample to its colour type (2000). Goodwin (2007b) refers to the participants’ physical orientation to their surroundings, objects and each other as the instrumental stance.
Within this corpus, most tests involve the use of stimulus items. For many tasks to be successfully completed, both participants are required to orient to mutual objects to achieve intersubjectivity. Items include puzzles, blocks, puppets, cards, toys (a doll, teddy bear, digger truck) and everyday objects (a bowl, cotton balls, icy pole stick). In the play-based tasks, the mutual objects and how the participants orient to each other and these objects, are of central importance for understanding the moment-by-moment unfolding of action. Thus the participation framework within these interactions not only involves the participants and their physical orientation to one another, but often also objects.

4.2.4 Uneven epistemic status

The interactions in this corpus often showed evidence of uneven epistemic status between participants. Achieving intersubjectivity within interaction is reliant on a participant’s abilities to recognise the knowledge states of others and adjust actions and understandings in accordance to this recognition (Heritage, 2013; 370). Thus conversation analysts are interested in how participants assert, contest and defend epistemic status within the real time unfolding of interactions. In institutional settings, asymmetry of epistemic status is often observed and can impact on the nature of the interaction (Drew & Heritage, 1992).

The adult participant’s extensive knowledge of the testing situation gives her a relative epistemic advantage over the child participants in this study. Even in the first session included in this data set, it is the seventh time the adult has conducted this research session. By her last session, she had conducted the session more than 60 times. She is very familiar with the overall structure of the session and also the structural organisation of each individual task. She has a clear understanding of what responses the tasks are designed to elicit and a good idea of some of the typical responses children will provide. The adult is in a privileged position of controlling the events which take place in the laboratory and she guides the course of both the session and interaction.

In contrast to this, the children have no prior knowledge of the task demands and limited previous experience of being in a laboratory setting where they are administered psychometric tests. This is particularly true for the TD children in this study, who presumably would have rarely, if ever, been in this situation. However, being an ‘expert’ on a subject can arise from personal, social experience and there are also sequences within this data set where the child demonstrates knowledge superior to that of the adult’s. These sequences typically occur in the child-led free play session, but can also occur in any instance where a child relays a story or event from their life during the more conversational excerpts of talk scattered throughout the interactions.
4.2.5 The clinical nature of the interaction

The previous four sections have provided an overview of aspects of the interaction which contribute to the interaction being understood as institutional. The clinical nature of the tasks undertaken within these sessions appear to have the most impact on the interactional constraints within this data set. These interactions occurred with the goal to complete a list of pre-determined tasks for the purpose of conducting research. To achieve this, the researcher came to the interaction with a goal of carrying out the required number of tasks within a set time period. However, she also had an institutional responsibility towards the child and their family to ensure testing does not take longer than 2 hrs and to ensure the child is comfortable and provided with breaks for refreshments, to use the bathroom and to see their parents. Parents were typically present in another room of the laboratory, sometimes watching the child in real-time on the television monitors which are recording the interaction. On occasion the child can assume considerable control over the course of the interaction by requesting breaks, or displaying non-cooperation on the tasks more generally. While the adult is in a privileged position to guide the interaction, there is evidence at times of differing alignments between participants with regards to the activity at hand, which will be demonstrated in some of the excerpts which follow.

While there is evidence of activity disalignment in this data set, tests used in the sessions are designed to be enjoyable for children and for the most part children appeared to enjoy their time in the laboratory. Children were rewarded for completing tasks by receiving lollies, raisins and/or stickers. While there were instances of children expressing their dissatisfaction with the testing situation, there were no instances of crying present in the data. Conversely, there were many instances of smiley voice and laughter indicating that, for the most part, the adult and the children enjoyed their research experience.

The researcher in this corpus is particularly engaged and enthusiastic with the children, which is demonstrated over the course of this chapter. She asks many questions and is typically very quick to respond to children in a positive manner, even when it appears that she has not understood what has been said. However, the clinical nature of each individual task has a strong influence on the sequence organisation which occurs in the interaction and this is discussed in detail over the course of section 4.3.

4.3 Sequence organisation

As the administration of clinical tests makes up the bulk of this dataset, the sequential organisation of the tasks strongly influences the interactional environment. This section aims to describe the
clinical tasks administered with reference to the sequential organisation each task commonly elicits. The majority of tasks in this data elicit Initiation-Response-Evaluation (IRE) sequences, in a number of variations, and each of these is described below. I begin the section by providing some background on the interactional significance of clinical testing environments.

4.3.1 The interactional demands of clinical testing

Clinical and educational test situations can be challenging for children, perhaps more so for those with communication impairment, such as children with ASD. It is often assumed, or hoped, that correctly administered standardised tests provide a stimulus-response environment where the examiners are neutral conduits of test items and for which interactional context is ‘controlled’. As Muskett, Body & Perkins (2013) point out, the interpretation of standardised assessments frequently rely on the assumption that they are immune to social context and thus the performance on such tasks is viewed as solely a reflection of the internal cognitive structures and processes of the examinee (Muskett et al., 2013; 213). However, standardised clinical tests are not necessarily objective instruments. Standardised tests may result in poor performance for a number of reasons, including interactional reasons rather than deficits in competency on the part of the examinee.

Marlaire & Maynard (1990) and Muskett et al. (2013) have demonstrated that, as in other interactional contexts, tests are collaboratively produced and both examiners’ and examinees’ social actions co-construct the unfolding of the interaction. Additionally, clarity about test administrators’ expectations at the onset of clinical test situations has been shown to improve test results substantially (Elbers & Kelderman, 1994), and when faced with a testing environment, children may draw on their knowledge of situations they are more familiar with to produce responses, which may or may not help them to achieve competent test results (Elbers, 2004).

Maynard (2005) examined interactions from two children with ASD taking part in an educational test, the ‘what do you do when?’ subtest of the Brigance test. This test presents children with a series of hypothetical situations, ‘what do you do when you are hungry/sleepy/cold etc.? ’ and requires them to draw on their ‘common-sense’ knowledge to produce a relevant or appropriate response. Maynard states that children need to draw on two elements of interactional knowledge to come to a correct answer. The first is their knowledge of local level sequential organisation, for example, in the ‘What do you do when?’ subtest of the Brigance, this is knowledge of adequate responses for question-answer adjacency pairs. The second is a broader knowledge of overall structural organisation, for example, the structure of doing a ‘What do you do when?’ subtest, which is a series of unrelated questions about hypothetical situations. After analysing instances of the question, ‘what do you do when?’ in everyday mundane conversation, Maynard was able to show
that the ways in which the incorrect answers from the children with ASD were structured demonstrated an adherence to everyday conversational rules. Specifically, the test defined a correct answer as one that drew on an abstract version of ‘when’, an impersonal version of ‘you’, a theoretical and projected experience and offered a generic solution to the problem. However, the children in the study answered in ways that drew on a specific time in reference to ‘when’, a personal version of ‘you’, expressed a lived experience, gave a specific solution to the problem, or provided a generic consequence of the given situation. These were all responses which were found to be acceptable responses to the question format, ‘What do you do when X?’ in conversational contexts. This indicates that the ‘incorrect answers’ were potentially a problem with the children understanding how the nature of the task is different to everyday conversation, rather than acting inappropriately, or not knowing what to do when they are hungry/sleepy/cold etc.

Muskett et al. (2013) support this finding in their deconstruction of the semantic verbal fluency assessment. In this task, also discussed in section 4.3.3.1, children are given a topic, such as ‘animals’ or ‘vehicles’, and asked to give as many examples of these as they can in a set time period (30-60 seconds). Children with ASD are known to perform poorly on this task, providing fewer responses, and more atypical responses when compared to their TD peers. Muskett et al. (2013) examined instances of atypical responses produced by one 11 year old child with ASD, showing that although he does produce a high number of atypical responses, these are oriented to as ‘unusual’ by the child in some way. For example, the child produces the word ‘feet’ as an example of a type of ‘vehicle’, however he orients to this as humorous, and the examiner accepts this as a non-serious response. The authors demonstrate that lists of objects produced during this test are no less susceptible to social context than lists produced in other contexts, and when you closely examine the context of such a response, there may be valid interactional reasons for its occurrence. Further managing the interactional nuance of a given situation may demonstrate more sophisticated skill than adhering to standardised task demands.

These studies suggest that standardised test results may not always reflect real life abilities of the examinee. This is supported by Kremer-Sadlik (2004) who found multiple demonstrations of Theory of Mind abilities in naturalistic interactions between children with ASD and their family members. However, these same children could not pass standard false belief tasks. It appears that children undergoing clinical testing are required to engage complex skills of interpretation and inference to understand and adhere to test demands which are ‘inherently ambiguous’ (Marlaire & Maynard, 1990; 84). However, these abilities are not themselves the subject of assessment, and the important part they play in performance on such tests is often overlooked.
The nature of the tasks in this corpus encourages sequence organisation which is linked to the task aims, however, there is also considerable flexibility in this organisation at times. For instance, children often make conversational contributions unrelated to the task, and if the adult understands the contribution and the task is not timed, her response to this is usually to encourage the child to expand on it for at least a few turns. An amusing example of this is shown below in excerpt (1).

Excerpt (1) takes place in the WPPSI-III, information subtest, which is explained in more detail in section 4.3.2.1. In it, the adult asks the test question, ‘what is made from milk’ in line 1 which leads to a discussion about ice cream.

(1) 4-CJ. 34:22 (TD: 5;7)
WPPSI-III – information subtest. Participants are sitting at table facing one another.

1 A: tsk what is made (.) from milk.
2 (1.1)
3 CJ: ice cream
4 A: yea:h ice cream (0.5) goo:d.
5 (0.3)
6 CJ: hey I like the ice cream from McDonald's.
7 A: oh it's y:vummy isn't it, I like that ice cream.
8 (1.4)
9 A: d'you have it with sa:uce on top;
10 (0.9)
11 CJ: no [yucky ]
12 A: [no? huh huh] oh you don't like the [ sauce; ] huh huh
13 CJ: [((cough))]
14 yucky
15 A: huh huh you just like the ice cream ye(hh)ah.
16 CJ: can't have sauce on top of it.
17 A: no?
18 CJ: you can have tomato sau: you can have sauce with :hoTdogs.
19 A: oh: yeah, you can have tomato sauce but you can have stra:wherry sauce on it or chocolate sauce on an ice cream,
20 (1.4)
21 22 CJ: [sh ]
23 A: [wou]ld that be nice?
24 CJ: how about ca:ramel on the top [of vanilla ice-creams]
25 A: [that would] be nice
26 [ c o : : h ] yeah
27 CJ: [ caramel ]
28 A: that'd be yUmmy huh huh
29 (0.7)
30 A: tsk n ow CJ what’s the bi:gest ocean in the wo:rld.

Lines 1-4 consist of the standard sequence organisation which this test typically produces. In it the adult produces the test question (line 1), the child gives a response to the question (line 3) and the adult provides an evaluation of that response (line 4). However, after this, CJ contributes a more conversational turn to the discussion in line 6 (‘I like the ice cream from McDonald’s’), which is related to the topic of ‘ice cream’ but is not aligned with the testing requirements of the task. Rather than acknowledging this contribution then moving on to the next test question, the adult indulges in
this tangent. First, she agrees with his statement in line 7 and then she expands on the topic when she asks if the child has sauce on his ice cream in line 9. This results in vehement disagreement from the child in lines 11 (‘no yucky’), 14 (’yucky’) and 16 (‘can’t have sauce on top of it’), which in turn elicits surprised responses from the adult, characterised by questioning intonation in lines 12 (‘no?’), ‘you don’t like the sauce?’ and 17 (‘no?’), and laughter in lines 12 and 15. In line 18 when the child makes a cut-off mention of ‘tomato sauce’ and asserts that sauce goes with hotdogs, the basis for the difference in stance towards the topic is made public, as the child demonstrates his understanding of the word ‘sauce’ in this context to be savoury sauces. The adult begins her next turn with a lengthened change-of-state token ‘oh:’, followed by an acknowledgement token ‘yeah’ which suggests she has now understood the child’s aversion to sauce on ice cream. She then acknowledges that tomato sauce is one type of sauce but provides justification for her previous statements by clarifying there are also sweet sauces, such as ‘strawberry’ and ‘chocolate’, which are good with ice cream. The child responds to this in line 24 by suggesting caramel sauce on vanilla ice cream which demonstrates a change in the child’s evaluative stance. With clarified understanding of the word ‘sauces’, the child’s turn is now affiliative with the adult’s prior turns and he is now demonstrating matched stance. Lines 23-28 display affiliative responses by both participants, with the adult demonstrating particularly emphatic agreement towards the child. In line 30, the adult brings the conversation back to the task by asking the next test question.

Excerpt (1) demonstrates that although there are constraints placed on the interaction from the testing environment and the tasks pursued in the session, not all interactions in this data set are representative of the institutional nature of the sessions and there is also potential for more mundane, everyday conversation to occur throughout the sessions. In addition to initiating conversation which is unrelated to the task at hand, there is also the potential for the child to interrupt the dominating IRE sequences by requesting clarification or repair, or by displaying general disalignment with the task, all of which frequently results in less restricted, more conversational interaction or negotiation. Recent work on classroom interactions also demonstrates diversity in interaction type. For example, Seedhouse (2004) demonstrates that orientation to the roles of ‘teacher’ and ‘student’ is not as fixed or prescriptive as earlier classroom studies suggest, and that sequence organisation is closely related to task type. In line with this, in this chapter I discuss sequence organisations as they relate to the tasks in the testing sessions, noting that the sequence organisation correlated with that task is not always the sequence organisation which plays out. Additionally, at the end of this chapter I cover repair sequences, which can occur at any time in an interaction.
4.3.2 Initiation–response–evaluation (IRE) sequences

Initiation–response–evaluation (IRE) sequences (Sinclair & Coulthart, 1975) are prevalent in this dataset. IRE sequences have been well documented in educational contexts and in such contexts, typically consist of the teacher asking a question to which they know the answer (initiation), a student answering the question (response) and the teacher then giving feedback on that answer (evaluation) (see Sinclair & Coulthart, 1975; Mehan, 1979; McHoul, 1978; Cazden, 1988; and MacBeth, 2004). Such sequences are also sometimes called an Initiation-Response-Feedback (IRF) sequence (Waring, 2009), triadic dialogue (Nassaji & Wells, 2000) or Testing Prompt-Reply-Acknowledgement (TP-R-A) sequences in testing situations (Maynard & Marlaire, 1992). During the course of this chapter I will use the phrase IRE sequence as it appears to have become the most commonly used terminology in the CA literature for such a sequence. However, I note that Maynard & Marlaire’s TP-R-A sequence (1992) is the sequence most closely related to the majority of excerpts I examine in this chapter. The initiation of an IRE sequence constitutes a first pair part in an adjacency pair (an initiation) and is followed by a second pair part (a response) (Schegloff, 2007; 13), however it is the third pair part (the evaluation), which makes this sequence unique. Camaioni (1979) found that IRE sequences were common in adult-child play sessions and Maynard & Marlaire (1992) have shown that IRE sequences are commonly found in standardised tests. Further, they found that in this context, once this sequence organisation had become established, the evaluation turn became optional (Maynard & Marlaire, 1992; 182).

The tasks administered in the corpus considered here frequently involve IRE sequences. The corpus consists of a battery of standardised tests which focus on assessing IQ, cognitive functioning, especially executive functioning abilities, and also the child’s ability to engage in pretence. Each of these tasks is listed in Table 4.1, with a short excerpt demonstrating typical interaction generated from the task. Tasks are discussed in the remainder of the chapter with excerpts presented for the more interactive tasks (WPPSI-III, vocabulary and information subtests, generation of object substitutions task, test of pretend play, unstructured free play) presenting the sequence organisation they typically establish. The WPPSI-III, vocabulary and information subtests are discussed in detail as these tasks feature heavily in chapters 5 and 6. For the less interactive tasks (the semantic fluency task, false belief task, sun-moon stroop task, Tigger-Piglet inhibition task, and WPPSI-III, Block design and object assembly subtests), only a description of the task is given, as these tasks do not feature heavily over the next two chapters.
<table>
<thead>
<tr>
<th>Task</th>
<th>Setting</th>
<th>Relevant interaction sequence</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WPPSI-III - block design subtest</strong></td>
<td>Table</td>
<td>IRE with non-verbal actions in response slot: Little structured verbal interaction</td>
<td>A: use the:se blocks to make them look the same as those blocks there. (4.3)/((TB arranges his set of blocks)) A: ve(h)ry go(h)od, well well done.</td>
</tr>
<tr>
<td><strong>WPPSI-III - object assembly subtest</strong></td>
<td>Table</td>
<td>IRE with non-verbal actions in response slot: Little structured verbal interaction</td>
<td>A: now the:se pieces make a bird. see if you can put them together as fast as you can. (2.1)/((CW completes bird puzzle)) A: oh that was fast, very very good.</td>
</tr>
<tr>
<td><strong>WPPSI-III - vocabulary subtest</strong></td>
<td>Table</td>
<td>IRE sequence</td>
<td>A: what’s a shoe. NV: to wear on your feet. A: you do. very good answer.</td>
</tr>
<tr>
<td><strong>WPPSI-III - information subtest</strong></td>
<td>Table</td>
<td>IRE sequence</td>
<td>A: what is made from milk. CJ: ice cream A: yea:h ice cream goo:d</td>
</tr>
<tr>
<td><strong>Semantic fluency task</strong></td>
<td>Table</td>
<td>IRE with lists in response slot and evaluation optional</td>
<td>A: tell me the names of some ANImals. RB: Zebra. A: good. RB: giraffe. A: good.</td>
</tr>
<tr>
<td><strong>False belief task</strong></td>
<td>Table</td>
<td>IRE sometimes with non-verbal actions in response slot</td>
<td>A: let's pretend that this is blue paint. can you help me paint the ca:rz (5.3)/((A and SF both pretend to paint the car with imaginary paint)) A: good</td>
</tr>
<tr>
<td><strong>Sun-moon stroop task</strong></td>
<td>Table</td>
<td>IRE with non-verbal initiation, one word in response slot, and optional evaluation</td>
<td>EM: SU:n. A: goo:d.</td>
</tr>
<tr>
<td><strong>Tigger-Piglet inhibition task</strong></td>
<td>Mat</td>
<td>IRE with non-verbal actions in response slot, and optional evaluation</td>
<td>A: ((deep voice)) touch your head. ((NC touches head)) A: goo:d.</td>
</tr>
<tr>
<td><strong>Generation of object substitutions task</strong></td>
<td>Mat</td>
<td>IRE with lists in response slot and optional evaluation</td>
<td>A: this could be:: an apple. what else could it be? MJ: diamond. A: yeah:: what else. MJ: a dice. A: yeah,</td>
</tr>
<tr>
<td><strong>Test of pretend play</strong></td>
<td>Mat</td>
<td>IRE with non-verbal actions and optional explanation in response slot</td>
<td>A: I wonder what could you do with the:se.</td>
</tr>
</tbody>
</table>
Testing sessions always began with the WPPSI-III, however the order in which the subtests were administered varied. Within this variation, one of the two performance IQ subtests (block design and object assembly subtests) was always administered first and then the verbal IQ (vocabulary and information subtests) and non-verbal IQ subtests were alternated. Next the semantic fluency task, sun-moon stroop task and the Tigger-Piglet inhibition task were administered. In half of the sessions, these were administered in the order semantic fluency task; Tigger-Piglet inhibition task; sun-moon stroop task and in the other half they were administered in the order sun-moon stroop task; the Tigger-Piglet inhibition task; semantic fluency task. The test of pretend play was typically administered after these tasks and was always administered before the unstructured free play session to establish rapport and create an atmosphere of pretence. Sessions ended with the generation of object substitutions task and the false belief task.

### 4.3.2.1 WPPSI-III, information and vocabulary subtests

The WPPSI-III, information and vocabulary subtests are the components of the WPPSI-III which make up the verbal IQ. These tasks are directed by the adult and are used to assess verbal ability in the child and regularly elicit IRE sequences. These tasks require reasonably sophisticated language ability both to interpret the task and to successfully complete it. The information subtest requires the child to provide answers to a broad range of general knowledge questions, such as ‘what colour is grass?’, while the vocabulary subtest requires the child to provide verbal definitions for a set of words, such as ‘a shoe?’. The questions get progressively more challenging in each subtest.

An example of this is illustrated at excerpt (2) which takes place at the transition into the WPPSI-III, information subtest from the block design subtest. Line 15 is the first question of the information subtest.
(2) 57-KD. 5:25 (TD: 4;4)

WPSSI-III - block design subtest transitioning to information subtest. Participants are sitting at table facing one another. A is packing up her blocks while KD stacks his blocks on top of one another.

1  A: so we're gonna pop the blocks-
2     (((A looks towards KD's blocks)))
3  A: [oo:h, [l:::- ]
4  KD: [look at this.]
5  A: yeah, it's a good tower.
6  (1.1)
7  A: oooXXX. ooo
8  (0.7)/((A picks up KD's blocks and puts them aside, out of
9  view))
10  A: now, (0.4)/((A places clipboard in front of her and KD looks
11  towards A))
12  A: tsk
13  (0.7)
14  A: could you tell me, (.). tsk what colour (.). is gra:ss
15  (1.5)
16  KD: er::m green.
17  A: ((smilie voice)) it is. very good.
18  tsk how many ea:rs do you have.
19  (0.4)
20  KD: two.
21  A: good. tsk what do people cut paper with.
22  (0.6)
23  KD: scissors.
24  A: well done. what comes in a bottle.
25  (1.3)
26  KD: um:: water
27  A: water does. what's [this finger called.       ]
28     (((A makes a fist holding up thumb)))
29  (1.2)
30  KD: a big one.
31  A: good; tell me the colours of the rainbow.
32  (0.8)
33  KD: um:: red orange pink
34  (0.8)
35  KD: purpl:e blue
36  (1.0)
37  KD: a::n:d
38  (0.4)
39  KD: can't remember any other [colours ]
40  A: [that was] pretty good though
41  well done.

Excerpt (2) shows a fairly typical execution of the information subtest from this data set. It begins with the adult transitioning into the task without any overt description or explanation that a new task is beginning or of the nature of the new task. She marks the change in task by her actions more than by her words, by packing up the items associated with the last test (the blocks) in lines 8-9 and placing them out of view and picking up the item associated with the new task, the clipboard containing the test questions and the scoring sheet (line 11). Marlaire & Maynard (1990) refer to these actions as displays of ‘administrativeness’ and state that this is a way for clinicians to establish co-orientation at the beginning of a new task. The child, KD, displays signs of ‘recipiency’ evidenced
by looking towards A in lines 11-12 to establish co-orientation. Marlaire & Maynard (1990) refer to ‘recipiency’ as signs of attention and willingness to participate in the task. The adult also verbally marks the change in task as one might mark a topic shift, beginning with the attention getting device ‘now’ in line 10 and followed by a ‘tsk’ in line 13, which A uses to mark a new question or topic throughout this data set. This is followed by a preface, ‘could you tell me’ in line 15 which forecasts the asking of the test question.

When A asks the first test question, ‘what colour is grass?’ in line 15, this constitutes the initiation (I), or the first turn in the IRE sequence. In line 17, KD provides the correct answer, ‘green’ which is the response (R) in the IRE sequence. A orientes to this as an acceptable answer in line 18 by providing a positive evaluation (E), ‘it is. very good’. This three part sequence of the information subtest is demonstrated in lines 15-18, 19-22, 22-25, 25-28, 28-32, and 32-42, with some variations.

Although this first question is an easy question for a 4 year old child to answer, KD orientes to the question as difficult, as displayed by the extended gap (1.5 seconds) in line 16, and the lengthened ‘erm’ in line 17, before he provides the correct response. While this could signal a word retrieval issue, this is more likely evidence that KD is working out what response the task requires. The session has transitioned from the block design subtest, which is mostly non-verbal to a question-answer task. Maynard & Marlaire (1992; 184) show that children participating in standardised tests learn what the task is through the interactive practices of doing it. Evidence of in situ rule learning can be found in such tests, which may or may not assist the children to produce a correct response. The instructions or lead in to a task are not sufficient for a child to fully grasp what is expected of them. This is demonstrated in the information subtest, where no explanation of the task is provided and the child demonstrates evidence of learning the task demands by doing them. KD’s response to the second test question ‘how many ears do you have?’ in line 21 is much less delayed and produced without any hesitation markers, which indicates that he now understands the format of the task. However, as the questions get more difficult, there is also a tendency for hesitation markers and gaps to become more frequent as KD struggles to produce a correct response.

I have compared three part sequences elicited by the WPPSI-III, information subtest to classroom IRE sequences, however there is a key difference between the clinical testing environment analysed in this research and the majority of IRE sequences which occur in classroom environments. This difference is the goal of the task and, by extension, the goals of the participants. In most IRE

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There is further evidence of this use of ‘tsk’ in lines 19 and 22 of excerpt (2), and throughout the dataset.
sequences which occur in a classroom setting, the goal is knowledge dissemination on the part of
the adult/teacher and (hopefully) learning on the part of the child/student. Whether or not the
response which occurs in the second part of the sequence is a ‘correct’ response is very important in
terms of the nature of the evaluation which occurs in the third turn and potentially the length of the
sequence which follows it. For instance, an incorrect answer will often lead to a repair-like insertion
sequence, meaning that the student gets a second chance at answering the question correctly
(McHoul, 1990). However, in a testing environment, the adult/test administrator’s role is to
ascertain the knowledge level of the child/test taker, rather than to contribute to it, and the goal of
the child/test taker is potentially less predetermined or prescribed. This means that performance on
the test, or the content of the answers, is not as interactionally relevant as it would be in a teaching-
learning environment. There is evidence of this in excerpt (2), where KD produces an insufficient
answer to the question, ‘what’s this finger called’ in lines 28-29. The correct answer is ‘thumb’ but
the child responds in line 31 with the answer ‘a big one’. However, A’s evaluation of ‘good’ in line 32
is lexically the same as her feedback to a correct answer in line 22. Her intonation in line 32 is now
slightly questioning, which arguably indicates some discomfort with the answer, however, she
provides no gap for KD to respond.

A second difference between IRE sequences occurring in a classroom and IRE sequences occurring in
a clinical testing environment is the difference in how related the questions are to one another. In a
classroom lesson the teacher usually, although not always, asks questions which are related to one
another and build upon one another. They may also be related to other things in the classroom or
other lessons, for example, conducting a science experiment and then asking questions about it.
When questions are not related topically to one another they are often still related in the activity the
children are taking part in, for example a spelling bee might ask unrelated words but the activity of
spelling out a word is consistent and understood.

Excerpt (3) demonstrates IRE sequences in the WPPSI-III vocabulary subtest and further
demonstrates evidence of in situ learning. The excerpt begins as the adult is removing objects
related to the last test, the WPPSI-III, object assembly subtest.

(3) 41-NV. 19:37 (TD: 5;2)
WPFSI-III – object assembly subtest transitioning to the vocabulary
subtest. Participants are sitting at table facing one another.
1   A:  tsk now ((clears throat))
2   A:  I’ll pop those down there:
3   (1.2)/((A moving the puzzle pieces aside, off the table))
4   A:  let’s have a look
5   (2.0)/((A still moving the puzzle pieces aside,))
6   A:  ((Beep Beep)) tsk I pop that down there ((Beep))
7   (17.1)/((A puts stopwatch off to the side and brings out a
clipboard and spends some time finding a pencil, then flicking to the correct page of the test sheet)
A: .hh now could you tell me NV, (. ) what is a shoe.
(1.0)
A: what’s a shoe
(0.5)
NV: um,
(0.2)
NV: to wear on your feet.
A: you do, very good answer. you do wear it on your feet well done
(2.5)
A: tsk what’s a telephone.
(0.6)
NV: you ring people up
A: ve(h)ry go(h)od.
(2.4)
A: .h what’s an umbrella.
(0.4)
NV: so you can keep dry in the rain.
A: go(hh)od.
(4.0)
A: well done
(0.5)
A: tsk what’s a bicycle.
(0.2)
NV: so you can ride to people’s houses.
A: goo:d. can you tell me a bit more, about a bicycle?
(0.6)
NV: .hh you can ride on it
(4.4)
A: very good you can ride on it. >very very< good
(0.4)
A: tsk .hh what is- or what ar:e l:ollies?
NV: um
(1.6)
NV: hhh you eat them then they’re
(0.2)
NV: not very healthy for your tee:th.
A: go(hhh)od. very good.
(7.9)
A: .hh what is a dog.

As with the Information subtest, A transitions into the vocabulary subtest with very little formal introduction. She does mark a transition to a new test by readying the test space by packing away the previous task’s stimulus items (lines 2-3, 5-7) and bringing out the new task items (lines 7-9). Additionally she displays multiple attempts to establish co-orientation (lines 1, 4 and 10). Line 10 begins with an orientation question prefaced with a ‘now’- and then proceeds to ask the first test question at a high pitch onset.

Again, we see that the child, NV, takes some time to produce this first answer. There are signs of hesitation or difficulty from three gaps (lines 11, 13 and 15), A re-saying the question in an abbreviated form (line 12) and an ‘um’ produced by NV (line 14). The excerpt continues with multiple three part IRE sequences which constitute the ‘doing’ of the test, which are demonstrated
in lines 10-17, 19-22, 24-29, 31-38, 40-46. After the initial test question, NV takes much less time to produce a response indicating that he understands the format of the task.

In discussion of Excerpt (2), I noted that repair sequences were not necessarily initiated on incorrect responses in the context of this task, however, in excerpt (3), A initiates a request for more information in line 34. Prior to this (line 31), A has asked the question ‘what’s a bicycle’ and NV responds, ‘so you can ride to people’s houses.’ A then asks for ‘a bit more’ information about a bicycle in line 34. This request does not constitute traditional repair, as by asking for ‘a bit more’, A is acknowledging the prior contribution as heard and understood. However by issuing a request for more information she orients to the previous utterance as insufficient in the context of the test environment. McHoul (1990) refers to this as ‘procedural repair’ and states that it is common in classroom contexts. Marlaire & Maynard (1992) have also noted the occurrence of this type of repair in standardised tests and see this as further evidence that the instructions to the child at the beginning of the task are incomplete.

The nature of the answer about bicycles in line 33 which is oriented to as insufficient is interesting in the context of exploring the interactional contributions of the testing environment. There are many ways one could ‘define’ a bicycle. For instance, most dictionaries provide a physical description like ‘a vehicle with two wheels, handlebars for steering and a saddle-like seat, which is propelled by peddling’. However, NV’s response in line 33 chooses to define a bicycle as it relates to people and their lives. That is, it is something you can use to visit other people. The definition NV provides is arguably too broad as it could also describe a motor bicycle or a horse (the use of the word ‘ride’ probably restricts it to those two, although children are more familiar with the concept of ‘riding’ in vehicles such as cars, rather than driving them, so other vehicles could also be included from a child’s point of view). Arguably, this definition is also too narrow in that it restricts the use of the vehicle to visit people, as bicycles could also be used to go to other places, such as work or school, for exercise or for enjoyment.

NV’s decision to define bicycle in relation to how it relates to people’s lives may not be arbitrary. In fact, it may be an example of in situ rule learning (Marlaire & Maynard, 1992). After the transition to the task, the first question NV was asked was ‘what is a shoe’ in line 10-11. He responded with ‘to wear on your feet’ in line 16. A appeared to orient to this as correct with positive feedback in line 17, including saying ‘very good answer’ and ‘well done’. However the first thing she said in response to ‘to wear on your feet’ was ‘you do’, followed by ‘you do wear it on your feet’. She included a subject, in the form of an impersonal pronoun, in the feedback which places emphasis on the importance of
the object to people. In other words, A reinforced a functional definition of the object. From NV’s perspective, there is evidence that this is understood as a repair sequence modelling the correct answer. NV then used this answer formula for every response he subsequently provided; ‘you ring people up’ (line 21), ‘so you can keep dry in the rain’ (line 26) and ‘so you can ride to people’s houses’ (line 33).

It is easy to discuss this task as based on ‘defining’ words, as this is the description of the subtest. However, with the ‘rules’ of this test not having been explained to NV, he does not have access to the knowledge that this is a task about defining words or concepts. His only knowledge of the task is contained in excerpt (3). From his point of view, the rule of the game is describing how these things relate to people, or providing a functional definition, as this is what was modelled to him. This is a strategy for answering the questions which is sufficient for the easy words in the test, but may become insufficient as the words to define become more complex.

A different way of answering these types of questions is shown in excerpt (4). In this excerpt, the child, JK, defines the object by giving examples, or subcategories, of the target object. In line 1 the adult asks ‘what is a shoe’, again the first question of the subtest, and again provided without introduction. After some hesitation, JK provides the response ‘a shoe sneaker’ in line 10 and then ‘a boot’ in line 12. These are both ‘types’ of shoes, or ‘examples’ of shoes, rather than a definition of a shoe.

(4) 25-JK.32:11 (ASD: 6;0) WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another.
1 A: NO:w (.) tsk can you tell me ↑what is (.) a sh:oe?
2 (1.9)
3 JK: °shoe."°
4 (4.6)
5 JK: a shoe?
6 A: yeah ↑what is a sh:oe_
7 (0.8)
8 JK: um a shoe b-
9 (2.1)
10 JK: shoe sneaker.
11 A: ↑yeah ↑very good, a shoe is a sneaker, very good.
12 JK: and a boot.
13 A: it is, and a boot, ve:ry cle:ver well done.
14 tsk what is (.) a telephone?

Perhaps because A is unable to provide feedback on the correctness of the child’s responses due to the test constraints, she gives both of these answers of ‘sneaker’ and ‘boot’ encouraging feedback. This is done by repeating both responses after JK has produced them, demonstrating that she has understood and acknowledged the answers, and providing positive feedback by the use of ‘very
good’ twice in line 11 and ‘very clever well done’ in line 13. She can even be seen to be affirming the answers with the use of ‘yeah’ in line 11 and especially the production of ‘it is’ in line 13.

Excerpt (5) is a continuation of excerpt (4) and in it, JK attempts a number of other strategies for answering this type of question before returning to the ‘subcategory’ strategy used in excerpt (4).

(5) 25-JK. 33:25 (ASD: 6;0)
WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another.
14 A: tsk what is (.) a telephone?
15 (1.4)
16 JK: u:m:
17 (0.7)
18 JK: mm ring someone.
19 A: †yeah you do, you ring someone. very good.
20 (1.3)
21 A: tsk what is (.) an umbrella.
22 (0.8)
23 JK: umbrella for rain.
24 A: goo::d, well done. it is for the rain.
25 (0.5)
26 A: tsk can you tell me a little bit more;
27 JK: .hh hh
28 (3.7)/{{JK looks around the room}}
29 JK: um: (cn you) (.). (I ss)
30 (2.1)
31 A: yeah;
32 (0.5)/{{JK stands up, looking towards the door})
33 A: I’ll just get you to sit down, I’ve just got a few questions.
34 .hh can you- you said an umbrella’s for rain and that’s right,
35 that’s good, can you tell me a bit more.
36 (1.7)
37 JK: um tree.
38 (1.0)
39 A: yeah, go(hh)od.
40 (0.3)
41 A: .hh †what is (.) a bi:cycle
42 JK: apple
43 A: †yeah can you tell me< (.). †what is a bi:cycle
44 (0.8)
45 JK: motorbike
46 (2.2)
47 A: ye:ih?
48 (1.1)
49 A: goo::d,
50 (0.8)
51 A: what are (.) l:ollies.
52 (0.5)
53 JK: lolly pop.

In line 18, JK defines a telephone in relation to its function and this appears to be accepted as sufficient given A’s encouraging feedback in line 19. However, just as in excerpt (3), A repeats the answer but also adds the second person pronoun, which emphasises the function of the target object in relation to people, again potentially modelling an answer for the child. When JK attempts
to define umbrella by describing its function in general terms, ‘for rain’ (line 23), rather than specifically relating it to its function for people, it causes A to pursue more information in line 26.

A’s pursuit of more information about ‘an umbrella’, and thus orienting to JK’s prior response as insufficient, results in JK displaying signs of disengagement. This is exhibited by gaps (lines 28, 30 and 32), JK looking around the room, including towards the door (lines 28 and 32), standing up in his chair at the table (line 32) and what looks to be the beginning of an abandoned question (line 29). After A attempts to re-engage JK in the task, and again pursues more information about an umbrella (lines 33-35), JK pursues a seemingly new strategy to answer the question when he says ‘tree’ in line 37. After a 1 second pause, A produces a somewhat uncertain and surprised response with laughter particles in the positive feedback and a slight high rising tone on the acknowledgment token.

However, she orients to this answer as sufficient in that she moves onto the next question in line 41. This next question, ‘what is a bicycle’, again produces an unusual response strategy from JK, when he answers ‘apple’ in line 42. Puzzles of a ‘tree’ and an ‘apple’ were both completed in the object assembly task prior to this subtest so JK’s strategy could be attempting to link the unrelated tasks or to treat this as a type of memory task. Regardless of motivation, A treats this answer as irrelevant or incorrect by pursuing the same question again in line 43, after she has attempted to re-orient JK’s attention back to the task with a question preface (‘can you tell me’).

After JK attempts other strategies for responding to the questions without much success (lines 23, 37 and 42), he then returns to using the ‘subcategory’ strategy to attempt to answer questions. This is a strategy which appeared to yield positive results earlier in the task in lines 10 and 12 of excerpt (4). JK is asked in lines 41 and 43 ‘what is a bicycle’ to which he responds ‘motorbike’ (line 45) and then he is asked in line 51, ‘what are lollies’ to which he responds ‘lollypop’ (line 53). This demonstrates evidence of in situ learning as the child returns to a strategy which received positive feedback earlier in the task, after a number of other strategies fail to work.

What is also evident in excerpt (4) is that although A’s feedback is meant to be impartial, it comes across as fairly inconsistent in response to the strategy the child is using to answer the question. This is particularly evident when JK gives an almost correct answer in response to the question ‘what is an umbrella’. The adult’s persistence in gaining a more complete answer to the question, both distances JK from the task, demonstrated by his hesitations and visible disengagement, and seemingly results in his pursuit of a completely different strategy to answer the question. In contrast to this, her confident positive feedback to the first display of the subcategory strategy, a strategy
which does not produce a correct answer for this task, appears to encourage JK to return to using a strategy which produces incorrect answers.

While previous excerpts demonstrate the need for answers to the vocabulary subtest to be relevant to people, excerpt (6) demonstrates that the answer shouldn’t be made too personal. In excerpt (6) the child, TB, is treating the task like a word association task. When he is asked what a castle is in line 1, rather than provide a definition or description of a castle, TB produces some words which he associates with a castle, namely ‘a queen and a king’. Likewise in lines 7-9, when A asks what glow means, TB names something that glows, ‘a light’.

(6) 56-TB. 23:38 (TD: 4:5)
WPSSI-III – vocabulary subtest. Participants are sitting at table facing one another.

1  A: tsk what is (. ) a castle
2     (1.2)
3  TB: a quee:n and a ki:ng.
4     (1.4)
5  A: very clever;
6     (0.4)
7  tsk .hh ‚what does (. ) gl:o:w mean.
8     (1.1)
9  TB: a l:i:g ht.
10     (0.6)
11  A: ‚very goo:d.
12     (2.0)
13  tsk can you tell me a bit more about l- glo:w.
14     (1.0)
15  tsk what else do you know about gl:o:w.
16     (1.1)
17  TB: .hh I’ve got a ni:g ht li:ght.
18  A: have you?
19  TB: yeah but it blinks a little bit.
20  A: ar::h.
21  TB: it- it mEans it’s a little bit wobbly.
22  A: oh ok,
23     (1.0)
24  ‚what does polite mean?

After TB produces the answer ‘light’ to the question ‘what does glow mean’ (line 9), A produces positive feedback, ‘very good’ in line 11, and then pursues more information about ‘glow’. A’s first attempt at this results in a 1 second pause, which causes her to reissue the request for further information in line 15. The simplified syntax and more fluent speech in the second request for more information, suggest she orients to TB’s lack of response as a problem with her own formulation of the request. The request ‘what else do you know about glow’ is a formulaic response A often uses to pursue a more sufficient response. The unspecified nature of this request can result in a wide variety of responses by the children in the sessions. In this instance, after a gap of over a second, TB attempts to respond to the request for further information by talking about one specific light of
relevance to his life, his night light. A provides some empathetic feedback to this contribution but ultimately treats it as a tangent to the task aims, rather than an answer to the question, as demonstrated by the lack of overt positive feedback, such as ‘good’, ‘it is’ or ‘well done’, which typically occur after correct responses, or even incorrect responses which are on-task.

TB’s answer to this question highlights how unusual the aim of this task is, particularly for a 4 year old. There are few contexts where a child of this age would be asked to ‘define’ a word. As a child gets socialised into a speech community, through the process of exposure to and increasing inclusion in mundane, everyday conversation, for most children there are likely to be many opportunities for them to share stories or events from their everyday live. More analysis from conversational data involving children would be needed to confirm or deny this. However, the telling of personal stories did surface fairly consistently throughout the testing sessions. Excerpt (7) is another example illustrating a personal story which occurs during the information subtest.

(7) 27-IY. 35:53 (TD: 4;5)
WPPSI-III information subtest. Participants are sitting at table facing one another.
1   A:  very clever. (. ) tk what comes in a bottle
2     (1.0)
3   IY:  water.
4   A:  very good.
5     (0.7)
6   A:  what's [this finger called.]
7     [(A makes a fist holding up thumb)]
8     (0.5)
9   IY:  >thumb< a [nd- a]nd I got a pink bottle
10  A:  [ good ]
11  IY:  and I- I put some water in it [and I drink it all the time. ]
12     [((IY looking off to her left))]  
13  A:  oh that's good 'cause water's very good for you.
14  IY:  [ and cu]cumber as well
15  A:  [ ((smilie voice)) and cucum-
16     ((normal voice)) yeah, cucumber's very good. that's very
17     healthy. tsk ;could you tell me a:11 the colours of t[h e
18                      ra:inbow.

In excerpt (7), A asks the test question ‘what comes in a bottle’ in line 1, which the child, IY, responds to with the answer of ‘water’. A then provides positive feedback for this response, completing the IRE sequence. A then asks the next initiator or test question, ‘what’s this finger called’, with corresponding actions to demonstrate the word ‘this’ is referring to the thumb. IY answers this question quickly and correctly in line 9, then moves on swiftly to introduce some new information specific to the child’s life, in this case about her pink water bottle. This contribution begins with the linking word ‘and’ which suggests it is extending a topic. However, the topic to which it links is actually the topic of the test question asked in line 1, rather than the question the child was
responding to most recently. Thus, this contribution is not topically aligned with the talk immediately preceding it.

IY’s contribution that she fills her pink water bottle up with water and drinks it frequently (lines 9-11), is explaining a routine which has significance for her everyday life. This is a similar type of contribution to TB’s response about his night light in excerpt (6). However, while TB was explicitly asked for more information, IY provides it without a prompt. To introduce this new information, IY interrupts the IRE sequence for the second test question and as a result A’s evaluation of the response, occurs in overlap with the child’s contribution. In this way, IY’s turn is also not sequentially aligned with the previous turns, or the dominant IRE sequencing which this task typically creates. In this turn IY is disaligning with the overall structure of the task as a rapid-fire, IRE sequence generating interaction.

IY again disaligns with the next IRE sequence which the adult initiates in line 14 where she tries to ask IY to name the colours of the rainbow. IY disrupts this sequence in line 15, beginning the turn with another ‘and’ to link it to something previously said, before saying, ‘cucumber as well’. This turn is additionally produced outside of a transition relevance position (TRP). It topically links back to A’s contribution in line 13, about ‘things that are good for you’ or to IY’s prior turn in line 11 about ‘things IY puts in her drink bottle’, rather than the new topic, and new test question introduced in line 14.

IY’s frequent use of ‘and’ in line 9 and 15 and twice in line 11 makes this sequence look more like a generic narrative or, more generally, an attempt to introduce some coherence to the interaction.

The interaction which eventuates within this excerpt has an organic, conversational flow where both interactants contribute turns to construct a narrative (i.e. water comes in a bottle/I have a water bottle that I drink from frequently/that’s good because water’s good for you/cucumber is also good for you). This is more reminiscent of casual everyday conversation than the IRE sequences elicited through the testing environment. In excerpt (7), it appears that IY is actively trying to create a conversational interactional environment.

This section has demonstrated that the requirements of the WPPSI-III information and vocabulary subtests are not clearly explained, either in the transition into the task or when the adult attempts to elicit further information, and task requirements are arguably often obtuse when considered in the context of a child’s everyday life experience. Because of these factors the testing scenario can elicit a number of different strategies in the response turn from the children. The goal of this section has not been to conduct an exhaustive account of these strategies but rather to illustrate their
diversity and, most importantly, that these strategies are not necessarily random, but are, at least in some instances, examples of *in situ* learning where the interactional response by the adult has led the child to use one strategy over another. Furthermore, the excerpts analysed here demonstrate the co-constructed nature of the completion of the tasks. Rather than the tasks being administered by an objective observer, the adult is first and foremost an interactive partner whose turns are important in creating the interactive environment in which the testing proceeds. Her privileged position in these interactions, as an adult, the researcher and the knowledge holder, all contribute to her turns potentially having more weight in guiding the course of the action within the talk.

### 4.3.2.2 The false belief task

A false belief task was also administered in these sessions and also resulted in IRE sequences. In this task the child is required to assist the adult to pretend to paint a toy car a different colour using paintbrushes. The adult asks what colour the car is and suggests, and in some cases negotiates, a colour to pretend to paint the toy car. After they have pretended to paint the car, the adult asks what colour an absent parent who hasn’t witnessed the car being painted, would say the car is, followed by what colour the car really is. This task also elicits IRE sequences, however the task demands put constraints on what participants can say throughout the testing parts of the sessions, and this task was not a site of much conversation.

### 4.3.3 IRE sequences with lists in the response turn

#### 4.3.3.1 The semantic fluency task

In the semantic fluency task the adult verbally provided a category and the child needs to verbally produce as many examples of things from that category as they can think of within one minute. This task is carried out in the data set with two categories; ‘animals’ and ‘things you can eat or drink’. Verbal communication is required to complete the task but in the restricted sense of listing semantically linked words. This test typically produces an IRE sequence consisting of an initiation, with a number of responses and optional evaluations after each response.

#### 4.3.3.2 The generation of object substitutions task

The generation of object substitutions task similarly produced IRE sequences which feature lists in the response slot. In this task the adult presents the child with an object and asks, ‘what could you pretend this could be?’. The child is then encouraged to verbally produce as many object substitutions as they can think of within a 45 second timeframe. Non-verbal demonstrations of the pretend objects are not required to obtain a correct answer to this task, but are often present.
Stimulus objects used in this session are a white plastic cup, a small wooden cube, a pencil and a cardboard tube (similar to a cardboard roll that paper towelling comes on), and the adult introduces each stimulus object with an example. For instance, when she brings out the cup she says, ‘this could be a hat’, and places the cup upside down on her head.

Excerpt (8) shows a child, MJ, completing the generation of object substitutions task. This excerpt occurs after the child has already completed the task with the first stimulus item, a plastic cup. In line 4 the adult brings out the second stimulus item, a small solid wooden cube.

(8) 21-MJ. 1:10:10 (TD: 5;9)
Generation of object substitutions task. Participants are sitting on the mat facing one another.

1 A: you came up with some really good ideas, that was good.
2 let's see about the next one. tsk [the next c:o:n:e, ]
3 [((A rummages through bag))]
4 0.6/((A pulls out the wooden cube))
5 this could be:: (. ) an apple. [ num num ]
6 [((A pretends to eat cube))]
7 what else could it be? ((beep))
8 (2.4) 
9 MJ: diamond.
10 A: yeah; what else.
11 (4.1)
12 MJ: a dice.
13 A: yeah, 't could be a dice. good one, what else.
14 (1.4)
15 MJ: a box.
16 A: good idea.
17 (2.2)
18 MJ: a switch.
19 A: yeah, good ((smilie voice)) >a switch.<
20 could be a switch, what else
21 (6.1)
22 MJ: cupboard;
23 A: yeah, it could be a cupboard. what else could it be
24 (0.7)
25 MJ: pizza;
26 A: ye(h)ah,
27 (3.4)
28 MJ: wire,
29 A: could be a wire, what else could this be
30 (3.0)
31 MJ: a leg;
32 A: yeah, it could be a leg.
33 (3.0)
34 MJ: a flat surface;
35 A: yeah,
36 (1.0)
37 what else could you pretend it could be.
38 (4.4) 
39 MJ: I don't know.
40 A: not sure? yeah, well they're really good ideas. You did
41 really well we've just have two more things for you to try;,
This task features an initiation (I) in line 7 when the adult asks ‘what else could it be?’ which prompts multiple responses (R) from the child in lines 9, 12, 15, 18, 22, 25, 28, 31 and 34. Each of these responses elicits an evaluation (E) from the adult which is backwards looking to the previous turn (lines 10, 13, 16, 19-20, 23, 26, 29, 32 and 35) and usually, but not always, this is teamed with a prompt to continue with the task. MJ ends the task before the designated time limit by use of the term, ‘I don’t know’ in line 39 (see Beach and Metzger (1997) for this usage of ‘I don’t know’). A follows this with an evaluation of the child’s performance on the whole task in lines 40-41. While similar in structure to the semantic fluency task, the generation of object substitutions task may have an extra level of complexity because it involves pretence. This task is interesting in terms of interaction because there is an underlying assumption that the objects generated will bear some relationship to the physical properties of the stimulus item.

4.3.4 IRE sequences with nonverbal initiations

4.3.4.1 The sun-moon stroop task

The sun-moon stroop task is a card game which consists of sixteen cards; eight showing a picture of a sun and eight showing a picture of a moon. The adult holds the shuffled deck of cards and presents them to the child one at a time, picture side up on the table, under two test conditions. In the first condition, the child needs to name the pictures on the cards as they are shown, as either ‘sun’ or ‘moon’. In the second condition the child is required to say ‘moon’ when the sun card appears, and ‘sun’ when the moon card is drawn. Verbal communication is required to succeed in both conditions of the task, however, the language it typically elicits from the child is minimal and formulaic. Thus the IRE sequence elicited during this task has a non-verbal initiation (the card being turned), a verbal one word response, and an optional evaluation.

4.3.5 IRE sequences with actions in the response turn

4.3.5.1 WPPSI-III object assembly and block design subtests

The object assembly and block design subtests of the WPPSI-III are designed to assess performance IQ, thus there is very little verbal interaction embedded within the task. The object assembly subtest requires the child to complete puzzles and the block design subtest requires the child to re-create a design the adult has made out of blocks with their own set of blocks. It is possible for the child to successfully complete these tests without having used any verbal communication.
4.3.5.2 The Tigger-Piglet inhibition task

The Tigger-Piglet inhibition task is a puppet task designed to test a child’s ability to inhibit a natural response to stimulus. The researcher uses hand puppets of the *Winnie the Pooh* characters Tigger and Piglet and has each character tell the child to perform simple actions, such as ‘touch your nose’, ‘stamp your feet’ and ‘jump’. The researcher plays the roles of the two puppets, using a different voice for each character, and switching between puppets to give directions for the children to follow. The activity is then repeated under a second test condition where the child is asked to only follow the actions that Piglet requests, and not the actions Tigger requests. The child can successfully complete the task without using any verbal communication. It elicits an IRE sequence with a non-verbal response and optional evaluation.

4.3.5.3 Test of pretend play

The test of pretend play (Lewis & Boucher, 1997) is a standardised test of pretend, or symbolic, play which aims to assess a child’s ability to engage in three types of pretend play, within a structured (modelled, instructed and elicited) condition. These three types of pretend play are ‘substituting one object for another object or person’, ‘reference to an absent object, person or substance’, and ‘attributing an imagined property to an object or person’. This task includes a range of objects (shown in figure 4.3), with a doll and a teddy bear used as protagonists for many of the scenarios, and the self as protagonists in other scenarios. The adult elicits pretence by presenting the child with certain objects and asking open-ended questions such as ‘what could Doll do with these?’ or ‘what could Ted pretend to do?’. If a child struggles to respond appropriately to such questions, the prompting becomes more specific with questions like, ‘could you make Doll put the plate on the table?’ Excerpt (9) demonstrates the beginning of the test of pretend play.
(9) 49-LC. 31:52 (ASD: 5;2)
Test of pretend play. Participants are sitting on the mat facing one another.

1 A: I wonder (. .) what [could you do with the:se.]

2 [((A places a plastic bowl and spoon on the

3 mat in front of LC))]

4 (1.8) / ((LC pretends to eat food from the bowl using the spoon))

5 A: o::h what a good idea, very good.

6 let's see [what else I've got. no::w (1.4) XX have a look.]

7 [((A opens a plastic bag with toys in it and rummages

8 through it, placing a white plastic cup on the mat in front of

9 LC))]

10 LC: °(yes)°

11 A: let's see [I'll just pop back in a moment (. .) to have a look=

12 [(A stands up and moves off camera)]

13 A: =in here. tsk no::w [we've got Do::ll. ]

14 [((A comes back into camera view and sits

15 down on the mat placing Doll on the mat next to the container))]

16 (0.3)

17 A: tsk [ what] could Doll do with this.

18 LC: [yes.]

19 (9.2) / ((LC scoops the container along the mat, turns it

20 upside down on the mat in front of Doll, then picks it up and

21 places it down upright beside Doll))

22 A: oh what's she doing?

23 LC: making sandcastles.

24 A: OH WHAT A GOOD IDEA that was excellent [idea. (. .) let's see=

25 through the plastic bag of toys])]

26 =what else I've got for Doll.

27 (1.0) / ((A places a black box with one end open and a white
plastic counter in the mat in front of LC))

A: now, I wonder what could Do:ll do with those things.

(A points to black box)

(LC slides the black box away from him, holds Doll in his left hand and with his right hand tosses the counter towards the box, then picks it up and does it again)

A: oh what's she doing.

LC: she's trying to get it into [here.]

(A points to white counter)

A: oh, so what's she got, what is [this.]

LC: a white thrower.

A: oh it's a white thrower and it's going [into here.]

As LC throws the counter into the box)

A: very good.

Similarly to the Tigger-Piglet inhibition task, the test of pretend play requires the child to respond to a verbal initiation with a non-verbal response. The first IRE sequence in excerpt (9) clearly demonstrates this. In lines 1-3, the adult initiates (I) an IRE sequence by laying out the stimulus items (a plastic bowl and a plastic spoon) and asking LC in line 1, ‘what could you do with these?’ LC responds (R) non-verbally by pretending to eat from the bowl using the spoon in line 4. A orients to this action as appropriate and adequate by providing the evaluation (E), ‘what a good idea. very good’, in line 5.

As the play sequences become more complex and potentially abstract, this task requires the child to provide meaningful descriptions of actions produced in the response slot of the IRE sequence to maintain intersubjectivity. This is demonstrated in the second IRE sequence, initiated in line 17. LC’s actions in lines 19-21 are not sufficient for A to understand his intended meaning, demonstrated by her clarification check in line 22, ‘what’s she doing’. This line acts as the beginning of an insertion sequence within the IRE (Schegloff, 2007). LC is able to clearly describe the action to the adult in line 23, ‘making sandcastles’, restoring intersubjectivity and closing off the insertion sequence. It is only after this verbal explanation is received that A issues an evaluation as she now has enough information to assess the validity of the response.

The same is seen in the final IRE sequence (lines 28-45) in excerpt (9). In this sequence A initiates two clarification checks to understand the intended action (line 34) and what an object represents (line 38), before evaluating the action as a good response to the initiation (line 45). While this is a test of the ability to pretend, this excerpt shows the ability to demonstrate pretence is highly dependent on a child’s communicative abilities to clearly describe their pretend scenarios to the test
administrator. The complicating role of pretence in this data is explored more fully in section 4.4.5 where breakdowns in intersubjectivity due to pretence are examined.

4.3.6 Child-led play in the free play session

The testing session also featured an unstructured free play session which lasted for approximately 20 minutes. This session was occasionally abandoned earlier if a child repeatedly requested that they finish. The objects in the test of pretend play kit (figure 4.3) were present in the free play session, as well as some additional objects and toys, including a toy digger which appeared to be a favourite among the children. Children were told they could play with whatever they wanted and while the researcher was present on the mat with the child, she was careful not to elicit or instruct any of the play. She did, however, display general interest (‘wow’), positive evaluations (‘that’s a good idea’) and also asked the children to clarify their play actions at times when it was unclear, with understanding checks, (‘is that a cake?’) and requests for clarification (‘what’s happening now?’).

An important distinction between this task and all others in the testing session is that the child is given the freedom to lead the session. Thus the free play contains much less restrained language on the part of the child when compared to other tests in these sessions. However, this interaction is not necessarily closer to naturalistic conversation between an adult and a child, as in this session there are constraints on what the adult can contribute to the interaction. While the adult can take part in the play, she may only do so in ways defined by the child, and she does not initiate play scenarios or introduce novel material. Thus, there is still asymmetry present in this part of the testing session, however, this asymmetry is inverse to that in the tests already discussed. An example of the unstructured free play session is shown in excerpt (10). In this play scenario the participants have been pretending that Ted is ‘Superman’.

(10) 7-BM. 1:10:01 (TD: 5;10)
Free play session. Participants are sitting on the mat facing one another.
1  BM: and
2   (0.5)
3  BM: no::w you need help.
4   (1.0)
5  A: I need help.
6  BM: yeah, [because these- these are little flies:]
7    [((BM is picking up small cotton balls and letting them
8    fall through her fingers))]
9  BM: and they can really- they can really sting you.
10  A: OO:::H >so there’s flies and they sting me:<< ooh no
11   (1.1)
12  A: >gonna need< help. .HHH lots of little flies.
13   (2.5)
14  A: [°another one there. oh and another one there.°]
15   [((A points to cotton balls to the side of the play space))]
16  A: they’re everywhere.
17   (7.4)/((BM still playing with the cotton balls begins to gently
throw them towards A’s hands))]
A: .hh oh no.

BM: you have to say help.

A: ↑HELP ME!

BM: (0.5)/(BM picks up Ted and makes him fly towards A’s hands))

A: oh here he comes Superted. Superman.

BM: Superted

A: huh huh

(2.2)

A: ↑I need help!

(1.2)

BM: well (.) he’s strong. he- (1.2) he- (0.8) he’s, (1.3) he can’t

sting him because- cause he’s a strong man.=

A: =oh they can’t sting- oh good [one]

BM: [he’s] got power in him.

A: yeah wo::w.

(0.6)

BM: [

[(BM holds Ted and moves his right leg to make him kick at the
cotton balls))]

A: o:h he kicked them!

(0.4)/(BM is still making Ted kick the cotton balls))

A: kicking the flii:es, good one Superted.

(1.5)/(BM still making Ted kick the cotton balls, then stops))

BM: and I helped him ‘cause I have- (0.5) ‘cause I’m a helper and

I’ve got- (1.2) and I’ve got s- (1.2) s:ttuper duper duper (.)

DU:per power [in (it).]

A: [ wo::w. ]

(0.4)

BM: in me¿ and him too.

A: [good one. ]

[[BM makes Ted kick a cotton ball))]

A: there goes another.

(3.6)/[[BM makes Ted kick the cotton balls))

A: a:h nice one.

(4.1)/ [[BM continues to make Ted kick the cotton balls,

chasing them around the play space))]

A: there go the flies he’s kicking them.

(1.1) /[[BM is still making Ted kick the cotton balls))

BM: [(where) are the other ones.

[(BM looking around, then to her left and behind her))]

(4.7)/[[BM brings Ted behind her to kick the cotton balls

there, into the play space))

A: good one Ted.

(19.8)/[[BM is making Ted ‘dribble’ cotton balls around the

play space))

A: kicking the flies.

(1.1)

BM: it’s- (.) all dead now.

A: they’re all dead? oh good one Ted.

(0.9)

BM: ((theatrical voice)) thank you.

Excerpt (10) demonstrates the leadership role the child is required to take to complete this part of
the session. In line 3, BM assigns A a role in the play scenario (‘you need help’) and explains the
reason for this (the presence of stinging flies). A accepts both of these aspects of the play scenario as
demonstrated by her repetition of both parts of the play (‘I need help’ in line 5 and ‘so there’s flies
and they sting me’ in line 10), and by acting out the role in the scenario (lines 12-19). Much of A’s contribution to this play sequence can be described as repeated descriptions of the play, commentary on play actions and providing positive reinforcement. For example, in addition to line 5 and 10 the adult repeats aspects of the play already established in lines 32 (‘they can’t sting’) and 68 (‘they’re all dead’). She provides commentary to the actions taking place in lines 24 (‘oh here he comes’), lines 39 and 56 (‘he kicked/he’s kicking them’); lines 41 and 65 (‘kicking the flies’) and 51 and 56 (‘there goes another/the flies’). The adult also provides frequent positive reinforcement to the child’s play, sometimes through positive feedback to the protagonist, Ted (‘good one’ in lines 32, 41, 62 and 68, ‘wow’ in lines 34 and 46, and ‘nice one’ in line 53).

Excerpt (10) shows a lively and interactive example of the free play session, however, there was a lot of variation in how children took on the task of leading unstructured play. Thus there was a lot of variation in the sequence organisation which occurred in this session. As with the test of pretend play, this session also typically included many clarifications and understanding checks from the adult as she made sense of the child’s play actions. This is reminiscent of Camaioni’s study (1979) where she found adult’s involvement in children’s play is often to build upon the child’s initiated actions, rather than to collaboratively produce a play scenario together. Camaioni analysed videotaped adult-child interactions involving 4 year old children in an ‘observation room’ and the participants were instructed to engage in ‘free play’ (Camaioni, 1979). In comparison to child-child interactions, Camaioni describes the child-adult interactions as displaying a ‘pedagogical situation’ rather than a ‘straight play’ (p. 334). In particular, she argues that the interactions were largely made up of instances where the child would engage in an action, such as picking up a toy, or offering a verbal expression, such as a request, a declarative or a question, and the adult would comment on it. While this appears to be child initiated conversation, Camaioni notes that it is actually the adult who is reacting to the child’s actions or comments, whether or not they are directed to her, and using them to ‘create a state of mutual involvement’. Thus the adults were actively facilitating and maintaining collaborative engagement with the children, which was also often the case in the unstructured play sessions in this data set.

In both the structured and unstructured play sessions the inclusion of pretence adds an extra layer of complexity. Social pretend play requires participants to negotiate a shared make-believe world, scenario and/or characters, which necessitates the inclusion of metacommunication (Bateson, 1955) to ensure that symbols carry the same meanings for all participants (Gönçü, 1993). Metacommunication is talking about the play in a way that makes clear that it is play (Gönçü, 1993).
It can be viewed as explicit communication which is both outside of and about the ongoing interaction.

The success of the pretend play sessions relies heavily on the child’s ability to metacommunicate. Children with ASD can be expected to have more difficulties with metacommunication during pretend play. For instance, Douglas & Stirling (2012) found using spontaneous play data, that children with ASD had specific difficulties with engagement with pretend play beyond that anticipated by their language abilities, calculated using standard language measures. Further, they attributed such difficulties to problems related to achieving intersubjectivity. However, Kelly (2007) found no significant group difference in the ability to pretend between the ASD and TD children, when tested using standard measures of pretend play in the original study using this data set.

4.4 Breakdowns of intersubjectivity and repair sequences
This thesis is concerned with the achievement of intersubjectivity so the practice of repair was an important focus of the early unmotivated looking I undertook in developing the ideas and understanding of this data set. Section 4.3 examined IRE sequences within the data set to understand the institutional nature of the interaction and how this influences sequence organisation within these interactions. This section is an overview of repair sequences and instances of evidenced breakdowns of intersubjectivity in the interactions. It does not constitute an exhaustive analysis of such sequences in the data set, but rather provides the reader with illustrations of types of misunderstanding, overt trouble and repair behaviours occurring in the data set. This serves as a prelude to the following two chapters, which each examine specific phenomenon concerned with the maintenance of intersubjectivity; open class repair initiation (OCRI) and prosodically marked yeah (PMY).

It has been established in the CA literature that self-repair is the preferred means of rectifying problems relating to hearing, speaking and understanding among (mostly American), English-speaking, neurotypical adults (Schegloff, Jefferson & Sacks, 1990 [1977]). That is, rather than repair an ‘other’s’ talk, speakers often flag the talk as problematic to allow the speaker of the turn, the ‘self’, to repair the trouble source. It has been suggested that this preference may be different in the language of children in some contexts where an adult ‘correcting’ a child may be more common than participants correcting others in adult-adult interactions (Schegloff, Jefferson & Sacks, 1990 [1977]; Norrick, 1991). In the context of this clinical testing environment, this does not appear to be the case. Self-repair by both adult and child was overwhelmingly the dominant type of repair present. Instances of other-repair were rare in this data set. However, this finding may be influenced by the
participants being unfamiliar to one another before the testing session and could be more common in adult-child dyadic interactions where the participants are well known to one another.

Repair sequences are discussed in this chapter by turn organisation. These repair organisations are ‘same turn repair’, ‘next turn repair’, ‘third turn repair’ and ‘third position repair’ which have been briefly introduced in chapter 2. In sections 4.4.1 to 4.4.4, I present excerpts demonstrating these repair sequences in this data set. In section 4.4.5, I then outline, with examples, how the nature of pretence in some of these tasks can complicate the establishment and maintenance of intersubjectivity. In section 4.4.6, a phenomenon known as ‘letting it pass’ (Firth, 1996) is discussed where there is evidence of misunderstanding within the interaction, however, participants do not orient to it as problematic. Schegloff (1992) also identifies a repair type which he calls fourth position repair where the identification and repair of a trouble source occurs later in an interactional sequence. I found no evidence of this type of repair in this corpus and thus it will not be discussed in this chapter. The absence of fourth position repair is not surprising as due to the ‘efficiency’ of the organisation of repair, problems of hearing, speaking and understanding generally get resolved before this point, and thus this type of repair occurs rarely in talk (Schegloff, 1992). Additionally, the majority of tasks in this corpus favour interaction which quickly moves through topics, rather than multiple turns occurring on the same topic, so misunderstandings may not become apparent. The presence of ‘letting it pass’ in this data set may also contribute to the lack of fourth position repair, as it may be preferable to leave misunderstandings rather than to actively repair them, after a certain point, within a testing context.

4.4.1 Same turn repair

As outlined in chapter 2, same turn repair is repair which occurs in the same turn as the trouble source. This means the repair is both initiated and carried out by the speaker of the trouble source turn. A schematic representation of the structure of same turn repair is provided below, where ‘T1’ is the first turn, ‘A’ is the self, ‘x’ is the repairable and ‘y’ is the repair proper.

Schematic representation of the structure of same turn repair:

\[ T1 \quad A: \quad x, \ x=y \]

In the interactions examined in this data set, self-initiated, self-repair occurring in the same turn as the trouble source occurred frequently. It was the most common type of repair across the data set, produced often by the adult and the children. Excerpt (11) is an example of this type. In this example, the child, SF, is taking part in the test of pretend play and has just completed a play scenario where the adult uses Ted to pretend to be an inanimate object, a bridge.
Test of pretend play. Participants are sitting on the mat facing one another playing with Ted.

1. A: tsk what else could Ted be.
2. (4.9)
3. -> SF: <he could be:>
4. (1.2)
5. -> SF: >he could be< a lion?
6. A: oh he could be a lion, could you show me how he could be
7. a lion.
8. SF: ra::wr=
9. A: =oh huh good one. that's a great idea.

In line 3, in response to the question ‘what else could Ted be?’, SF begins his turn with an abandoned turn where he provides the incomplete sentence ‘he could be ‘ which is produced in a slow and drawn out fashion with a lengthened vowel sound in the final word. After a gap, SF then repeats the same words, this time produced at a faster pace and in a syntactically complete turn, ‘he could be a lion’, produced with questioning intonation. The trouble source or repairable item is ‘he could be’ produced in line 3, the lengthened quality of the vowel sound in ‘be’ marks the initiation of repair by the child and ‘he could be a lion’, produced in line 5, is the repair proper. While there is trouble in this turn, it is quickly and efficiently rectified by the child. This is typical of same turn repair both in this data set and more generally. The following excerpts, (12)-(15) demonstrate other instances of self-initiated, self-repair occurring in the same turn.

(12) 15-SI. 1:10:24 (ASD: 4;11)
Transition from free play session into a break.
1. A: oh the giraffes with the big long necks.
2. (0.7)
3. -> SI: I- I know how to draw giraffes.

(13) 55-TV. 59:29 (TD: 4;4)
Free play session. Both participants are sitting on the mat. TV is playing with the toy truck.
6. -> TV: and this- and it can- and it can eat anything.
7. A: oh it can eat anything, wo:w.

(14) 37-HS. 1:03:57 (TD: 5;0)
Free play session. HS is playing with the toy car.
1. A: .hh what’s it doing
2. -> HS: it’s- it’s flying cause it’s tyres turned into- to bullets

(15) 34-ML. 20:40 (ASD: 4;1) – abridged from ID 524, appendix A
WPPSI-III - object assembly subtest. Participants are sitting at table, facing one another.
1. -> ML: it’s b- big house.
2. A: it _ is a big house, it’s a nice house is;n’t it.

Additionally, same turn repair occurred when prior speech was produced in overlap. Excerpts (16)-(18) demonstrate examples of this type.
(16) 46-MG. 10:10 (TD: 4;7)
Test of pretend play. Participants are sitting on the mat facing one another.
1  MG:  ↑yee-hah.
2  A:  ((smilie voice))oh: ex[cellent]
3  ->  MG:  [Captain] Captain Feathersword.

(17) 27-IY. 1:43:54 (TD: 4;5)
Generation of object substitutions with stimulus item cardboard tube.
Participants are sitting on the mat facing one another and IY holds the tube up to her right eye and is looking through it.
1  A:  Think of something else. What else could you pretend
2    [it could be.]
3  ->  IY:  [ I ca-     ] I can see you.

(18) 14-MT. 33:24 (ASD: 6;9)
Participants have just finished the Tigger-Piglet inhibition task and MT has taken the puppets and is leading the task.
1  MT:  take off your shoe
2  A:  ((exaggerated sharp intake of breath))
3  MT:  huh huh
4  A:  huh huh huh huh [I have to do it quickly] don't I.
5  ->  MT:  [and take off your sock.]
6  ->  MT:  and take off your sock.
7  A:  oh take off my sock;

Unsurprisingly, repair issued in the same turn was also produced by the adult, as demonstrated in excerpts (19)-(22).

(19) 46-MG. 38:50 (TD: 4;7)
Free play session. Participants are sitting on the mat facing one another.
1  ->  A:  Oh: I see yeah, there's a- it's a bi- little bit of a lump
2    there isn't there.
3    (0.8)
4  ->  A:  yea:h I think it’s just a lump in the- in the mat.

(20) 8-LS. 12:08 (TD: 6;6) – abridged from ID 502, appendix A
WPPSI-III - transition between the information subtest and the object assembly subtest. Participants are sitting at table, facing one another, but A is completely off-camera.
9  LS:  see=
10  ->  A:  =is that a- is that a pokemon watch?

(21) 15-SI. 1:09:05 (ASD: 4;11)
End of free play session. Participants are packing up toys into the toy box.
10  ->  A:  OH:: the lolly oh I’ve got- I know where the lolly one is.

(22) 12-LT. 38:48 (ASD: 5;7) – abridged from ID 518, appendix A
Transition from a break. The beginning of this excerpt takes place outside the room and for most of the interaction neither participant is on camera.
13  ->  A:  .h ye[ah? I’ll just- I’ll tidy these aw-]
14  LT:  [we can play with (.). a:::ill ] XXXX play (with in)
15    the carpet.
4.4.2 Next turn repair

Next turn repair is the classic case of other-initiated, self-repair, where speaker A produces a turn (T1), and speaker B explicitly initiates repair in the next turn by use of something like a request for clarification (‘what?’, ‘Huh?’, ‘sorry?’). A then repairs their first turn (T1) in the third turn (T3), but the repair sequence is initiated in T2 and T3 would not occur without this initiation in T2. This is unlike third position repair, discussed below, whereby the repair is not initiated until the T3. Next turn repair signifies a breakdown of intersubjectivity, which is explicitly oriented to by the ‘other’, at their next available turn.

Schematic representation of the structure of next turn repair:

<table>
<thead>
<tr>
<th>Turn</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>A</td>
<td>x</td>
</tr>
<tr>
<td>T2</td>
<td>B</td>
<td>-&gt; overt initiation of repair</td>
</tr>
<tr>
<td>T3</td>
<td>A</td>
<td>x=y</td>
</tr>
</tbody>
</table>

Excerpt (23) demonstrates other-initiated, self-repair performed in the next turn which occurs during the information subtest of the WPPSI-III.

(23) 4-CJ. 28:50 (TD: 5;7)

WPPSI-III – information subtest. Participants are sitting at table facing one another.

1  A:  wow huh huh that’s lots of (lines) good stuff.
2  .hh ↑what animal gives milk.
3  (1.6)
4  CJ:  the z0okeepºerº
5  (0.7)–
6  -> A:  the::¿
7  CJ:  zookeepers.
8  A:  the zookeepers good job.=
9  CJ:  =give the animals milk.=
10 A:  (0.5)
11 CJ:  =they do,
12 tsk (.) what do people u:se to keep dry: in the rain.

In line 2 of excerpt (23), the adult asks the test question, ‘what animal gives milk’. After a 1.6 second gap the child, CJ, gives the answer ‘the zookeeper’, a response which becomes the trouble source. This response is produced with an emphasis on the beginning of the word and fades out in volume as CJ says it. In line 6, the next turn, A initiates repair on CJ’s previous turn by repeating the first word of his answer with lengthening on the vowel and slight questioning intonation. CJ responds to this repair initiation by repeating the second word from his original response in line 4. That is, he picks up where A has left the phrase and collaboratively completes the repeat of his previous turn, this time with more level volume across the whole word, ‘zookeepers’, which he now produces in the plural form rather than the singular form. His louder production of this turn suggests that he has identified his production of the turn in line 4 as the source of the trouble, although from A’s perspective, it is likely also contributed to by the unusualness of the answer produced, and perhaps the additional explanation of the answer CJ offers in line 9 orients to this as a potential source of
misunderstanding. CJ’s turn in line 7 constitutes the repair proper, of the trouble source turn in line 4. It appears that intersubjectivity has been restored as A repeats the turn again in full, along with a positive evaluation, ‘good job’, in line 8. However, this excerpt demonstrates that while understanding has been restored, A’s supportive response does not necessarily indicate that a correct response has been provided.

Excerpt (24) demonstrates another instance where the adult initiates repair in the next turn using the same strategy as in excerpt (23).

(24) 52-NC. 59:12 (TD: 4:4)
Free play session. Participants are sitting on the mat facing one another.
1 A: ((smilie voice)) that's a good hat.
2 (0.6)
3 A: huh huh
4 (1.4)
5 NC: I'm as-
6 (1.0)
7 NC: <I'm aks[:,:poring.> 
8 (0.4)
9 -> A: you:'re?
10 (0.4)
11 NC: <aksplo:[ring.> ]
12 A: [OH you're] exploring.

In excerpt (24) the child, NC, states in line 7, ‘I’m exploring’, however his pronunciation of exploring is atypical. A initiates repair on this turn by again producing the part of the trouble source turn she has understood with a lengthened vowel and questioning intonation. In this case the identifiable part of the turn is a pronoun, so rather than produce a direct repetition of this turn, she produces a second person pronoun, the form which is applicable to her perspective. NC produces a repair in line 11, by repeating the word which posed the problem in line 7, produced with more typical pronunciation. Intersubjectivity is demonstrably restored by line 12 when A produces a change-of-state token and repeats the content from trouble source turn, using the relevant pronoun for her perspective and with emphasis on the word she had difficulty understanding.

The following excerpt, (25), illustrates another example of next turn repair. In this excerpt the strategy used is similar to the previous two excerpts in that A repeats the part of the trouble source turn she has identified, however she additionally adds the word ‘what?’ produced with questioning intonation. There is intermittent drilling in the background of this recording which occurs in lines 3-8 in this excerpt and likely influences the participants’ ability to hear one another.

(25) 13-JM. 1:04:21 (TD: 5:2)
Free play session. Participants are sitting on the mat facing one another. There is an intermittent drilling sound in the background of this recording.
1 A: that’s okay. that’s alright we’ve got more of those.
In this free play session, JM describes the actions of his play protagonist in line 5, however this is difficult to hear due to the drilling sound in the background. A initiates repair in line 6 by repeating the part of the prior turn she has heard and understood and adding ‘what’ with questioning intonation in the place of the unknown content. JM repairs the turn with words which I have been unable to confirm, however, A orients to this in line 8 as if intersubjectivity has been restored by producing a change-of-state token and laughter. This time, however, she does not repeat the trouble source turn or word so it is unclear if intersubjectivity is actually restored or whether she just orients to it as restored.

Another way of initiating repair in the next turn is by the ‘other’ offering a candidate understanding of the trouble source turn. Candidate understandings are a way of issuing an understanding check to confirm (or disconfirm) the accuracy of an ‘other’s’ understanding of the prior turn (Heritage, 1984a; 319). Excerpt (26) illustrates this strategy of repair initiation.

(26) 15-SI. 1:09:05 (ASD: 4;11)
End of free play session. Both participants are packing up the toys into the toy box.
1 A: what are you looking for?
2 SI: °XX box°
3 (1.4)
4 -> A: the big box?
5 SI: yes::.
6 (0.7)
7 A: tsk I’m not sure which (. ) box you mean I’ll just= the lolly one
8 SI: =the- the lolly one
9 lolly one
10 A: OH:: the lolly oh I’ve got- I know where the lolly one is.

In excerpt (26), the child, SI, produces an unclear turn in line 2, which A initiates repair on in line 4 by producing a candidate understanding, ‘the big box?’, with questioning intonation. SI responds with an affirmative response token, ‘yes’, confirming the adequacy of A’s interpretation in line 5. However, the referent for the item is not clarified until SI renames it as ‘the lolly one’ in lines 8-9, and in line 10, A demonstrates that intersubjectivity has been restored.

The following excerpt, (27), also demonstrates A providing a candidate understanding for the child, MJ, to confirm or deny.
Free play session. Participants are sitting on the mat. Doll is lying on her back in the play space. MJ is trying to push a block through the end of the cardboard tube.

1  MJ: won’t go through
2  A: oh, are you trying to get it to go through;
3  (6.8)/((MJ is twisting and jiggling the block at the end
4  of the cardboard tube))
5  A: °aw X (. ) oh XXX stick.°
6  (4.2)/((MJ puts down cardboard tube down across Doll’s neck,
7  then looks up at A))
8  A: oh what's she got.
9  MJ: uh
10 (1.2)
11 is kiwing herself.
12 A: she’s— she's KILLing herself. huh huh huh huh poor Doll.
13 (0.9)
14 -> A: or is she cle:aning herself.
15 MJ: killing.
16 A: KILLing? °°oh no.°° (. ) °poor Doll.°
17 (2.8)
18 A: so what's [this.
19 [((A motions towards the cardboard tube))]
20 MJ: ah::
21 (0.7)
22 MJ: the sword?

In line 6 of excerpt (27), MJ deliberately places the cardboard tube across the neck of the toy doll and then looks to A for a response, or perhaps for guidance on what to do next. A responds by initiating an explanation from MJ about the action performed in line 6. After a pause, MJ produces the trouble source turn in line 11 which is syntactically atypical and includes an atypical pronunciation of the target word, ‘killing’. A interprets this correctly in line 12, when she acknowledges this explanation, ‘she’s killing herself’. When MJ does not respond to this acknowledgment or expand on it, A offers an alternative candidate understanding of line 11 in line 14, ‘or is she cleaning herself’. In line 15, MJ confirms A’s first understanding of the problematic word as ‘killing’ is correct and A acknowledges this again in line 16.

Excerpt (27) demonstrates the complications which arise when pretence is involved in establishing intersubjectivity. In the tasks which require pretence on the part of the child, the adult’s only access to this is through the child’s ability to enact and explain it. This puts pressure on the child to come up with adequate explanations for their actions, whether or not they are conceptualising them as pretence when they initiate those actions. Pretence within these interactions is further explored in 4.4.5.

A final means of initiating repair in the next turn is by producing an open class repair initiator, such as ‘huh?’, ‘sorry?’ or ‘what?’. The following excerpt, (28), demonstrates this repair initiation strategy, where repair is initiated in line 4 by the adult.
Next turn repair using an open class repair initiator was the most common type of next turn repair in this data set. Analysis of these is the focus of chapter 5, so they will not be discussed further here.

Although they are fewer in number, this data set also contains instances where the child initiates repair of the adult’s talk in the next turn. An example of this is shown in excerpt (29) where 7-BM is taking part in the WPPSI-III, information subtest.

(29) 7-BM. 9:26 (TD: 5;10)
WPPSI-III - information subtest. Participants are sitting at table facing one another.

1. A: tsk ↑how many ears do you have.
   (0.6)
2. BM: two
3. A: yeah good job.
   (0.6.)
4. A: .hh what do people use to cut paper with.
5. BM: cook paper¿
6. A: to cUUt.
7. BM: cut paper¿-
9. BM: >SCISSors!<
10. A: YEah they do don’t they. well done.

In line 6 of excerpt (29), A asks the question, ‘what do people use to cut paper with’. This turn becomes the trouble source when the child, BM, initiates repair in the next turn by demonstrating a candidate understanding of the prior turn as ‘what do people use to cook paper with’. BM does this in an abbreviated form by saying ‘cook paper’ with a slightly questioning intonation. This misunderstanding is likely due to A’s British pronunciation of ‘cut’. A responds to this by clarifying the verb form only of the trouble source turn, ‘to cut’, with emphasis through loudness on the vowel of the verb, or the trouble source phoneme in line 6. BM again requests clarification of her understanding of this when she asks ‘cut paper’ in line 10, again with slightly questioning intonation. A quickly confirms this is the correct understanding and BM is able to produce the desired answer in line 12.

4.4.3 Third turn repair

Third turn repair is a type of self-initiated, self-repair which occurs over three turns rather than one, as happens in same turn repair. In third turn repair, speaker A takes a turn which B responds to in T2, in a way which does not mark T1 as problematic. Schegloff (1997) states that this turn is usually a
continuer (such as ‘yeah’), change-of-state token (such as ‘oh’), or some other sort of ‘quasi-turn’, which passes up the opportunity to take a full turn. In T3, however, A initiates a repair of T1. This is done from A’s own volition and not as a consequence of B’s response to T1. This is in contrast to third position repair which also occurs in T3 but does so as a result of B’s demonstrated (mis)understanding of T1 (further discussed in section 4.4.4). As this is a form of self-initiated, self-repair it does not signify a breakdown in intersubjectivity that the other has oriented to or demonstrated. However, it is a preventative measure to help maintain intersubjectivity. Thus, it is more closely related to same turn repair than to third position repair, despite its placement in the sequential organisation of talk (Schegloff, 1997; 34-35).

Schematic representation of the structure of third turn repair:

T1 A: x
T2 B: continuer, change-of-state token etc.
T3 -> A: x=y

Excerpt (30) demonstrates third turn repair during the generation of object substitutions task.

(30) 13-JM. 1:21:13 (TD: 5;2)
Generation of object substitutions with stimulus item wooden cube. JM and A are sitting on the mat.

1 JM: a picture.
2 A: yeah it could be,
3 (2.1)
4 JM: a light X.
5 (0.3)
6 A: °yeah,°
7 -> JM: I mean- I mean then you push the button and then [the]
8 A: [OH ] I=-
9 JM: =light comes [ on ]
10 A: [yeah] like a light switch. good one. well done.

In excerpt (30) the child, JM, is listing things the wooden cube or block could be, and gives an answer ‘a light X’ in line 4, where the final syllable is difficult to hear. After a brief gap, A produces a quiet continuer, ‘yeah’ in the next turn. This turn does not confirm understanding of the prior response or mark it as problematic, although perhaps the less enthusiastic production of this continuer when compared to the confirming response of the previous answer, ‘yeah, it could be’, could be perceived as marking trouble. After this continuer, JM uses the third turn to provide a description of the item he is trying to communicate, beginning the turn with the repair marker ‘I mean’ to signal that it is a revision of a previous turn. The mention of the light in line 9 further confirms that it is a repair of line 7 and the description helps A understand the item to which JM refers. This is demonstrated by her loud change-of-state token in line 8, followed by her naming of the item in line 10, ‘like a light switch’.
Excerpt (31) contains another instance of third turn repair. This excerpt occurs during the pretend play session where the child, AP, is playing with the toy car and providing commentary on his play actions.

(31) 43-AP. 1:09:03 (ASD: 4;8)
Free play session. Both participants are on the mat facing one another. A is sitting and AP is lying on his side. AP is playing with the toy car and has a cardboard box and has placed a sheet of cardboard stretching from the top of the box to the ground so it acts like a ramp.

In lines 11-12, AP states that the car is going back in its underground garage which is accompanied by non-verbal actions of driving the car under the space beneath a sheet of cardboard leaning against a cardboard box. A responds to this with a very quiet ‘oh’ in line 13. Similarly to excerpt (30), the quiet and unenthusiastic nature of this response by A could be indicative of trouble. In response to this, AP then sits up slowly and looks at A before producing a repetition of some of the content of his previous turn in line 11, saying ‘back in the underground parking garage’ in line 15. This turn is missing a subject but includes more descriptive detail regarding the object of the sentence; now referring to ‘the underground garage’ as ‘the underground parking garage’. While saying this, he maintains eye contact with A which appeals to her for a response, and also points towards the cardboard ramp or ‘garage’. A responds to this in line 18 with a loud, lengthened change-of-state token and a complete repetition of AP’s turn in line 15. A’s turn in line 18 demonstrates to AP that she has understood his prior turn and AP accepts this by continuing with the play. While I have included excerpt (31) as an example of third turn repair, there is potentially overlap between this phenomenon and the phenomenon Pomerantz describes as ‘in pursuit of a response’ (Pomerantz, 1984; Forrester, 2008).
Third turn repair was rare in this data set. Although I could find no research indicating the prevalence of third turn repair, the lack of focus on this repair type could indicate it is not a common type of repair or that these instances are often analysed along with same turn repair as instances of self-initiated, self-repair. Additionally, both excerpts examined in this section, demonstrate noticeably unenthusiastic responses to the child by the adult in the turn preceding the repair proper (T2). As the adult is usually a fairly engaged and eager interactant, the nature of these responses could indicate some sort of trouble to the child participants, whether that might be that intersubjectivity is being threatened or some sort of interactional trouble, such as a lack of alignment with the intended action. This is a difficulty in understanding the actions of quasi-turns in talk, as they can be used in an aligning fashion to create space for the speaker to continue their turn or topic or they can be produced when a participant declines to contribute more to the talk, whether this is because they have not understood the prior turn, have a different epistemic status which limits what they can contribute or have a differing stance towards the topic matter. This issue is revisited in chapter 6 when I examine instances of prosodically marked yeah.

### 4.4.4 Third position repair

The final type of repair considered in this section is third position repair. Third position repair is a type of self-initiated, self-repair which occurs when a participant demonstrates, but does not orient to, a misunderstanding of their participant’s previous utterance (Schegloff, 1987; 1992). Essentially, this type of repair occurs when an participant responds to another’s turn in T2 with a turn at talk which is sequentially appropriate and relevant to their understanding of the preceding utterance, but demonstrates a misunderstanding or misalignment to the speaker’s intended meaning of T1. The structure of third position repair is shown below.

Schematic representation of the structure of third position repair:

| T1 | A:  | x   |
| T2 | B:  | x=y |
| T3 -> A: | (not y,) | x |

Schegloff (1992) refers to third position repair as the last structural defense of intersubjectivity, which refers to the sequence position of this repair as a last point to rectify a misunderstanding. If the breakdown in intersubjectivity is not repaired at this point, it is likely that it will be ‘let passed.’

Excerpt (32) illustrates an example of third position repair which occurs during the free play session when the child, JK, is leading the play.
Free play session. JK & A are sitting facing one another on the mat with multiple toys in the play space. JK is leading a play scenario where he has been making his lunch.

1. JK: that’s my fresh food. And my (yum) -
3. (3.1)/(JK pretends to eat food)
4. JK: that’s (alley at) hh .hh salad;
5. (0.6)
6. JK: "XX"
7. (0.7)
8. JK: ‘c:use me?
9. (0.4)
10. JK: [ pass me that car. ]
11. [((JK gazes towards multiple toys on the mat))]
12. (0.5)
13. -> A: the cup;
14. (0.7)
15. -> A: [ this one? ]
16. [((A picks up a cup and begins to hold it out towards JK))]
17. JK: no pass me that ca:r.
18. A: Ah: the cA::r.
19. (0.7)/((A passes car to JK))
20. JK: see if you put the car in there so now

In excerpt (32), the trouble source occurs in line 10 when the child asks the adult to pass him a toy car. This turn also constitutes the first turn in the structure of a third position repair sequence. The adult understands the item to which JK is referring to be a ‘cup’, as demonstrated by presenting it as a candidate understanding in line 13, ‘the cup’ (line 15), produced with slight questioning intonation, and also by her non-verbal response to pass a white cup to JK (line 16). This turn is the second turn in the repair sequence. Both the verbal and non-verbal response to this request potentially demonstrate to JK that a misunderstanding has taken place. JK’s response in line 17 begins with ‘no’ which acts as both a rejection of A’s actions and a repair initiator. This is followed by the repair proper consisting of a full repetition of the request originally issued in line 10, including added emphasis on the problematic referent ‘car’. Line 17 constitutes the third position in the repair sequence, or where the repair is both initiated and carried out. That A has now understood JK correctly is evident in line 18. She begins this turn with the change-of-state maker ‘ah’ and repeats the correct referent ‘car’ produced with added emphasis on the vowel of the problematic word. More importantly, she demonstrates intersubjectivity by satisfactorily fulfilling JK’s request for the object, which allows the play to continue.

Schegloff states that incorrect reference is one source of trouble which third position repair typically deals with (Schegloff, 1987; 1992; also see Egbert, Golato & Robinson, 2009 for more on repair of referents). Repair due to mistaken reference occurs when a speaker’s response to a turn demonstrates that they have an adequate understanding of the action of the prior utterance (i.e.
requesting, offering etc.), however they demonstrate a misidentification of a referring expression within the turn. Schegloff has found repair dealing with mistaken reference to be relatively straightforward for adult speakers of American English (1987; 204) in the sense that the mistaken referent is quickly identified and repaired. Excerpt (32) illustrates a straightforward example of this. However, the play-based nature of these sessions also creates environments where referents are pretend or abstract and these add an extra layer of complexity to establishing, maintaining and repairing intersubjectivity.

The following excerpt, (33), contains an example of third position repair concerning an object of pretence. This excerpt occurs in the generation of object substitutions task where the stimulus object is a cardboard tube. Prior to this excerpt, the child, PO, has suggested the cardboard tube could be a telescope.

(33) 38-P0. 1:36:23 (ASD: 4;8)
Generation of object substitutions task with cardboard tube as stimulus object. PO holds this up to his right eye as if it is a telescope, which he has already given as a suggested pretend object.

1. PO: it could be::: a: h (1.4) ah li-(1.2) a mi:crophone.
2. A: it could be a microphone. what else could it be;
3. (0.9)
4. PO: .hh what- this- u:m put (it)-
5. (2.5)/((PO still has tube held up to his right eye))
6. A: oh: what can it be.
7. (4.8)
8. PO: .hhh=
10. PO: a [ BOULD@:H! ]
11. [((PO drops the tube emphatically))]
12. -> A: ((smilie voice)) it could be a bowler good, what else?
15. PO: hh .hh this can be a: .hh

After A’s prompt in line 9 to continue generating more pretend objects, PO asserts ‘a boulder’, saying the word loudly and with emphasis on the final syllable. This assertion co-occurs with a dramatic play gesture where he drops the cardboard tube from his face so that it tumbles down his body. A responds to this with a turn that demonstrates her understanding of the prior turn by saying, ‘it could be a bowler’ (line 12), she then tries to move PO on with a test prompt, ‘what else?’.

In line 13, rather than respond to A’s question ‘what else?’ with a novel idea, PO repeats his previous response of ‘a boulder’, however this time he is using an ordinary talking voice rather than a raised, emphatic voice, and he places the stress on the first syllable in the word ‘boulder’, rather than the last, which is a more typical syllable to stress in this word. This turn constitutes the third position response and acts to repair A’s demonstrated understanding of the referring expression ‘bowler’ in
line 12. There is strong evidence that it is successful in line 14, where A repeats back the correct word mirroring the intonational stress which PO used in line 13.

The repair in excerpt (32) was an example of a misunderstood act of reference to an object mutually and physically available in the play space. However, the confusion in excerpt (33) is over the child’s naming of a type of object which is not physically present in the play space. Line 12 demonstrates that A understands that PO’s turn ‘a boulder’ was a candidate response to the question asking what the cardboard tube could be, however the misunderstanding occurs in understanding the word ‘boulder’. As there is no real world referent corresponding to this in the play space, the interaction constitutes a form of negotiation over what an object could be in a pretend scenario.

Within this data set, difficulties with achieving intersubjectivity of nominal expressions which result in third position repair occur most often in the pretend play sessions, both structured and unstructured, where negotiation over the pretend identity of objects within the play frame are common occurrences. It is also significant that these are the sessions where the child has a more directional role in the course of the play.

Excerpt (34) is another illustration of this. This excerpt occurs during an unstructured play session when both adult and child are seated on the mat with numerous toys between them.

(34) 55-TV. 59:29 (TD: 4:4)
Free play session – both sitting on the mat but TV is sitting with his back to the camera. He is playing with the toy truck. Some lines before this excerpt he refers to the truck as ‘the muncher’.
1 TV: hey this is gonna be the muncher eat munch.
2 A: oh: the muncher huh huh huh=
3 TV: =it’s gonna be the muncher eat muncher.
4 A: th- the muncher ↑eat muncher? wo:w.
5 (0.8)
6 TV: and this- and it can- and it can eat anything.
7 A: oh it can eat anything, wo:w.

In line 1, the child, TV, begins his turn with an attention-getting device ‘hey’ which signals that he wants A’s attention and flags the following information as noteworthy (McTear, 1979). He then states that a toy is ‘the muncher eat munch’. A responds to this with a newsmarker token ‘oh’ and then abbreviates the name of the item to ‘the muncher’. This causes TV to repeat his naming of the toy with an extended title to the one he gave it in line 1, ‘the muncher eat muncher’ in the third position. That TV repeats his first turn in line 3 almost verbatim indicates that there are problems with the way A has interpreted this first turn and importantly, in his production of this turn he places stress on the word ‘eat’ which is the first word A missed in her repetition of the naming of the object in line 2. A orients to line 3 as if it is a repair of her turn in line 2, as she repeats the toy’s novel name
in full with strong emphasis on the word ‘eat’ which is the start of phrase she failed to pick up on in line 2. This indicates that she has now understood the full term.

In excerpt (34), TV gives the toy a name or feature which does not otherwise belong to it, and the adult’s only access to this novel element of the toy is from TV’s ability to explain this. A has some assistance in understanding the pretend protagonist or object in excerpt (34), as TV explains the novel term in full ‘the muncher eat muncher’, even marking the contribution as important by preceding it with the attention-getting device ‘hey’. However, play scenarios which contain pretence are only accessible to the adult and to the analyst to the extent that the child can explain their pretend world. There are examples within this data set where the referent is not so clearly highlighted or explained by the child or where there is disagreement over what the play world character or actions are. The next section examines these.

4.4.5 Negotiation over the pretend world

As mentioned throughout this chapter, the occurrence of pretence in some of the tasks in these testing sessions can be a complicating aspect in the interaction when it comes to participants’ ability to establish, maintain and repair intersubjectivity. This is because the nature of collaborative pretend play inherently requires shared or collective intentionality (Rakoczy, 2008). This section examines excerpts which demonstrate negotiations over pretence which lead to other-repair sequences.

Excerpt (35) is a demonstration of negotiation over an action of pretence which results in an other-repair sequence. BM and A are taking part in the test of pretend play and the child has just made Ted pretend to drive a car when this excerpt begins.

(35) 7-BM. 52:58 (TD: 5;10)
Test of pretend play. BM & A are sitting facing one another on the mat with the stimulus item Ted.
1 A: what else could Teddy do.
2 BM: um: ((sniff))
3  
4 BM: he could do acrobats?
5 A: oh yeah could you show me.
6  
7 -> A: oh: very good Teddy’s spinning (.). excel[lent]
8 -> BM: [ no ] he’s doing cartwheels
9  
10 A: he’s doing cartwheels (.). clever Teddy.

When asked for another thing Teddy could pretend to do, BM nominates ‘acrobats’ in line 4. The adult then asks for a demonstration of the action in line 5 and BM makes Teddy turn around in a circle. A’s commentary on this action in line 7 refers to it as ‘spinning’, however BM rejects this label.
in line 8-9 first with a repair initiator ‘no’ followed by the repair proper in which BM labels the action as ‘cartwheels’. With BM given the lead to develop and describe the pretence the play, she has epistemic access to the intention behind the action. This puts the child in a privileged position to repair A’s demonstrated understanding if this does not fit the intended meaning.

Excerpt (36) also occurs in the free play session and is essentially a negotiation over labelling pretend food. Prior to this excerpt, JK had nominated some play objects as ‘fat’ foods and some others as ‘skinny’ foods (meaning ‘unhealthy’ and ‘healthy’ food). Now he has asked A to ‘show’ him, or guess, which ones are ‘fat’ or ‘skinny’ food.

(36) 25-JK. 1:39:04 (ASD: 6;0)
Free play session. JK & A are sitting facing one another on the mat with a variety of objects and toys between them in the play space.
1  A: that one’s skinny.
2  (0.9)
3  JK: what’s that [one
4  ]
5  A: =and that
6  one’s fat.
7  JK: and what’s [that?
8  ]
9  A: =and that
10 -> A: oh:: that one’s even fatter.
11  (0.3)
12 -> JK: no it’s thin.
13  A: you think that one’s thin. That can be thin.

This excerpt begins with the adult classifying a bowl (or presumably the imaginary food in the bowl) as ‘skinny’ in line 1. The child, JK, appears to accept this as an adequate answer and moves on to ask her to guess the category of (the pretend food in) a cup in lines 3-4. The adult responds that the cup is (or is filled with) ‘fat’ food which again appears to be an adequate response as JK continues the game by asking her to categorise a block in lines 7-8. A has exhausted the two already-established options by the time they get to the third guess and she comes up with a novel group ‘even fatter’ for the third object in line 10. JK does not accept this answer and begins his turn with the repair initiator ‘no’ and issues an other-repair of A’s turn in line 10, by nominating the block as being ‘thin’. A accepts this decision in line 13 saying ‘you think that one’s thin. That can be thin’.

Structurally, this is an other-initiated, other-repair sequence, with line 10 constituting the trouble source, and line 12, demonstrating the repair initiation (‘no’) and repair proper (‘it’s thin’). However, repair involving the features of a pretend item such as this is qualitatively different to repair concerning features of real world referents. Thus, when pretend elements within the shared play world are involved, negotiation over the aspects of the play can become a focus of the interactions.
This example could be seen as a lack of alignment over the course of the pretend play in addition to a repair sequence.

Within a pretend play situation, potential referents exist on a continuum of abstractness within the physical context of the play. These last four excerpts demonstrate that as referents move from being concrete and present in the play frame to being more abstract or removed from the present play frame, negotiating reference becomes increasingly difficult. This is captured in the representation below.

concrete/in play frame ————abstract/not in frame ————
excerpt (33)       excerpt (34)       excerpt (35)       excerpt (36)

4.4.6 Letting misunderstandings pass

There were also examples in this data set where there appeared to be misunderstanding within the talk, however, the participants did not orient to it as problematic. Firth (1996) examined examples of these in a lingua franca setting where it is necessary for companies to conduct international business in English, even though it is neither participant’s native language. He found that often when misunderstanding or misalignment arises in this talk, neither party orient to it as a source of trouble, either in an explicit or covert sense. Rather they let the unknown or unclear action, word or utterance ‘pass’ as it is deemed inconsequential to the larger goals within the specific context of the time and place (Jordan & Fuller, 1975). The difficulty for CA with dealing with misunderstandings in these events lies in the fact that neither participant orienting to the misunderstanding renders it interactionally irrelevant (Firth, 1996; 243). Further, it becomes difficult to tell whether the misunderstanding is not noticed by the hearer, or is noticed and allowed to ‘pass’, with the hope that whatever was unclear will be made either apparent or inconsequential after further talk. An example of ‘letting it pass’ from Firth is shown below at excerpt (37), in a modified format.

(37) Example from Firth (1996), modified.\(^8\)

1 B: we don’t want the order after the cheese is uh (. ) blowing.
2 H: I see yes
3 B: so I don’t know what we can do with the order now (. ) what do you think we should uh do with this is all blowing Mr Hansen.
4 (0.5)
5 H: I’m not ah (0.7) blowing uh what uh, what is this u::h too big or what?
6
7
8 B: no the cheese is bad Mr Hansen.

In excerpt (37), B uses the lexeme ‘blowing’ with an idiosyncratic meaning i.e. to mean ‘bad’ or ‘gone off’. H lets this problematic word ‘blowing’ pass in line 2, where he claims he understands the

---

\(^8\) Transcript has been simplified for consistency with transcription conventions used in this thesis.
problem. However this is an example where ‘letting it pass’ has interactional consequences further down the track, as in the following turn, B asks a direct question of H about what they should do with the ‘blowing’ cheese. During lines 6-7, H needs to make his lack of understanding ‘public’ (line 6), before an appropriate answer to B’s request can be provided. Thus, Firth states that letting it pass is a potentially interactionally vulnerable procedure which likely occurs due to the potentially interactionally threatening nature of repair. However, whenever it does occur, intersubjectivity is compromised at the expense of maintaining the appearance of a ‘socially normal’ interaction. Sterponi and Fasulo (2010) refer to this as an inherent tension between the pursuit of intersubjectivity and sequence progressivity.

Excerpt (38) is an instance of letting it pass from this data set which takes place during the WPPSI-III, vocabulary subtest.

(38) 38-P0. 36:17 (ASD: 4:8)
WPPSI-III - vocabulary subtest. Participants are sitting at table facing one another.
1 A: what does courage mean.
2 PO: (courage) mean
3 (1.2)
4 -> it (goes) and the goldilocks and the three bears;
5 A: ye(h)ah very good.
6 (1.7)
7 A: what does ancient mean.
8 PO: it means you can get oil.
9 A: very good.

In line 1, the adult asks the child, PO, what courage means. Because of A’s British accent, she pronounces the word ‘courage’ so that it rhymes with ‘porridge’, which is different to a standard Australian English pronunciation of ‘courage’. In line 2, PO seemingly repeats back some of the question, including the target word, pronouncing it similarly to the way the adult has produced ‘courage’ in line 1. PO then responds to the question with an answer which references Goldilocks and the three bears in line 4. This response suggests that PO has understood the question to be asking about ‘porridge’, rather than ‘courage’. Regardless of PO’s intended meaning in line 4, Goldilocks and the three bears is not an appropriate answer to the question, ‘what does courage mean’. Thus, this answer appears to be a good candidate for A to initiate a third position repair in line 5. However, instead she provides an acknowledgement token containing a laughter particle which perhaps indicates her surprise at PO’s response, followed by a positive evaluation. After a 1.7 second gap, she then moves on to the next test question. This next question in line 7, ‘what does ancient mean’ again receives an unusual response in line 8, ‘it means you can get oil’ which is also given a positive evaluation. In both instances, these potential misunderstandings are not oriented to by either participant as problematic and testing resumes.
The following excerpt, (39), also shows another example of letting it pass, again in the WPPSI-III, vocabulary subtest.

(39) 56-TB. 25:08 (TD: 4:5)
WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another.
1   A: tsk ↑what does double mean.
2   (2.8)
3   TB: bubble bath.
4   (0.6)
5   A: tsk .hhh ↑what does courage mean.

Excerpt (39) shows the adult asking what the word ‘double’ means in line 1. TB’s response to this, ‘bubble bath’ in line 4, strongly suggests that he has heard the word ‘double’ as ‘bubble’. Again, A does not orient to this as problematic by initiating repair in line 5, rather she continues with the testing by asking the next question in line 5. The third position evaluation after ‘bubble bath’ in the IRE sequence is also absent, which perhaps indicates some form of trouble.

The nature of the WPPSI-III, vocabulary subtest means that the adult in the interactions has less investment in establishing understanding which does not directly add to the clinical goals of the task. As I have shown in section 4.3.2, the WPPSI-III, information and vocabulary subtests set up an interactional dynamic where gaining understanding is of less importance from the test administrator’s perspective than proceeding with the test. Rather than knowledge sharing, the aim of this task is knowledge testing. Excerpts (35) and (36) both occur some way into the subtest, which gets progressively difficult. By this stage in the task the test questions are likely surpassing the children’s knowledge. The children are perhaps deemed unlikely to obtain correct responses from this point in time and the adult may not see establishing understanding at this point of the task as a high priority, despite the fact that the child’s apparent misidentification of the target word compromises the test result he is able to attain.

While this phenomenon of ‘letting it pass’ is more likely to occur in lingua franca discourse than that involving native speakers (Firth, 1996), it is also likely to come about in interactions involving any speakers deemed ‘less competent’, such as children, or adults with communication impairment. As such Muskett (2008) found a similar trend in dyadic play sessions involving children diagnosed with ASD and neuro-typical adults, which he called repair avoidance. In his data, only two repair sequences were initiated by the adults, despite the presence of much idiosyncratic language, where it seemed unlikely that intersubjectivity had been established. Similar observations have been made regarding interactions involving individuals with psychosis (Swartz, 1994), acquired brain injury (Body & Parker, 2005) and aphasia (Paoletti, 1998).
4.5 Conclusion

This chapter serves to highlight some interactional details of these sessions, namely demonstrations of participant roles and the presence of specific types of sequences, including IRE and repair sequences, as they occur in various tasks in the data set. I have illustrated the individual task constraints which impact upon the ways in which each participant takes on roles and orients to activities at hand. The clinical nature of these standardised tests give the interactions an overall institutional feel, where the adult usually has a privileged position to ask questions of the child and issue directives. The sequences examined in this chapter, should only be taken as illustrative of the tasks and the sequencing they often elicit, rather than an exhaustive description. While the participants have a fixed relationship, as an unfamiliar adult researcher and a child taking part in clinical research, this dynamic changes in a moment-by-moment manner, as the participants orient to different aspects of their personality or the roles they can play. Every task outlined in this chapter can also contain examples of conversational interaction where children can establish themselves as knowledge holders, or story tellers, on a certain topic and in most instances where this occurs, the adult steps outside her role of clinician to indulge contributions outside of the task constraints. Additionally, some tasks deliberately place the child in a position to lead the play and these tasks alter the epistemological relationship present throughout most of the session. However, the constraints child-led tasks place on the adult’s contributions means these excerpts are not necessarily more representative of everyday, mundane conversation.

This chapter is not intended to be an evaluation of the performance of the participants present, either as test takers or test administrators. Rather its goal is to illustrate the types of sequence organisation for which testing situations, and particularly specific tasks, create an environment. While both participants orient to their roles in the clinical testing environment and play a part in creating and, for the most part, maintaining the structural organisation of the sessions, the main determinant of the organisation of these sessions appears to be the task which is underway. This is evident both in the variant IRE sequences which correlate strongly with task, and also in the occurrence of certain repair sequences in certain tasks. For example, third position repair due to unclear references tends to occur in the tasks containing unstructured pretend play, while the phenomenon of ‘letting it pass’ occurs most often in the WPPSI-III, information and vocabulary subtests. In the unstructured free play session, the child leads the session and the adult needs to understand the play unfolding to accurately score the play correctly. Additionally, the nature of the data set means there is an emphasis on eliciting pretend items, and due to their abstract nature, there is potential for the intended act of pretence to be misunderstood. In the WPPSI-III, information...
and vocabulary subtests the emphasis is on assessing knowledge rather than negotiating it, and the straightforward IRE sequences it elicits, and the mandate to move through the test quickly and not assist the child to reach a correct answer, means there may be less likelihood that repair will be initiated on demonstrated misunderstandings.

This chapter has demonstrated the diversity of interaction within this data set. On the one hand, some tasks are highly structured and produce highly constrained sequence organisations which can be difficult for children to interpret and navigate as they use interactional rules which differ greatly from those typical of conversational settings. Children are usually not provided with instruction on how to complete the structured tasks and demonstrate evidence of in situ learning during their navigation of the task demands. On the other hand, some tasks in these sessions were designed to elicit pretend play and these tasks can be interactionally challenging in a very different way, as they require children to have sophisticated communication skills to describe and narrate their play in a way that the adult can understand.

As participants explore more complex pretend play scenarios referents become more obscured and achieving intersubjectivity becomes very dependent on a child’s ability to describe their pretend world and the objects and actions within it. Such a dependency may be especially difficult to overcome for children with limited social communication abilities, which, in this data set, could include both younger children and children with ASD. Traditionally children with ASD have been characterised as having deficits in pretend play abilities (see Chaudry & Dissanayake, 2015 for a recent comprehensive overview). However, the analysis presented here supports the view that such deficits could be a result of communication impairments rather than a problem pertaining to pretence.

In this chapter, I have provided the reader with an illustration of the clinical testing environment in which the interactions in this study take place. It acts as a backdrop to better understand the nature of the interactions so the reader can contextualise the following two chapters. In these I analyse excerpts concerned with the maintenance of intersubjectivity in more detail, first by examining instances of open class repair initiation, then by examining a new phenomenon I name ‘prosodically marked yeah’.
5 Open class repair initiation

5.1 Introduction

This chapter examines open class repair initiation (OCRI), which is a type of next turn repair initiation. As discussed in chapters 2 and 4, next turn repair is a type of other-initiated, self-repair, which is represented schematically at excerpt (1). In this representation the ‘other’, or the recipient of the trouble source, (B), explicitly initiates a repair. Overwhelmingly this occurs in the turn space (T2) following the trouble source (T1). The self (A), or speaker of the trouble source, then repairs the trouble source in the third turn (T3).

(1) Schematic representation of the structure of next turn repair

\[
\begin{align*}
T1 & : A: x \\
T2 & : B: \text{initiation of repair} \\
T3 & : A: x=y
\end{align*}
\]

OCRI refers to a subclass of next turn repair which include a particular set of tokens in the next turn. An example of OCRI, taken from Schegloff, Sacks & Jefferson (1977) is at excerpt (2).

(2) Excerpt from Schegloff et al., (1977; 367)

1 D: wul did ‘e ever get married ‘r anything?
2 -> C: huh?
3 D: did jee ever get married?
4 C: I have no idea.

Excerpt (2) demonstrates that by the production of a ‘huh’ spoken with rising intonation in line 2, C conveys to D that there has been some problem in his understanding of the previous turn. This provides D with the opportunity to repair their own talk in line 3. Sequentially speaking, the initiation of repair by the ‘other’ can occur after any turn at talk, that is to say that any segment of speech can potentially be a trouble source. These difficulties are usually addressed as soon as trouble occurs by the ‘other’, if they are going to be addressed at all. Thus the repair is overwhelmingly initiated in the turn following the trouble source. However, Schegloff (2007) notes that this is a trend rather than an identifying feature of other initiation of repair.

Self-initiated, self-repair can begin and be finalized in one turn. However, other-initiated, self-repair necessarily requires a sequence of turns to identify and resolve trouble. Self-initiated, self-repair highlights a part of the talk which the speaker themselves believes could potentially be problematic. However, other-initiated, self-repair provides the independent analyst with evidence that there has

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9 The acronym ‘OCRI’ will be used in this thesis to refer to the open class repair initiation practice. When referring to an open class repair initiation token (such as ‘huh?’ ‘sorry?’ ‘what?’ etc), the term ‘OCRI device’ will be used.

10 Transcript has been simplified for consistency with transcription conventions used in this thesis.
been a breakdown in intersubjectivity from the perspective of the trouble source recipient (speaker B in excerpt (1)) and places an onus on the speaker of the trouble source (speaker A in excerpt (1)) to attempt to repair this breakdown in intersubjectivity.

Repair initiation by the other can be performed with varying degrees of specificity. This can be conceived of as a ‘spotlight’ being shone on the precise aspect of the previous talk which was problematic. Different initiation devices have differing degrees of power to locate the trouble source. There is a direct relationship between the form the repair initiator takes and its strength in terms of specification of the source of the problem (Schegloff et al., 1977; 369). Schegloff et al., (1977) identified five categories of repair initiator which are listed below from the weakest to the strongest type:

1. Open class initiators (‘Huh?’, ‘Sorry?’, ‘Pardon?’, ‘What?’).
2. Wh-interrogatives; (‘Who?’, ‘When?’, ‘Where?’).
3. Partial repetition of the trouble source + wh-interrogative.
4. Partial repetition of the trouble source.
5. ‘You mean’ + understanding check.

Repair using open class initiators, which I refer to as OCRI, and which has been illustrated at excerpt (2), takes the form of a general query. From the five initiation devices Schegloff et al., (1977) have identified, the ability to highlight the trouble source is at its weakest in OCRI devices. Schegloff (2004; 98) describes them as claiming ‘only that something was heard to be said’. This type of next turn repair initiation will be the focus of this chapter. I begin this chapter with an overview of OCRI in this data set in section 5.2. In section 5.3, I examine the environment which leads to the use of an OCRI device by the adult participant. In section 5.4, I focus on children’s responses to the OCRI, which usually take the form of a repair. As ASD involves difficulties with social communication and understanding others’ perspective, it was expected that the children with ASD in this data set may encounter additional challenges with repair behaviours. Thus, in each of these sections, I first discuss excerpts from interactions involving TD children to provide an overview of how this phenomenon works in typical development, followed by discussion of excerpts from interactions involving children with ASD.

5.2 Open-class repair initiation in this data set

5.2.1 Scope and motivation

This chapter examines instances of OCRI in which the child is the speaker of the trouble source and the adult initiates repair using an OCRI device. While this corpus contains instances of children
initiating repair on the adult’s speech, these examples were much less frequent and examination of these are beyond the scope of this thesis.

There are a number of reasons for focusing on repair sequences involving OCRI devices within this data set. The first is practical as this was the most frequent type of other-repair initiation found within this data set. While there were more instances of self-initiated, self-repair in this data set, this was the most frequent form of repair which involved multiple turns in the repair sequence. Therefore, there were more cases on which to base conclusions. Secondly, as these types of repair initiators simply highlight trouble in the previous talk without explicitly identifying which aspect of the previous talk was problematic, the onus is placed on the speaker of the trouble source, in this case the child, to identify what may have gone wrong with the previous talk (Schegloff & Lerner, 2009; 101), to formulate an appropriate repair strategy and finally to implement it. Additionally, OCRIs are somewhat more complex than some other types of next turn repair initiation, such as, for example responding to a request for clarification which takes the form of a yes/no interrogative. The children in this study are aged between 4;0 and 7;5 and, as outlined in chapter 2, TD children of this age have already acquired considerable skill in identifying breakdowns in intersubjectivity and using repair strategies. Thus analysis of more complex types of repair is likely to yield more interesting results for this age group. Finally, analysis of OCRIs may be especially enlightening for identifying differences in conversational skills between children with ASD and TD children. As outlined in chapter 2, individuals with ASD are documented as having particular difficulties when attempting to understand other people’s perspective. Thus identifying the source of the trouble may be especially challenging for the group of children with ASD.

5.2.2 Overview of findings

In the approximately 60 hours of interactional data analysed in this thesis, I identified 27 instances of the adult producing an OCRI device in the data set. The adult produced OCRI devices 16 times in the interactions involving TD children and 11 times in interactions involving children with ASD. OCRI occurred in interactions with eight of the 20 TD children, and in interactions with seven of the 20 children with ASD. Details of these children are shown in table 5.1.
<table>
<thead>
<tr>
<th>ID</th>
<th>Gender</th>
<th>Age</th>
<th>Number of Excerpts with OCRI</th>
<th>ID</th>
<th>Gender</th>
<th>Age</th>
<th>Number of Excerpts with OCRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>51-JW</td>
<td>Male</td>
<td>4;0</td>
<td>1</td>
<td>34-ML</td>
<td>Male</td>
<td>4;1</td>
<td>2</td>
</tr>
<tr>
<td>52-NC</td>
<td>Male</td>
<td>4;4</td>
<td>1</td>
<td>42-SO</td>
<td>Male</td>
<td>4;1</td>
<td>1</td>
</tr>
<tr>
<td>55-TV</td>
<td>Male</td>
<td>4;4</td>
<td>1</td>
<td>38-PO</td>
<td>Male</td>
<td>4;8</td>
<td>1</td>
</tr>
<tr>
<td>27-IY</td>
<td>Female</td>
<td>4;5</td>
<td>3</td>
<td>15-SI</td>
<td>Female</td>
<td>4;11</td>
<td>1</td>
</tr>
<tr>
<td>33-JR</td>
<td>Male</td>
<td>4;5</td>
<td>3</td>
<td>12-LT</td>
<td>Male</td>
<td>5;7</td>
<td>2</td>
</tr>
<tr>
<td>28-CB</td>
<td>Male</td>
<td>5;0</td>
<td>2</td>
<td>14-MT</td>
<td>Male</td>
<td>6;9</td>
<td>1</td>
</tr>
<tr>
<td>13-JM</td>
<td>Male</td>
<td>5;2</td>
<td>1</td>
<td>30-AA</td>
<td>Male</td>
<td>7;3</td>
<td>3</td>
</tr>
<tr>
<td>8-LS</td>
<td>Male</td>
<td>6;6</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>16</td>
<td>Total</td>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

Table 5.1 Participant details against OCRI occurring in sessions involving TD children and children with ASD

The OCRI is always produced by an adult speaker

The adult most commonly used the token ‘sorry?’ as an OCRI device. She used this token as an OCRI device 18 times in the data set; 12 times in the interactions with TD children and six times in interactions with children with ASD. In interactions involving TD children the adult used the OCRI devices ‘sorry?’, ‘hey?’ and ‘what was that (sorry)?’ and in the interactions involving children with ASD, in addition to ‘sorry’, I identified one example of a solitary ‘what?’ and one example each of ‘what was that?’, ‘what were you saying?’ and ‘what did you say?’’. There was also one instance of ‘pardon?’, which was produced by the mother of 38-PO, rather than by the adult researcher administering the sessions. Table 5.2 displays an overview of all OCRI devices used in the data set by the adult in interactions involving both TD children and children with ASD.

Drew found that there appears to be very little difference between the use of different forms of OCRI devices, such as ‘pardon?’, ‘sorry?’, ‘what?’, ‘hmm?’, ‘huh?’, ‘hey?’, or even ‘what’s that dear/love?’, in terms of their sequential organisation, the circumstances in which they are chosen, their function or the consequences for the following repair sequence (Drew, 1997; 73). In line with Drew’s finding, I also observed no obvious differences between ‘sorry?’ and other OCRI devices in this data set, in terms of sequential environment or the type of repair sequence that followed. Therefore in this chapter I have combined the analysis of all tokens used as an OCRI device found in this data set.
<table>
<thead>
<tr>
<th>OCRI device</th>
<th>TD</th>
<th>ASD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorry?</td>
<td>12</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Hey?</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>What?</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>What was that (sorry)??</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>(Sorry) what were you saying?/</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>What did you say?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pardon?</td>
<td>0</td>
<td>1*</td>
<td>1*</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>11</td>
<td>27</td>
</tr>
</tbody>
</table>

*Table 5.2 Total numbers of types of OCRI devices spoken by adult speakers*

Apology-based repair initiators (such as ‘sorry?’, ‘pardon?’ and ‘excuse me?’, as opposed to ‘what?’ or ‘huh?’) can be viewed as formal or polite forms of initiation which could signal social distance between speakers. Robinson (2006) suggests that apology-based repair initiators create a stance which places the responsibility for the lack of communication on the repair initiator, rather than on the speaker of the trouble source. This could explain the frequency of ‘sorry?’ used as an OCRI device in this data set, as there are many reasons social distance between the participants may be oriented to, as outlined in chapter 4. All excerpts analysed in this chapter appear in full at appendix B.

### 5.3 Analysing the turns prior to open class repair initiation

This section will examine the turn/s prior to the adult producing an OCRI. It is recognised that identifying a definitive ‘cause’ for the production of an OCRI device is not possible. Rather, this is an attempt to identify patterns of interaction preceding OCRI, which could potentially lead to a breakdown in intersubjectivity. A breakdown in intersubjectivity could be contributed to by a number of potential sources. Due to this, excerpts in this section are examined at multiple sections when there are multiple factors in the turn preceding the OCRI device which may potentially contribute to its status as a trouble source turn.

Further, it is possible that there are other factors involved which are not identified here. For example, the analysis of non-verbal aspects of interaction is limited here due to the nature of the recording of the data set, but could contribute to a breakdown of intersubjectivity. In section 5.3.1, I examine the environment in which the OCRI was produced in interactions involving TD children. Then the same phenomenon is examined in section 5.3.2, in the interactions involving children with ASD.
5.3.1 Analysing the turns prior to OCRI in interactions involving TD children

This section discusses the turns prior to an OCRI device being produced by the adult in the interactions involving TD children. It first discusses repair initiated after a demonstrated mishearing on the part of the adult. This may include when the adult is not orienting to the child and when the trouble source turn is produced in overlap with other speech or noise. I then discuss repair initiated after demonstrating misspeaking on the part of the child, followed by repair initiated after sequentially inapposite turns (Kasper & Kim, 2007). The latter are further broken into those demonstrating misunderstanding regarding the task demands and those demonstrating disalignment in terms of participants’ pursued activities.

5.3.1.1 Repair initiated after mishearing

As OCRI is a general way of initiating repair, it is tempting to presume that this type of repair would largely occur after a failure of hearing on the part of the participant who initiates the repair. Evidence of mishearing before an OCRI device is found in previous research (Schegloff et al., 1977; Drew, 1997). However, Drew (1997) shows that sequential aspects of interaction may play a more important role in creating an environment where an OCRI is produced.

Evidence of mishearing before the adult produces an OCRI can be found in eight, or half, of the 16 excerpts identified in interactions involving TD children. I have further divided this category into excerpts which demonstrate a lack of orientation by the adult and excerpts which contain overlap, both of which contribute to mishearing. I have found no other research which has divided responses in this way, however when analysing the data it appeared to be a relevant distinction as the discussion over the following two sections shows. While some form of mishearing is common in the turns prior to an OCRI in the interactions involving TD children, this is often not the only factor contributing to a breakdown of intersubjectivity.

5.3.1.1.1 A lack of orientation

The following three excerpts demonstrate evidence of a lack of orientation by the adult in the turns prior to the OCRI. The first two occur after the adult has re-entered the testing room and is not yet orienting to the child, while the last excerpt shows that the adult’s attention is on a testing sheet rather than the child. The first excerpt, (3), occurs near the end of the testing session when the adult has finished a task at the table and the following task requires the participants to move to the mat on the floor. This requires the adult to change the camera which is recording. She needs to do this in
the next room, which has three televisions set up which show the camera view being recorded in real time.

(3) ID 504: 8-LS. 1:15:26 (TD: 6:6)\(^{11}\)
Transition from sun-moon stroop task to the generation of object substitutions task, which is a transition from the table to the mat. The camera is recording the table and they have already left the table when this excerpt begins so both participants are off-camera.

1  A: so I'll just straighten this up,
2       I'll just be >back in a moment<,
3       (0.6)
4  LS: I'll straighten it up.
5  A: ye-Oh thank you. >that'd be good<.
6  ((A leaves room))
7  LS: *(see if we can) place that over there*X
8  ((camera angle changes to mat where LS is visible on the mat))
9  LS: XX
10     (0.6)
11  LS: ah::
12  ((A opens the testing room door))
13  LS: did you see the TV in there.
14  (1.4)
15  -> A: sorry?
16     (0.3)
17  LS: did you see the TV in there.
18  A: the TV. yeah there's a TV in [there. ]
19  LS: [I heard it]
20  A: did you hear it?
21  LS: and it goes sss
22  A: [huh huh huh now- oh, thanks for straightening the mat
23  ((A moves into camera view))

In excerpt (3), when A returns from the recording room, the child, LS, asks if she saw the TV in the recording room (line 14). However, he asks this question when she has only just opened the door to the testing room and is not yet in the room orienting towards LS.

Similarly, excerpt (4) occurs when both the child, TV, and A are returning from a break. TV has sat down in his chair when he produces line 2. However, A is still preoccupied with preparing herself for the next task and is not yet sitting with TV or orienting towards him.

(4) ID 516: 55-TV. 1:01:36 (TD: 4:4)
Transition from a break back into the room. TV sits down at chair facing the camera and is eating an apple.

1  A: huh huh
2  TV: sometimes I need to >(cough [ (a bit)<. ]
3       {{(noise of ]door closing)}}

\(^{11}\) All data excerpts in this chapter are also in appendix B. The bracketed number at the start numbers the excerpt relative to the current chapter, while the ID number is the unique identification number allocated to each excerpt for analysis purposes. The ID number is used every time the excerpt is discussed so the reader can find other instances where the excerpt is discussed, if desired. For more detail on the labelling of excerpts, see section 3.3.2.1 and appendix A.
Without having access to the time children spend outside the room, it is difficult to contextualise TV’s utterance as I do not know what has occurred prior to this. Additionally, TV is still eating an apple so his talk is not clear in either the trouble source turn (line 2) or the repair (line 6) and there is some overlap in the problematic turn with the noise of the door closing in line 3. Thus there are a number of factors which could contribute to the breakdown of intersubjectivity in this excerpt.

The previous two excerpts both show examples where we can presume that the adult has not ‘heard’ or perhaps not ‘comprehended’ what the child has said plausibly due to a lack of physical proximity or orientation towards the child which is observable in the video footage. In the following excerpt, (5), A is present in the room and seated opposite the child, however, she is concerned with her testing notes, and organising the next task, when the child, LS, initiates a new topic in line 3.

(5) ID 502: 8-LS. 12:08 (TD: 6;6)
WPSSI-III - transition between the information subtest and the object assembly subtest. Participants are sitting at table, facing one another, but A is mostly off-camera, with eyes cast down at her testing notes.

1  (stop watch beeps twice)
2  (3.0)/((A flips through her testing notes))
3  LS: >(I got) timer< on my watch
4  A: sorry?
5  LS: I've got a timer on my watch
6  A: you've got a timer on your watch?
7  (1.0)/((LS shows A his watch))
8  A: oh:=
9  LS: =see= =is that a- is that a pokemon watch?
10 LS: yep.
11 A: [wow ]
12 LS: [that’s] the timer.
13 A: oh that’s pretty cool.

In excerpt (5), A is physically sitting opposite LS in terms of body orientation, however, in terms of eye gaze she is looking down at her clipboard and appears to be engaged in its contents, rather than orienting to LS when he speaks in line 3. Before this point she does not seem to be orienting towards LS. In addition to this, LS’s trouble source turn is spoken quickly and contains two words which are difficult to transcribe, thus this excerpt is also discussed as an example of misspeaking in section 5.3.1.2.
5.3.1.1.2 The presence of overlap

Section 5.3.1.1 demonstrates that an OCRI can occur after the adult has not ‘heard’ or ‘understood’ the child, due to being out of hearing range and/or not orienting to the child because of concern with other matters. However, there are other factors which could contribute to the adult’s ability to hear or understand the child’s contribution and thus trigger initiation of repair. One of these is when the trouble source occurs in overlap with other talk or noise in the testing room, as demonstrated in excerpt (4), where the trouble source turn overlapped with the noise of the heavy testing room door closing.

The following excerpt, (6), also shows an instance of overlap in the trouble source turn. In this excerpt, JR is completing puzzles as part of the WPPSI-III, object assembly subtest and his mother is also present in the room.

(6) ID 511: 33-JR, 10:47 (TD: 4;5)
WPPSI-III – object assembly subtest. Participants are sitting at the table facing one another.
1   A: [these make a bi:rd. put them together] as fast as you can.
2   [(A puts out puzzle pieces on the table in front of JR)]
3   (2.7)
4   JR: this is easy.
5   A: is it easy, can you show me¿.
6   Mum: "huh huh (. ) [ huh huh (. ) huh ° ]
7   [(2.5)/((JR puts puzzle together))]
8   A: o:h it was easy wasn’t it. a:h well [ done. ]
9   Mum: ["huh huh huh]huh huh huh°
10  (2.2)
11  A: now some of them might get a little bit more tricky.
12  ((A picks up puzzles pieces))
13  Mum: ((cough cough [cough])
14  JR: [>can isly do<] puzzles.
15  [(A is putting away puzzle pieces below the table)]
16  (0.2)
17  -> A: sorry?
18  JR: I can ea:isly do [ puzzles:.
19  A: [you can easily] do puzzles, yeah, you’ve just
20  shown me that was really, really quick.

In line 14, JR makes a comment about his abilities in completing the task. During this turn, JR’s mother is coughing (line 13). This likely contributes to the adult’s inability to hear the utterance and also influenced my own inability to hear and transcribe the turn. Additionally, ‘easily’ is pronounced atypically in this turn.

Some degree of overlap occurred in five of the 16 examples of OCRI in the TD interactions, including excerpt (6). This may have contributed to the adult’s ability, or inability, to accurately hear and process what the child had said. The relevant excerpts are provided below in abridged format, as all of these excerpts are examined in more detail elsewhere in this chapter.
(7) ID 513: 33-JR. 37:25 (TD: 4:5) – abridged
Tigger-Piglet inhibition task. Participants are sitting on the mat facing one another.
5  A:  tsk now
6  (0.9)
7  A:  we’re going [to]-
8  JR:  [I ’ve se_en a baby (.) pig(.)le:t¿
9 - >  A:  sorry?
10  JR:  I’ve seen a baby [piglet]

(8) ID 515: 52-NC. 36:52 (TD: 4:4) – abridged
Transition from the semantic fluency task to the test of pretend play. Participants are on the mat. NC is lying on the mat on his stomach with his legs bent and his feet in the air.
6  A:  no:w, let’s have a [little look]
7  NC:  [ can I be ] baby;
8  (0.5)
9 - >  A:  [ sorry? ]
10  (((A looks back towards NC)))

(9) ID 509: 28-CB. 0:17 (TD: 5:0) – abridged
WPPSI-III - block design subtest. CB is sitting at the table.
3  A:  the first thing we’re going to do today is we’re gonna
4   play with some blo:cks.
5  CB:  (yeah,)
6  A:  no[:w]
7  CB:  [wh]ere are the blocks.
8 - >  A:  sorry? the blocks are down [↑here.]
9  ((((A turns to left side to get
10   blocks from under the table)))

(10) ID 503: 8-LS. 40:44 (TD: 6:6) – abridged
Test of pretend play - stimulus objects are Doll, and a white plastic cup and then Doll, a black plastic box and white plastic counter. Participants are sitting on mat facing one another.
58  LS:  she gets out too.
59  ((LS removes Doll from the box))
60  A:  ch, good o[ne].
61  LS:  [th]ere she goe:s:.  
62  A:  that was [really good],
63  LS:  [ keep D]Oll (. ) out?
64 - >  A:  hey?
65  LS:  keep [Doll] out¿
66  ((((LS points to Doll)))

Many of the excerpts containing overlap in the trouble source turn contain only minor instances of overlap. In Excerpts (7) and (9) especially, the overlap is only brief and did not affect my ability to transcribe the turns in which the overlap occurs. Overlapped speech in excerpts (6), (7), (8), (9) and (10) consistently occurs before a complete turn construction unit (TCU) is produced by the adult, or before the adult has completed her turn at talk. The point at which a speaker comes to the end of a TCU constitutes a transition relevance place (TRP), or a point where a ‘transition’ from one speaker to another may occur (Sacks et al., 1974). That the overlaps in these excerpts take place outside of a TRP means a change in speakership is occurring in each of these excerpts in an unlikely position.
Thus from the adult’s perspective, a turn produced by the child before her TCU is complete, is an unexpected time for a conversational partner to begin to speak.

In section 5.3.1.1, I have examined instances of mishearing on the part of the adult participant occurring before she produces an OCRI. In section 5.3.1.2, I discuss instances of misspeaking in the trouble source turn.

**5.3.1.2 Repair initiated after misspeaking**

Another potential source of trouble which may occur in the turn(s) preceding an OCRI is misspeaking. That is, the adult may not understand the child’s prior turn due to a problem with speaking on the part of the child, which could lead to repair initiation. In excerpt (4), the trouble source turn is difficult to understand because the child is eating an apple when he speaks which results in difficulty in articulation. In excerpt (6), the child mispronounces the word ‘easily’ which is a key word in understanding his turn, as demonstrated by the child’s emphasis on it in the repair. Difficulties in pronunciation, grammar and expression of ideas were not uncommon among the TD children. Of the 16 examples of open class repair sequences, seven contained some degree of misspeaking, which could have contributed to a breakdown in intersubjectivity. As excerpts (4) (ID 516) and (6) (ID 511) have already been discussed, they will not appear in this section.

The following excerpt, (11), exemplifies misspeaking in the trouble source turn. Throughout this session, the child’s speech is very difficult to understand due to her difficulties with articulation and the low volume in which she often speaks.

(11) ID 506: 27-IY. 12:52 (TD: 4;5)  
*WPPSI-III - vocabulary subtest. Participants are sitting at table facing one another.*

1 A: tell me what is a shoe.
2  (4.2)
3 IY: [I've got a *(silver) one]*  
4 {((IY lifts her foot up to show A and is looking at it just above the table))}
5 IY: *it’s got (flowers) on it.*
6 A: ah you have haven't you, yeah, those very pretty shoe.
7 could you tell me, what- what is a shoe.
8 IY: um  
9 (7.8)/((IY is restless and moving about in her chair))
10 A: a shoe is something you put on your foot. yeah?  
11 IY: **(XXX)**
12 A: sorry?  
13 IY: **(XXX)**
14 A: yeah, a shoe is something you put on your foot. that's right.
15 now  
16 (bang))
17 IY: I heard- I heard that noise
18 A: did you, the XX (the bang)
IY’s turn in line 12 was difficult for two transcribers to understand. After A initiates repair using ‘sorry?’, IY, responds with a turn in line 14 that sounds the same as her utterance in line 12. This is spoken quietly and as multiple listens of the audio and audio-visual recordings of this could not clarify the turn for me or a second independent transcriber, it is very probable that the adult in the interaction also had difficulties hearing this turn. This is supported by her lack of uptake of any new information after the repair in line 14. In line 15, A continues her testing without any orientation to the insertion sequence in lines 12-14. This excerpt is discussed in more detail at (18) in 5.3.1.3.

Difficulties with expression and with adequate volume were a feature of IY’s talk and we can see in the following two excerpts that this causes the adult to initiate repair using OCRI three times during her session. The following excerpt, (12), occurs during the free play session. As the only session led by the child, IY has increased freedom here to provide novel contributions to the interaction. IY announces that she is making a cake in line 1 and her actions throughout this excerpt support this pretend activity.

(12) ID 508: 27-IY. 1:17:53 (TD: 4;5)
Free play session - stimulus items include the white plastic bowl, the black plastic stick, the white plastic counter and a cardboard tray like a takeaway tray from a bakery. There are also other toys and objects in reach. Participants are sitting on the mat facing one another.

1  IY: oh you know wh- you know what I'm making? a cake.
2  A: ohh, yum yum!
3  IY: making a birthday cake.
4  A: oh b1:rhday cake!
5  IY: yeah, I'm making a Barbie one.
6  A: oh, wow, >(making the) Barbie<
7  IY: oops
8  (0.6)
9  IY: now what (we) have to do is <get some wait->
10 (0.5)
11 IY: get some water
12 (1.2)/{(IY drops counter in the plastic bowl)}
13 IY: [got it]
14 [((IY makes a stirring motion with a stick in a plastic bowl))]
15 A: *ah (mix) some water*
16 IY: and now I need some milk
17 A: ah: a bit of milk
18 (3.1)/{(IY still stirring the stick around the bowl)}
19 IY: now let it cook.
20 A: ah now it cooks.
21 (10.4)/{(IY picks up the cardboard tray and is trying to push the stick through the middle of it)}
22 IY: they can't eat it X til I make a hole.
23 -> A: sorry?
24 IY: I ca:n't make a hole.
25 A: can't make a hole? oh that's okay.
26 IY: what happens if it- what- if you- would you- when I make a hole
27 are you gonna get a (shock).
28 A: it might break. it might be a good idea not to break-
29 make a hole in there.
The trouble source turn takes place in line 23 and contains a syllable which I could not transcribe. However, perhaps more importantly, it also contains an underspecified referring expression; the word ‘they’. During the course of this ‘game’, IY has been the protagonist in the pretend scenario. That is, she is the one making the cake and there has been no mention in this excerpt or prior to it, of who will eat the cake. When she begins line 23 with ‘they’ it is difficult to know who this refers to. Additionally, the message, or logic of this contribution is difficult to understand and perhaps requires further explanation. It is unclear why ‘they’ can’t eat until there is a hole in the tray and this potentially makes line 23 difficult for the adult to understand.

As mentioned, there were an additional three excerpts which show evidence of misspeaking by the child in a turn prior to the OCRI and these are presented below in abridged format with brief discussion, as they are all discussed in more detail in other parts of this chapter.

Excerpt (13) takes place during the test of pretend play. After the adult asks the child to act out Ted’s bedtime routine, IY’s response is unclear.

(13) ID 507: 27-IY. 59:30 (TD: 4;5) – abridged
Test of pretend play – stimulus object is Ted. All other toys are off the mat to the right of A. Participants are sitting on mat facing one another.
8 A: can you make Teddy get ready for bed.
9 IY: no::, I know how to (.) (do it. wanna be a sleep-over)
10 (.) friend.
11 -> A: [wh- what was that sorry? ]
12 [((A leans in towards IY))]
13 IY: *sleep-over friend*
14 A: a sleep-over friend, yeah¿ can you sh- can you show me.
15 (1.0)
16 IY: we need X the doll.

The talk in lines 9-10, ‘wanna be a sleep-over friend’, is not produced clearly enough to convey the intended meaning to A. The word which I assume from the turns which follow it is ‘over’, is particularly difficult to understand. There are a range of difficulties with the production of this turn, with pacing and clarity of articulation especially playing a part in influencing the adult’s inability to understand the turn.

Excerpt (14) demonstrates another instance where the trouble source turn is very difficult to hear and thus transcribe. It is unknown whether the turn in line 13 is ‘dove’, ‘numb’ or something completely different and the repair from JM in line 17 fails to clarify this.

(14) ID 505: 13-JM. 29:38 (TD: 5;2) – abridged
WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another.
11 A: you’re not sure, that’s alright. what are lollies.
12 (0.8)
Excerpt (15), also discussed at excerpt (5), shows an instance where LS produces a turn which is difficult to hear in line 3, which is produced quickly at the beginning of the turn. My best guess at transcribing this turn records it as a grammatically incorrect utterance, which is corrected in the repair proper.

(15) ID 502: 8-LS. 12:08 (TD: 6;6) – abridged

WPPSI-III – transition between the information subtest and the object assembly subtest. Participants are sitting at table, facing one another, but A is mostly off-camera, with eyes cast down at her testing notes.

1 (stop watch beeps twice)
2 (3.0)/((A flips through her testing notes))
3 LS: >I got< timer< on my watch
4 -> A: sorry?
5 LS: I’ve got a timer on my watch

In this section I have looked at excerpts where there are difficulties in the child’s speaking in the turn prior to the adult’s production of an OCRI, which could contribute to a breakdown in intersubjectivity. The findings have demonstrated a range of types of misspeaking occurring before an OCRI. Further breakdown of these types of misspeaking is not useful in such a small sample of excerpts, however the findings here suggest a range of problems with misspeaking and that there is no clear relationship between a type of misspeaking and the production of an OCRI. Additionally, while there are issues with misspeaking with turns prior to an OCRI in many of the TD excerpts, some of these are rather minor in nature and occur with other factors which may lead to a breakdown in intersubjectivity. For example, the grammatical error in excerpt (15), would probably not in itself be sufficient to result in a breakdown of understanding. It is noteworthy that this excerpt was found to have another problem in the turn preceding the production of an OCRI; a lack of orientation from the adult. In section 5.3.1.3, I will focus on problems in turns preceding an OCRI which appear to be less concerned with comprehending what was said and more focused on understanding why a turn was produced.

5.3.1.3 Repair initiated after sequentially inapposite turns

Drew (1997) shows that in open class repair, ‘difficulties in comprehending, and therefore responding, may arise from the sequential relationship between the prior (trouble source) turn and its prior sequence’ (Drew, 1997; 73). While emphasising that that there is no clear-cut, deterministic
relationship between types of trouble sources and types of repair sequences, Drew (1997) examines excerpts where OCRI are produced after unmarked topic changes or when the social activities participants are adhering to within an interaction differ. In support of this, Schegloff has stated that there appears to be an association between repair and topic initial turns (1979; 270-271).

Drew (1997) analysed excerpts where OCRI occurred after a sequentially inapposite turn. These were further broken into two categories; topically disjunctive turns, where the trouble source turn is on a notably different topic than the turn prior to it, and turns which were sequentially inapposite in terms of pursued action, where the trouble source turn is on the same topic as the prior turn but speakers are attempting to achieve different social actions with the talk. Additionally, I have identified sequentially inapposite turns which occur as the children in the data set produce a turn which is not aligned with the previous sequencing as the turn is attempting to work out the task demands. This is likely unique to the nature of the clinical testing environment, outlined in chapter 4. This section first covers topically disjunctive excerpts, section 5.3.1.3.1 discusses excerpts I have characterised as trying to work out the task demands, while sequentially inapposite turns due to pursuing differing activities are covered in section 5.3.1.3.2.

Topics sometimes shade into one another throughout the course of an interaction, while at other times there is a clear topic boundary which becomes analysable to interactional analysts (Schegloff & Sacks, 1973; 305). In his analysis of open class repair, Drew found that there was often a shift in topic in the turns prior to an OCRI being produced and, more specifically, this topic shift was overwhelmingly an unmarked topic shift from the perspective of the OCRI producer (1997; 75). For example, in excerpt (16), taken from Drew (1997), Lesley abruptly changes topic at the end of a telephone call from enquiring about Patrick’s life to telling him something of her own family’s life; that her son, Gordon, is ‘at Newcastle now’. This causes Patrick to initiate repair by using the word ‘sorry’ with a rising intonation (line 9).

(16) Example from Drew (1997; 75)\(^{12}\)

<table>
<thead>
<tr>
<th>Lesley: how are you keeping.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patrick: oh I’m very [well thanks?</td>
</tr>
<tr>
<td>Lesley: [.hhhhhh are you- are you keeping yourself busy,</td>
</tr>
<tr>
<td>Patrick: ooo ye[s my goodness [XXXXXX.</td>
</tr>
<tr>
<td>Lesley: [.hhh [yes I know: w hhuh heh</td>
</tr>
<tr>
<td>Patrick: XX [XXXXXX</td>
</tr>
<tr>
<td>Lesley: [.hhh Gordons at Newcastle now</td>
</tr>
<tr>
<td>8 (0.7)</td>
</tr>
<tr>
<td>9 -&gt; Patrick: sorry?</td>
</tr>
<tr>
<td>Lesley: .hh.tlk Gordon is at New[castle</td>
</tr>
<tr>
<td>11 Patrick: [is he, ye:s,</td>
</tr>
</tbody>
</table>

\(^{12}\) Simplified for consistency with transcription conventions used in this thesis.
When this is referred to this as an abrupt topic change, it is so only from the repair initiator’s perspective (Schegloff, 1990; 70; Drew, 1997; 82); Patrick in the above example. Paraphrasing Drew’s analysis of this excerpt (1997), Lesley’s first two turns can be seen as ‘conventional news exchanges’, which participants typically engage in to end a phone call. From this perspective it can be seen that Lesley’s turn in line 7 is simply continuing on the ‘conventional news exchange’ when she switches the focus from Patrick’s life to her own. However, the fact that in line 4, Patrick has responded so enthusiastically to her enquiries suggests he has more to say on the topic of his busy life. Combined with the fact that Patrick is yet to reciprocate the news solicitation, Lesley’s introduction of her own family news without having being asked about it, makes this an unanticipated conversational move from Patrick’s perspective (Drew, 1997; 79). Further, it is an instance where intersubjectivity has momentarily broken down between the participants and the OCRI in line 9 is used to repair this breakdown in intersubjectivity.

Like Drew (1997), I found that OCRIs often occurred after an unexpected topic shift in interactions involving TD children. Excerpt (17) clearly demonstrates this. In this excerpt the child, CB, is completing the WPPSI-III, block design subtest where he has to replicate simple patterns of blocks which the adult has constructed on the table in front of him. He completes one pattern successfully (line 2), and receives positive feedback from the adult (line 3), before he makes a comment about the blocks in line 4.

(17) ID 510: 28-CB. 6:41 (TD: 5;0)
WPPSI-III – block design subtest. Participants are sitting at the table facing one another. There are two red blocks side by side on the table in front of CB.
1  A:  huh huh now see if you can make (.) these match.
2   (3.8)/((CB completes block design))
3  A:  oh, we(h)ll done! that was excellent.
4  CB:  is there a nose [there]. (.)
5         [((CB is pointing to the join between the
6        two blocks))]
7  ->  A:  sorry?
8  ((A looks at CB and leans forward looking at CB’s blocks))
9  CB:  [there’s no n:ose there.]
10 (((CB taps finger against the blocks))]
11 A:  yeah, like a nose. it is like a nose. it’s like a face, isn’t
12 it...hh now, very good. tsk, now this time I’ve got some
13 different blocks to show you.

It is difficult to understand what CB means by the turn ‘is there a nose there’ in line 4, however it is clear that he is commenting on the blocks, as he is pointing to them while he uses the referent ‘there’, as demonstrated in line 5. Additionally, in the previous few block designs, he has often commented on things he thinks the blocks look like, for example, he has already said that previous block designs have resembled ‘stairs’, ‘a t-shirt’ and ‘Mickey Mouse’. Thus it seems fair that A’s
interpretation of his turn as communicating that the blocks look like a face with a nose in line 11 is appropriate, even though it seems as if CB is saying the pattern is similar to something with no nose. Regardless of the specifics of CB’s turn, the fact that he is pointing to the blocks indicates that he is contributing something to the interaction which he believes to be related to the mutual objects in the participants’ shared space; the blocks on the table. However, for A the sequential link between the finishing of the last block design and the question regarding a nose is initially unclear. Especially considering how quickly this turn follows on from A’s enthusiastic feedback in line 3, A appears to orient to this as if it is an abrupt topic change which is unrelated to completing the task at hand.

Drew (1997) notes that topic changes in conversation are usually marked lexically (i.e. with words such as ‘anyway’) and with prosodic features such as increased amplification, raised pitch, in-breaths, pauses and sound stretches (Drew, 1997; 76; see also Schegloff, 1979). When a speaker neglects to preface a topic change with such features, the environment becomes ripe for a next turn repair initiation. In Drew’s excerpt at (16), Lesley’s turn displayed few markers of a topic change when she changed the topic from enquiring about her participant’s life to providing information regarding her son’s life. Similarly, CB’s contribution in excerpt (17) is unmarked, presumably because CB does not view this move as a topic shift.

Many of the excerpts analysed in this chapter can be seen as containing abrupt topic changes, however with a broader view such examples can be recast as problematic to the adult because they contain some sort of unanticipated response. Following on from Kasper & Kim (2007), I will refer to these as ‘sequentially inapposite responses’. Most excerpts identified as containing instances of OCRI exhibit some element of ‘unexpectedness’, even if they also contain overlap and or instances of misspeaking in the trouble source turn.

To demonstrate this, excerpt (18) presents ID 506, which was also discussed at (11). In this excerpt, IY has difficulty with articulation in the turn prior to A producing an OCRI, however it is also evident from this transcript that she is having other difficulties with answering A’s question. Before this point, A has asked the test question ‘what is a shoe?’, in lines 1 and 8, and not received a response deemed sufficient for the test requirements.

(18) ID 506: 27-IY, 12:52 (TD: 4:5)
WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another.
1 A: tell me what is a shoe.
2 (4.2)
3 IY: [I've got a *(silver) one]*
4 [[(IY lifts her foot up to show A and is looking at it just above the table)]]
5 IY: *(it’s got (flowers) on it.)*
A: ah you haven't you, yeah, those very pretty shoe.
could you tell me, what- what is a shoe.
IY: um
(7.8)/((IY is restless and moving about in her chair))
A: a shoe is something you put on your foot. yeah?
IY: °°(XXX)°°
A: sorry?
IY: °°(XXX)°°
A: yeah, a shoe is something you put on your foot. that's right.
now
((bang))
IY: I heard- I heard that noise
A: did you, the XX (the bang)

IY’s first response to A’s question ‘what is a shoe’ is to lift up her shoe and show A an example of a shoe in lines 4-5, while providing information about her own shoe (line 3). The showing of a shoe seems to be a common response to this test question and in the context of everyday conversation, this is likely to be a relevant and sufficient response. However, within the context of this test, a verbal definition is required. In lines 7-8, A pushes for a more ‘appropriate’ response, in accordance with the task requirements, by acknowledging IY’s response, then asking the whole question again. From IY’s perspective, she has ‘answered’ the question, so A pursuing a response likely leaves her unsure of what further response is required.

A provides a sample answer in line 11 stating, ‘a shoe is something you put on your foot. yeah?’ The request for confirmation at the end of this sentence creates an environment where the preferred response would simply be a demonstration of agreement such as an agreement token, or perhaps a repetition of A’s statement. Even though it is unclear what IY’s softly spoken response to this turn is, it is clear that it is not a straightforward agreement token or a repetition of A’s turn. It appears to be a contribution which is not sequentially aligned with the previous turn, while additionally being difficult for A (and this analyst) to hear, due to its low volume.

On analysing the 16 excerpts from interactions involving the TD children, it became apparent that the majority of these repairs occur after sequentially inapposite, or at least sequentially unanticipated, turns. In addition to this, these trouble sources may occur in overlap or be misspoken by the child so that the adult finds them additionally difficult to hear, or comprehend. The exceptions to this trend, are excerpts (3), (4) and (5) where repair was initiated due to a lack of orientation. However, these are actually instances of the child initiating a turn from ‘silence’ so it is impossible for them to be sequentially inapposite, at least in terms of verbal contributions to the interaction. In a sense, these three excerpts still count as unanticipated turns as they are produced before the adult becomes ‘accountable’ to take part in the interaction. Further, the adult usually has privileged rights to initiate tasks and direct the session in this clinical testing environment, as
outlined in chapter 4, so it is somewhat unusual for the child to take on an initiating role in these sessions.

In the following discussion regarding OCRI occurring after sequentially inapposite turns, I have divided the examples into two categories based on the reasons why the turns are inapposite. Firstly, I will explore unexpected turns which appear to be due to the child not yet understanding the task demands. This is a subcategory of sequentially inapposite responses which I have not found documented in other literature and is likely to arise as a result of the clinical testing environment in which these interactions occur. Secondly, I will discuss excerpts which occur due to a disharmony between the activity the adult intends to take place and the activity the child attempts to pursue. These are referred to as ‘disaligned’ sequences and are further defined at the beginning of section 5.3.1.3.2. These categories are somewhat artificial and, in accord with Drew (1997), in reality excerpts discussed exist on a continuum which range from children demonstrating a lack of clarity regarding what is required of them during tasks to deliberate attempts to resist alignment with the adult’s pursued activity.

5.3.1.3.1 A lack of understanding regarding the task demands

The excerpts discussed in this section involve sequentially inapposite turns preceding the trouble source turn where children demonstrate a lack of understanding about what is required of them in the task. They can be characterised as the children attempting to feel out what is expected of them in the upcoming task. As discussed, this data set contains interactions in a clinical testing environment, which most of these children would not be familiar with, and where tasks are often initiated with minimal instruction. In chapter 4, I discussed excerpts from the WPPSI-III, information and vocabulary subtests, which showed evidence of in situ rule learning, where children learn the rules of the task through the interactional process of doing the task. Excerpt 18 (ID 506) discussed in the last section is an example of this, where the child, IY, is learning that a verbal description of a shoe, rather than a non-verbal showing of a shoe, is the response required in the WPPSI-III, vocabulary subtest. Tellingly, excerpts demonstrating the children feeling out the task demands by producing turns related to understanding the administration of the tasks rather than completion of the task, occur at the beginning of a new task, or the introduction of a new element in the task.

Excerpt (19) below occurs only 5 minutes into the whole testing session. So far during the session, the child, JW, has only completed the WPPSI-III, block design subtest, and they have just transitioned into the WPPSI-III, information subtest. As discussed in chapter 4, the block design subtest does not require the child to speak, while the information subtest requires children to formulate verbal
responses to a wide range of questions, without introduction or explanation from the adult. This task typically elicits IRE sequences.

(19) ID 514: 51-JW. 5:05 (TD: 4:0)

WPPSI-III - information subtest. Participants are sitting at table, facing one another.
1  A: so maybe I’ll pop the lid on, (0.2) and now they can go here,
2   (0.3)
3  A: tsk and now could you tell me (. ) what colour is grass.
4  JW: (. ) mm [ ah ]
5  A: [what] colour is grass.
6   [((JW looks towards A))]
7  JW: um [me and you.]
8   [((JW makes hand gesture towards himself then A))]
9  -> A: sorry?
10  JW: [me and you.]
11  [((JW makes hand gesture towards himself then A))]
12  A: yeah¿
13  JW: mm
14  A: d’you know what colour grass is.
15   (0.5)
16  JW: [Erm (let’s) (. ) number (. ) that one.]
17  [((JW stands and leans over towards A and points to something
18     on her test sheet)]
19  A: that one¿
20  JW: [yeah.]
21  [((A moves test sheet to her chest covering the answers and JW
22     sits back down on his seat))]
23  A: how many ears do you have.
24  JW: [two!]
25  [((JW holds up two fingers with palm facing towards his face))]

JW’s difficulty answering the test question is evident from the gaps in lines 4 and 15 and the hesitation markers ‘mm’ ‘ah’ and ‘um’. His answer to the question in line 7 is unusual and difficult to contextualise, however it appears to be intentional as he repeats it as a repair in line 10 complete with the accompanying deictic hand gesture. His response could plausibly be a metacomment or request for clarification regarding who is doing the task, rather than an answer to the question, so this could be an insertion sequence within the IRE sequence. Additionally, as A has a British accent this may be adding to JW’s difficulty in comprehending the test question ‘what colour is grass’.

‘Colour’ is pronounced by A more like the way Australians would pronounce ‘collar’, and ‘grass’ is said so that it rhymes with ‘mass’, rather than the usual Australian pronunciation which would rhyme with ‘brass’. Whatever difficulty with the question JW has, from A’s perspective, his response in line 7 is clearly not an expected answer to this question ‘what colour is grass?’. Thus the turn in line 7 is sequentially inapposite and A responds to it with an OCRI device. This test question leads to an extended repair sequence which does not appear to reach resolution, details of which will be covered in section 5.4.1.4.
Excerpt (20) displays a very similar type of example where the child, JM, appears to have difficulty understanding what response A is pursuing. This excerpt occurs in the WPPSI-III, vocabulary subtest, where the child is required to give basic definitions of names for common objects. As discussed in chapter 4, in this test the goal is to elicit a functional definition. The OCRI occurs after four of these questions have been completed, during which JM appears to be treating the test as a word association task, rather than providing verbal definitions. For example, in the three questions preceding this excerpt, JM is asked ‘what is a shoe?’, to which he responds ‘shoelace’; ‘what is a telephone’ to which he responds ‘numbers’; and ‘what is an umbrella?’ to which he responds ‘rain’. This indicates that although this excerpt does not occur in the first question of this subtest, JM has not yet worked out the type of response the adult is pursuing in this task.

(20) ID 505: 13-JM. 29:38 (TD: 5;2)
WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another.
1 A: what is a bicycle.  
2 (1.9)  
3 JM: °°bicyc°°  
4 (5.3)  
5 JM: a bike;  
6 A: yeah, good one. it is a bike. (.) can you tell me a little bit more?  
7 (22.0)  
8 A: can you tell me a bit more about a bicycle.  
9 (0.8)  
10 JM: nuh.  
11 A: you’re not sure, that’s alright. what are lollies.  
12 (0.9)  
13 JM: .hh um, (dove/numb).  
14 (0.3)  
15 -> A: what was that?  
16 (1.0)  
17 JM: (dove).  
18 A: °mm° good, can you tell me a bit more.  
19 (5.1)  
20 A: what are lollies:.  
21 (1.0)  
22 JM: for eat.  
23 A: yeah good one. they're for eating. good one.  
24 (2.3)  
25 A: that’s right they are they’re for eating. tsk. what is a dog.

When the trouble source occurs in line 13, it is in response to the question, ‘what are lollies?’. After a pause, JM gives an outbreath and an ‘um’ before uttering a word which is difficult to hear. The child could be providing the name of a type of lolly and could perhaps be referring to Dove chocolate, however, this cannot be confirmed. What is clear is that from A’s point of view this is not an adequate response to the test question. Merely from the fact that it is a one word response, it can be deemed insufficient for the purposes of defining lollies. After further prompting, JM issues a different response in line 22, ‘for eat’. A orientus to this as an acceptable answer as she responds to it with extensive praise in lines 23 and 25.
Similarly to excerpt (20), excerpt (21) also demonstrates a sequentially inapposite turn as the trouble source. This occurs during the beginning of the test of pretend play. However, it does not occur at the very start of the session. LS has already completed one task in the test, which was to act out what he could pretend to do with a bowl and a spoon. A then puts aside these two objects, just before this excerpt begins and introduces the doll and a white plastic cup to the play space as the second set of stimulus objects. While this is not the first scenario LS has completed in the test of pretend play, it is the first task he has attempted involving the doll in the role of the protagonist. This is a more complicated form of pretence where behaviours need to be attributed to a third party rather than just the self. The following is a long excerpt, however it is necessary to include it all to fully appreciate the cues LS is drawing on to understand the task demands.

(21) ID 503: 8-LS. 40:44 (TD: 6:6)
Test of pretend play – stimulus objects are Doll, and a white plastic cup and then Doll, a black plastic box and white plastic counter. Participants are sitting on mat facing one another.

1 A: now I've got something else to show you.
2 (1.0)/((A moves Doll and a white cup into the play mat))
3 LS: ((cough))
4 A: =now let's see, (.) what could Doll do with this.
5 LS: (1.1)
6 LS: (1.6)
7 LS: >ah<
8 (1.5)/((LS puts the cup upside down and stands Doll near the cup))
9 LS: (there)
10 (0.6)
11 A: now what's she doing.
12 LS: making a DRum.
13 A: ah it's a drum. good [idea,]
14 LS: [drum ] drum drum=
15 A: =ah that was a super idea, well ↑done. (0.7)
16 LS: <now I> put them [over there?]
17 [((LS picks up Doll and the cup and moves them to the side of the play space))]
18 A: yep (.) well we'll keep Doll here because we've got something else.
19 (0.5)/((LS moves Doll back to play space and A turns to get more objects from a bag beside her))
20 A: what could she do (.) [with these? ]
21 [((A places a black plastic box and white plastic counter in the place space with Doll))] (2.2)
22 LS: XX [this (could) go he::re] XXXXXXX
23 [((LS is moving the box around then places it open side up in the middle of the play space))]
24 (0.9)/((LS places Doll standing up in the box))
25 LS: (and) (0.2)
26 LS: .hhh hh (1.8)
27 LS: oh:::..
Following A’s lead of removing the objects from the play space after the first pretend scenario was complete, LS attempts to remove the objects from the play space after completing the second scenario in lines 19-21. However, A intervenes, explaining in lines 22-23 that they have something else for Doll to do. The following turns consist of A introducing the next set of stimulus objects (the doll, a box and a counter; lines 24-28) and LS acting out an appropriate action for the doll to do with the box and the counter; to stand in the box holding a Frisbee (lines 30-51). The pair then work together to wrap up the scenario with LS removing the counter and the doll from the box (lines 52, 56, 58, 59 and 61) and A providing encouraging feedback (lines 57, 60 and 62). The problematic turn occurs in line 63 when LS asks the adult a question which is still relevant to the task, but is administrative in nature. In this turn, LS clarifies whether to keep the doll in the play space. This is likely a consequence of lines 19-23, where LS tried to assist A to remove toys and objects from the play space and A stopped him, as they still required the doll for the next scenario. However, from A’s perspective, the trouble source turn is not aligned with LS’s usual role in the task as a ‘recipient’ or the ‘doer’ of the task. Rather it is concerned with administration of the test, a role for which A is typically responsible. This makes the turn unexpected from A’s perspective.
As discussed in chapter 4, the test of pretend play typically consists of IRE sequences with non-verbal actions in the response turn. In excerpt (21), A has closed off the prior IRE sequence by providing an evaluation in lines 60 and 62. This excerpt represents an instance where A is caught off-guard as, sequentially, LS’s trouble source turn occurs at a time when the child would not usually have cause to speak. The next turn would typically involve A producing another initiation, such as the next test question. A question from the child in this position, after an evaluation is produced by the adult, is disaligned to both the overall structure of the task which elicits stacked IRE sequences, and the established institutional roles of test administrator and test taker.

Similarly, the following excerpt displays an unexpected contribution by the child. Excerpt (22) occurs at the very beginning of the test session where A and the child, CB, have just entered the room. CB is already seated at the table which is currently empty, with no blocks visible in the play space.

(22) ID 509: 28-CB. 0:17 (TD: 5;0)
WPFSI-III - block design substest. CB is sitting at the table.
1  A: [ yeah huh huh .hh no::w ]
2   [ (( A sits down on the table )) ]
3  A: the first thing we’re going to do today is we’re gonna
4   play with some blo:cks.
5  CB: (yeah,)
6  A: no[:w]
7  CB: [wh]ere are the blocks.
8 -> A: sorry? the blocks are down [:there.]
9   [((A turns to left side to get
10   blocks from under the table))]
11  CB: yeah.
12  A: now, I’m going to put, I’m going to make a little picture.
13  CB: ok.

As shown in chapter 4, this task requires only non-verbal responses from the child, which means that verbal interaction is rare in this task. Additionally, the setup, preparation and administration of tasks are the responsibility of the adult in this clinical context, so it is unusual for children to contribute much verbally during the start of a new task. However after being advised he will play with blocks, and without seeing any, CB asks where the blocks are in line 7 and A orients to this turn as problematic by initiating repair in line 8. Similarly to excerpt (21), the trouble source turn from CB is more concerned with the administration of the task rather than its completion. The trouble source turn disaligns with the institutional roles of ‘administrator’ and ‘recipient’ of the task and also with the sequential norms where the adult would typically initiate the test requirements in the next turn. This is the only example of the adult producing an OCRI device which she then repairs in the interactions involving TD children.

The previous four excerpts ((19), (20), (21) and (22)) all occur towards the beginning of a task and involve the child attempting to understand the procedure of the task, how to respond to the task, or
seeking clarification about the task. As discussed in chapter 4, the tasks administered in this data set are often not explained or described before they are begun. This is true of all of the tasks analysed in this section so far and could contribute to an environment where there is cause for the task recipient to gather information on the task requirements.

The final excerpt in this section, (23), is one where the turn which contains the trouble source is inapposite to the previous turn, however this is not concerned with the child familiarising himself with the task demands, rather it is a metacomment about the difficulty of the task. This excerpt occurs during the WPPSI-III, information subtest, and LS has already answered many of these general knowledge questions, which get progressively more difficult.

(23) ID 501: 8-LS. 9:44 (TD: 6:6)
WPPSI-III - information subtest. Participants are sitting at table, facing one another. A is completely off-camera.
1 A: what day comes after Saturday.
2 (7.9)
3 LS: Sunday?
4 A: yeah, perfect, that was right.
5 (2.3)
6 A: what are shoe:s made of.
7 (1.6)
8 LS: this one's har:d;
9 (2.2)
10 -> A: what was that sorry?
11 LS: this one's har:d:-
12 A: =that one's hard isn't it. (. ) shall we try the next one;
13 LS: yeah.
14 A: how many days make a week?

In the data set there were a number of instances identified where the child produced a turn which was a comment about the experience of doing the task rather than a comment contributing to the process of doing the task. A’s question in line 6, ‘what are shoe:s made of?’, is an initiation in an IRE sequence, which typically leads to the production of a response in the following turn. Rather than provide a relevant response to the initiation, LS provides a reason for not providing a relevant response; that the question is difficult (line 8). The absence of a response in this environment makes line 8 an unexpected or inapposite response to A’s question. That LS feels the need to explain the absence of a relevant response after A’s initiation demonstrates his orientation to the importance of providing responses in this interactional context.

This section has covered excerpts in which trouble source turns have occurred as a result of the child attempting to feel out the task requirements or making some sort of metacomment about the task, rather than contributions by the child used to complete the task. In section 5.3.1.3.2, I explore the remainder of the excerpts which also occur as a result of a sequentially inapposite turn, however, in
these excerpts the participants are displaying differing orientations to or understanding of the activity underway.

5.3.1.3.2 Activity disalignment

Within discourse analysis, and even within CA, the term ‘alignment’ is used in many differing ways, such as to refer to corresponding political or ideological beliefs (Hutchby, 1997), matched empathetic agreement (Zahn, 1984; also called affiliation), or a sharing of linguistic features between speakers (Pickering & Garrod, 2004; Garrod & Pickering, 2004; also called linguistic accommodation (Giles, Coupland & Coupland, 1991) or resonance (Du Bois, 2001; Du Bois, 2007)). In line with Drew (1997) and what appears to be emerging as the favoured definition of the term ‘alignment’ within CA, throughout this thesis I will use the term to refer to turns which demonstrate agreement between participants on the activity which is taking place. I draw on Stivers (2008) work on storytelling to help define the term below and following on from her lead, I will use the term ‘disalignment’ rather than ‘misalignment’, to refer to a lack of alignment in shared interactional activity.

In her analysis of the activity of storytelling, Stivers observed that there is typically an asymmetry between speakers whereby the person who is telling the story has an increased right to the conversational floor (2008). When only one person has epistemic rights to tell the story, the activity of storytelling necessarily puts one participant in the position of speaker and other participants present in the role of hearers. In such a situation, Stivers considers an aligned turn one which allows the speaker who initiates a story the floor space to tell the story and orients to the process of storytelling at the same ‘pace’ as the speaker (2008). Thus a disaligned turn, within the context of storytelling, is where a person in the role of hearer either competes for the turn or fails to act as if there is a story in progress, or, as the story finishes, fails to orient to its completion. An additional example of disalignment can be seen in Sacks’ early observations of joke telling, where a joke has the potential to fall flat if a hearer fails to laugh at the appropriate time (Sacks, 1992). This can indicate that the hearer failed to realise that the contribution was intended to be a joke, thus the hearer’s response, or absence of an appropriate response, is disaligned to the activity of telling a joke.

Stivers (2008) distinguishes between ‘alignment’ and ‘affiliation’, where the latter refers to the hearer’s agreement to the stance the speaker is taking towards the events of the story. In other words, an affiliated turn endorses the speaker’s position on the events. Thus alignment refers to (demonstrated) agreement to the ongoing activity, while affiliation refers to (demonstrated)
agreement with the speaker of the story. Note that, on the one hand, turns may be aligned to the activity underway, but disaffiliated to the stance the speaker is taking towards the events, as happens when a hearer allows a speaker to tell their story but does not display agreement with the ways in which the speaker views the events. On the other hand, sequences may be affiliated to the speaker while being disaligned to the ongoing activity, as happens when hearers demonstrate over-excited affiliation towards a speaker mid-story, thereby derailing the storytelling process.

In this thesis, I apply this concept of alignment to the process of completing a clinical task, rather than the process of telling a story. Excerpt (24) demonstrates an example of a sequentially inapposite response which disaligns with the task activity the adult is attempting to execute. This takes place during the beginning of the Tigger-Piglet inhibition task, where A has just brought out puppets of the Winnie the Pooh characters Tigger and Piglet and introduced them to the child, JR.

A begins to explain the task to JR when he interrupts to initiate a topic of his own.

(24) ID 513: 33-JR. 37.25 (TD: 4:5)
Tigger-Piglet inhibition task. Participants are sitting on the mat facing one another.

1 A: well this (0.3) is Tigger
2 (0.5)/((JR nods head))
3 A: and this (0.3) is Piglet.
4 (0.4)
5 A: tsk now
6 (0.9)
7 A: we’re going [to]-
8 JR: [I ’ve seen a baby (. ) pig(. )le:tl]
9 -> A: sorry?
10 JR: I’ve seen a baby [piglet]
11 A: [you’ve] seen a [ baby piglet have you ]
12 ((JR nods head a few times))
13 A: where did you see a baby piglet,
14 JR: um,
15 (3.0)
16 A: did you see it at the zoo.
17 (0.9)/((JR shakes head))
18 A: no, was it at (. ) a friend’s house.
19 (0.6)
20 JR: no it was at a circus and I went to see one.
21 A: oh wow.

From A’s perspective, JR’s contribution in line 8 can be seen as an abrupt topic change which is devoid of any topic shift markers. Additionally, he has also interrupted A’s turn to initiate his story, so he begins this turn outside of a TRP. This makes line 8 a particularly unexpected turn, as typical turn taking conventions would require that JR wait for a TRP before initiating a change in speakership. It is not difficult to see the connection that JR has drawn between the introduction of Piglet, the Winnie the Pooh character, and his story about seeing a real piglet. However, the action this performs, which is something like ‘news telling’, is at odds with the action that the adult is
pursuing, which is to initiate a new task where the choice of a piglet puppet is inconsequential for achieving the task requirements. Thus JR’s turn fails to allow the adult the floor to initiate the new task and the interaction shifts from being institutional to being conversational.

The following excerpt, (25), shows another abrupt topic change which results in the adult producing an OCRI device. During this excerpt, A is again attempting to introduce the next task, the test of pretend play, which she expects to be leading.

(25) ID 515: 52-NC. 36:52 (TD: 4;4)
Transition from the semantic fluency task to the test of pretend play. Participants are on the mat. NC is lying on the mat on his stomach with his legs bent and his feet in the air.
1 A: you came up with some good ones then (. ) and we are gonna play
2 with the [other toys, 'cause I've got some things here.
3 (((A turns her body to her right (away from camera) to
4 look through the toy box))
5 NC: oh.
6 A: no:w, let's have a [little look]
7 NC: [ can I be ] baby;
8 (0.5)
9 -> A: [ . sorry? ]
10 (((A looks back towards NC)))
11 NC: I want (to) play goldilocks.
12 A: well (.) what do you reckon you [could do with these¿]
13 (((A lays out a plastic bowl
14 and a plastic spoon in the play frame))
15 NC: [ u h : ]
16 A: [we’re gonna] play with some different things (. ) what could
17 you do with these¿

In line 7, NC initiates an idea of his own about what they will play, with a request to enact the role of ‘baby’ in a game of ‘goldilocks’. Again, topic change markers are absent from NC’s request. We can infer that NC has taken A’s statement ‘we are gonna play’ in line 1 as being a play invite of the sort he would have experienced in other settings in his everyday life, as opposed to A’s contextually constructed understanding of ‘play’ within the structured setting of the test of pretend play. NC’s inapposite turn in line 7 and further pursuit of his suggested game in line 11 can be seen as at odds with A’s attempt to initiate the next task. This is not to imply that topic changes are necessarily used consciously or in a manipulative fashion to derail the testing session by children in this study, although they may be. The point this excerpt nicely illustrates is the difference in how the child and the adult understand the activity taking place. The child appears to draw on his life experience and world knowledge to interpret the word ‘play’ in a conversational frame, while the adult is drawing on her familiarity with administering the test of pretend play to interpret ‘play’ within an institutional frame.
Excerpts (24) and (25) display the adult’s and child’s differing expectations of both the tasks and their own roles in completing them. The following two excerpts, (26) and (27), appear to demonstrate more intentional oppositions to the adult’s requests. Excerpt (26) takes place during the test of pretend play, however it occurs towards the end of the test and IY has already completed various pretend scenarios. Thus it is unlikely that this occurs as a result of the child not understanding the testing procedure.

(26) ID 507: 27-IY. 59:30 (TD: 4;5)
Test of pretend play – stimulus object is Ted. All other toys are off the mat to the right of A. Participants are sitting on mat facing one another.

1  A: can you think of another story for Ted?
2  (0.9)
3  A: huh
4  (4.2)
5  A: [how about- could you show me:?]
6  [((A puts Ted in a seated position, then he falls backwards))]
7  IY: oops huh huh it fell.
8  A: can you make Teddy get ready for bed.
9  IY: no::, I know how to (.)(do it. wanna be a sleep-over)
10  (.) friend.
11 -> A: [wh- what was that sorry? ]
12  [([A leans in towards IY)])
13  IY: *sleep-over friend*
14  A: a sleep-over friend, yeah; can you sh- can you show me.
15  (1.0)
16  IY: we need X the doll.
17  A: [oh well we're just going to leave Doll over here]=
18  [((A looks towards the doll to her right and places her hand
19  on it when she says here))]
20  A: =’cause she's sleeping over there but could you make up
21  another story for Ted.
22  (4.8)
23  A: *oh he's XX*
24  (2.7)
25  what’s happening now,

After A asks IY if she can make Ted ‘get ready for bed’ in line 8 and she responds with a blunt refusal, ‘no’, in line 9, said with a lengthened vowel sound. This seems to be a clear disalignment with the task requirements, and thus the adult’s desired activity. However, on further elaboration by IY, it appears that the child lacks the necessary play objects to complete the required action in her desired way. IY would like to include a second character, the doll (line 16) or presumably the ‘sleep-over friend’ (lines 9-10 and 13), in the play scenario. The adult opposes this in lines 17-21 because it is not aligned with the administration of the test of pretend play, which specifies toys and objects used for each play scenario.

The most directly oppositional example of disalignment resulting in an adult producing an OCRI is provided below. This occurs during the WPPSI-III, vocabulary subtest, and occurs while the child’s mother is in the room. Again the child, JR, has demonstrated understanding of the task requirements
on three questions of the subtest when an OCRI device is produced by A in response to the fourth attempt. JR has answered these first questions adequately, as demonstrated by A’s evaluation of these in line 4 (response to the second question) and lines 9 and 11 (response to the third question).

(27) ID 512: 33-JR. 23:04 (TD: 4:5)

WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another. Most of A is off-camera, Mum is completely off-camera

1 A: what is an umbrella.
2 (1.5)
3 JR: it keeps you dry out of the rain?
4 A: yeah, perfect.
5 (5.7)
6 A: what is a bicycle.
7 (0.5)
8 JR: something that you ride on?
9 A: good.
10 (4.1)
11 A: well done. tsk, what are lollies.
12 (0.9)
13 JR: .hh something that you eat
14 A: good.
15 (0.8)
16 A: can you tell me a bit more?
17 (0.8)
18 JR: mm
19 (1.4)
20 JR: no [ you gotta ] tell me something then I’ll tell it=
21 [(JR points to A)]
22 =back to you.
23 -> A: sorry?
24 (4.0)/(Mum giggling)/(JR smiling))
25 A: lollies? w- wh- what was that? huh
26 (2.5)/(mum chuckling))
27 MUM: ((smilie voice)) he said you gotta tell me something else and
28 then [I’ll tell it back to you huh huh]
29 A: [ oh:: huh huh oh ] I see.
30 MUM: [huh huh huh]
31 A: [.hh ] ah well I can’t give you any more help but you’re
32 on the right track. you do eat lollies. is there anything else
33 you can tell me about lollies?
34 JR: "er"
35 (3.9)
36 A: that’s okay. that was a good answer, you do eat them. (.) tsk
37 what is [a-]
38 JR: [but] they’re not good for you.
39 A: they’re not good, they’re- very good, they’re not good for you,
40 well done.
41 MUM: {{clears throat}}
42 (2.0)
43 A: what is a dog.

A asks the fourth test question in line 11, ‘what are lollies’ and JR answers in a similar fashion to the approach he has taken to answering the preceding questions, which is to describe the objects’ function for people. In this instance, A orients to this type of response as insufficient and in line 16 she attempts to elicit more information. JR appears to have difficulty providing more information on the definition of lollies, as demonstrated by the gaps in lines 17 and 19 and the thinking vocalisation
‘mm’ in line 18. In lines 20-22 he responds to her request with a direct refusal ('no'), not just to answer the question, but to comply with the rules of the task as dictated by the task demands and, by extension, the adult. JR then proposes a new activity or game by inviting A to ‘tell me something then I’ll tell it back to you’. Thus this is a clear example of the trouble source turn being disaligned with the activity A is attempting to carry out. JR may have the confidence to make such an oppositional suggestion as his mother is also in the room, and is orienting to the opposition as being ‘non-serious’ by her laughter in lines 24, 26, 28 and 30 and her use of smilie voice in line 27. She is not treating this disalignment as interactionally problematic in a contentious way, however the fact she is laughing does suggest she finds it interactionally atypical.

The comedy in this sequence appears to come from JR’s subversion of pre-defined institutional roles in this interaction. This excerpt takes place 23 minutes into the testing and so far JR has sat at the table and only participated in adult-directed tasks. As described in chapter 4, there is an asymmetry of participation within these tasks, where the adult directs the task and the child carries out the task. JR’s refusal to add more information to A’s question about lollies, and his proposal that ‘you gotta tell me something, then I’ll tell it back to you’, is requesting a change in the activity, or at least in the way in which the activity is carried out. This request is at odds with A’s pursued activity. Further, and perhaps more importantly, by making a request of A, he is also rejecting his institutional role as the ‘do-er’ of the tasks, and is challenging A’s institutional role as the ‘administrator’ of the tasks.

Schegloff (2007) states that other-initiated repair (in general, not specifically open class) can be used as a forewarning of a disagreement or rejection. It can act as a pre-disagreement, which gives the speaker of the trouble source the chance to adjust their prior turn, although they do not always do so (2007; 102-104). Drew (1997; 97) also found this usage in OCRI devices in telephone interactions involving English speaking adults and concluded that instances of OCRI may not only indicate a cognitive status of not having heard or understood a prior turn, but can also be used to perform interactional work, such as disaffiliation.

The trouble source turns in the prior two excerpts (26) and (27) may be seen as demonstrating disagreement and, in excerpt (27), JR may abstain from producing a repair as he understands the OCRI as forewarning interactional disagreement. There is evidence that A genuinely does not hear or comprehend what the children have said in both these excerpts and not that she is offering the child a chance to re-state potentially fraught turns. This is evidenced by the adult demonstrating acknowledgment of the content of the repaired turn after the repair proper in both excerpts, which is particularly emphasized in excerpt (27) ('oh huh huh oh I see') and also evident in excerpt (26).
when the adult repeats the problematic term ‘sleep-over friend’ in line 14. Although there are insufficient examples of the phenomenon in this data set to make generalisations, it may be that other-initiated repair due to disagreement is rare in child-adult interaction, particularly when it involves unfamiliar participants in a research or clinical testing environment.

The excerpts examined in this section reflect the institutional nature of the data set and the asymmetry in participation within the tasks at hand. Specifically in the first two excerpts examined in this section, (24) and (25), when compared to the adult, both children demonstrate different interpretations of the activity when they orient to the initiation of the clinical tests as if they are everyday activities. In excerpt (24), JR responds to the initiation of the Tigger-Piglet inhibition task by initiating a ‘news telling’ sequence and in excerpt (25), NC responds to the initiation of ‘play’ in the test of pretend play with a specific play scenario in mind. Excerpts (26) and (27) demonstrate more direct opposition to the clinical tasks underway, when the children present try to introduce new rules for the tasks. IY does this in excerpt (26) when she wants to include another character in a play scenario during the test of pretend play, and JR seems to do this more intentionally when he suggests new rules for the WPPSI-III, vocabulary subtest, that the adult should tell him something and he will repeat it.

5.3.1.4 Summary of analysis of turns preceding OCRI in interactions involving TD children

A broad commonality between all of the excerpts containing OCRIs in interactions involving TD children seems to be that the turn which becomes problematic occurs at a time when the adult is not expecting the child to say something, or the adult is expecting the child to say something but not the contribution that they produce. It is a turn from the child which is oriented to by the adult as being unexpected within the task context. As I have shown this may happen for a variety of reasons. In excerpts (3; ID 504), (4; ID 516) and (5; ID 502) repair appeared to be initiated due to lack of orientation from the adult, excerpts (6; ID 511), (7; ID 513), (8; ID 515), (9; ID 509) and (10; ID 503) all showed a degree of overlap with the problematic turn and excerpts (4; ID 516), (6; ID 511), (11; ID 506), (12; ID 508), (13; ID 507), (14; ID 505) and (15; ID 502) showed evidence of misspeaking in the trouble source turn. These are all factors which may have contributed to a lack of understanding between the participants. In addition to these factors, and in support of findings from Drew (1997), excerpts often also showed evidence of sequentially inapposite turns in the trouble source turn. I further divided these into instances where the child appeared to provide a sequentially inapposite turn due to trying to find out more about the task demands and those which were sequentially
inapposite due to disalignment between the activities which the participants were attempting to pursue. Excerpts in which OCRI occurred due to feeling out the task demands were (18; ID 506), (19; ID 514), (20; ID 505), (21; ID 503), (22; ID 509) and (23; ID 501) and excerpts in which OCRI occurred due to disalignment between activities participants were pursuing were (24; ID 513), (25; ID 515), (26; ID 507) and (27; ID 512).

In support of findings by Drew (1997; 96), the trend in this analysis is for OCRIs to occur following a sequentially inapposite turn, or instances where a hearer ‘understood’ what was said in the literal sense, but may not have understood its coherence, sequential or ‘activity’ connectedness to the prior talk. However, a lack of participant orientation, overlapping speech and missspeaking can also play a role in OCRI. OCRI appears to occur in these interactions when the adult has very little to contextualise the child’s utterance and this can be because she has not heard, due to lack of her orientation, overlapped speech or sounds or problems of speaking, and/or as a result of an abrupt and unmarked topic shift, or sequentially inapposite turns due to a participant trying to understand the expectations of the interaction or turns disaligned in terms of the activities the participants are attempting to pursue. In Stivers & Rossano’s work on mobilising response (2010), they found that when an increased number of devices to mobilise a response were used, the chances of a participant eliciting a response were also increased. A similar phenomenon is likely at work here as well. That is, an increased number of factors which mark a turn as being potentially problematic in some way, likely increase the chance of the other participant initiating a repair.

The majority of previous work on OCRI has drawn on examples from naturalistic conversation between English-speaking adults. This chapter further this work by examining OCRI in English-speaking child-adult dyads in an institutional setting. As outlined in chapter 4, the institutional setting of these interactions become a defining feature of them and consequently a defining environment for repair initiation to occur in these interactions. As demonstrated in chapter 4, the clinical testing environment in which these interactions take place creates an institutional form of interaction which is characterised by one participant having increased epistemic status in terms of individual tasks and overall structure of sessions, and increased rights to contribute to the course of the interaction. This setting leads to the presence of sequentially inapposite turns produced by the child as they attempt to work out what is expected of them and the highly structured nature of the tasks presents opportunities for OCRI to take place in terms of disaligned pursued activities. Thus these findings may be particularly pertinent to the clinical testing setting in which they take place. The excerpts where OCRI is produced after a turn where children are trying to work out task
requirements are likely unique to the testing environment. As discussed in chapter 4, many of these tasks are initiated with no explanation or introduction.

5.3.2 Analysing the turns prior to OCRI in interactions involving children with ASD

In section 5.3.1, I explored the sequential environments preceding the adult’s production of an OCRI occurring in interactions involving TD children. I now examine this same environment in the interactions involving children with ASD. To be consistent with the previous section, I first examine the preceding turns in terms of evidence of mishearing which includes examining evidence of a lack of orientation, and the presence of overlapped speech in the trouble source turn. In section 5.3.2.2, I then discuss excerpts with instances of misspeaking on the part of the child and finally, in section 5.3.2.3, I examine excerpts which demonstrate sequentially inapposite turns in the trouble source turn.

5.3.2.1 Repair initiated after mishearing

In line with analysis of the excerpts involving TD children, the excerpts with evidence of mishearing in the turn/s preceding the trouble source in interactions involving children with ASD are divided into two categories. These are those showing evidence of mishearing due to a lack of orientation from the adult towards the child and those showing evidence of overlapped speech.

5.3.2.1.1 A lack of orientation

Analysis of OCRI in the interactions involving TD children found that the adult produced an OCRI after a turn which was somewhat unexpected, from the adult’s perspective. One reason for unexpected turns was due to a lack of orientation to the child by the adult. This was due to a transition from a break back into the testing room or between tasks or because the adult’s attention was focused on the administration of tasks rather than the interactional context. This same environment was found preceding OCRI in two interactions involving children with ASD. Excerpt (28) is an example of this. Most of this interaction takes place out of the view of the camera, due to the beginning of the excerpt starting when they are outside the testing room and also because the participants are packing up toys which are not in the same area in which the following task is taking place. Thus they are not in view of the camera which is recording at this time.

(28) ID 518: 12-LT. 38:48 (ASD: 5;7)
Transition from a break. The beginning of this excerpt takes place outside the room and for most of the interaction neither participant is on camera. LT briefly becomes visible on the camera in line 19 when he picks up the toy box.

1 A: I’ve got some more different things in here.
A: would you like to see what I’ve got in here
LT: no.
A: no¿

(1.1)

(LT and A re-enter room. LT is helping A clean up the
toys from the mat from the last session, but camera is already
pointed to the table, where the next task is based))

LT: we can play in the carpet?

(2.2)

A: sorry?

(0.3)

A: .h ye[ah? I’ll just-

(0.2)

I’ll tidy these aw–]

LT: [we can play with (.). ] XXXX play (with in)

the carpet.

A: ye:ah,

(4.3)

((noises of packing up toys))

LT: [uh]

((LT picks up the toy box

and moves it out of the way))

A: ooh it’s (very) heavy, very strong

((noises of packing up toys))

In line 6 of excerpt (28), I have indicated that the participants re-enter the room, which I infer
through the change in volume in the participants’ voices rather than through visual evidence, thus I
am unsure who walked into the room first. Regardless of this, it is clear that the participants are not
sitting face to face orienting to one another as there are noises which indicate that the toys are
being packed away, when LT asks A, ‘we can play in the carpet?’, in line 9. This turn elicits an OCRI,
‘sorry?’, from A in line 11, which then elicits a repair attempt from LT in line 14.

The following excerpt, (29), also demonstrates a lack of orientation preceding an OCRI produced by
the adult. This occurs towards the end of the testing session for the child, AA, when he is in a
separate room from the other participants. The adult has left the testing room and is conversing
with AA’s mother outside the room. AA continues to play with toys in the testing room, with the
camera still filming him. The conversation between A and AA’s mother is vaguely audible but is not
transcribable.

(29) ID 523: 30-AA. 1:35:46 (ASD: 7;3)
Session has finished. A has left the room but AA continues to play in the
room and is still on camera. A and Mum talk outside - their speech is
audible in the background but I cannot make out what is being said.

(AA picks up Ted and makes him ‘hold’ a stick in each
paw and waves them as if he is sword fighting))

AA: pish:oo:: pish:oo:: sh:oo ((said in time with sword movements))

(6.4)

((AA Looks across at the other toys, selects the orange
truck and moves it into the play space))

AA: oh oh

(7.7)

((AA picks up truck in his left hand and looks it over
intently))

AA: [HEY MUM CHECK THIS OUT!]

(((AA moves the orange truck to his right hand side, while
still holding Ted)))

(1.4)

A: ‘what was that AA?’
In excerpt (29), AA tries to gain his mother’s attention in line 9 with a well formed utterance beginning with an attention getting device, ‘hey’, the use of a term of address, and the use of louder volume to account for the fact that he is in a different room from his addressee. The repair is initiated in the following line by A asking ‘what was that AA’, which is spoken more quietly indicating that A is still outside the testing room. Note it is not the addressee (mum) who initiates the repair but rather the researcher, which implies that the adults did not hear or comprehend the trouble source turn. Being in a different room to the recipients and engaged in conversation with another person would have limited A’s orientation to AA’s utterance. Note that this is also an example of overlap as the adults were engaged in a conversation which the child interrupted.

5.3.2.1.2 The presence of overlap

As demonstrated in section 5.3.1.1.2, in the interactions involving TD children, overlap was often a factor in the initiation of OCRI devices, with some degree of overlap in the environments preceding an OCRI device in one third of identified excerpts. In the excerpts from the interactions involving children with ASD, overlap is present in three excerpts but appears to be very brief in length. In excerpt (29) above, we can see that AA’s contribution can be viewed as an interruption to the adult’s conversation taking place in a different room which potentially increases the need for the adult to initiate repair.

Excerpt (30) also contains a small degree of overlap in the trouble source turn. In this excerpt, the child, MT, begins to speak at the same time as the adult in lines 9 and 10, which results in overlap.

(30) ID 519: 14-MT. 3:53 (ASD: 6;9)
WPFSI-III - block design subtest. Participants are sitting at the table facing one another, but only MT is visible on camera.
1 A: tsk and now we’re going to be doing something a little bit different with the blocks because this time, (1.6)
2 A: I'm going to put the blocks (.)
3 A: [so they look like this picture.] ([((A slides open book showing a picture of a pattern towards MT))]
4 A: tsk [n-]
5 MT: [Le]anne has [that.]
6 MT: [[((MT grins and puts both hands on the book))]
7 (0.4)/((MT slides book towards him))
In the TD group, I found that four of the five instances of overlap occurred from the child cutting into the adult’s incomplete TCU and thus consisted of an interruption (and the remaining example contained talk which overlapped with a cough so is arguably not analyzable in these terms). In the above excerpt, (30), the adult’s use of ‘tsk’ indicates that the adult was about to begin talking, as she consistently uses ‘tsk’ as a device to mark further talk. Despite this, the overlapped speech does not occur within a TCU and is instead an instance of both the child and the adult self-selecting as next speaker at a TRP.

Excerpt (31) also demonstrates a brief period of overlap in the turn preceding an OCRI. In this example the child, SI, is retelling plot details of the fairytale *Snow White and the seven dwarfs* to the adult, in particular she is describing the Queen’s relationship with Snow White.

(31) ID 520: 15-SI. 23:51 (ASD: 4;11)
Free play session. SI and A are sitting on the play mat but SI has her back to A for the majority of this and is not physically orienting to A until the repair initiation in line 29, when SI turns her body and looks at A for the first time. SI is playing with the doll and a white plastic bowl rather absentmindedly while she is talking when this begins.

```
1  SI: look at that.  
2    (1.1)  
3  A: woo:::h, (0.4) it's another crown;  
4    (1.1)  
5  SI: wee ha ha (0.8) you know which princesses I like?  
6    (0.5)  
7  A: which princesses.  
8    (0.5)  
9  SI: Snow White.  
10  A: oh she’s nice isn’t she.  
11    (0.7)  
12  SI: but the Queen’s not  
13    (0.2)  
14  A: no she’s not (0.2) she’s wicked.  
15    (0.2)  
16  SI: hh  
17    (0.8)  
18  SI: she’s (a a) very nasty when she wants to kill Snow White=  
19    (0.7)  
20  A: =°mm°  
21  SI: cos she does—cos Snow White’s even (.) more beautiful than  
22    (0.2)  
23  A: the Queen and she doesn’t like Snow White.=  
24    (0.2)  
25  A: tsk what’s [Doll] (.). [‘ere]  
26  SI: [and—] [‘ere]  
27  but cuts the gesture off))  
28    (.)
```
29  ->  A:  [sorry what were you saying ("sorry") Snow White (who) was=
30  [((SI turns and looks towards A))]
31  A:  =going to kill her?
32  SI:  [yeah because she didn’t like her,
33  [((SI looks down again, lies on mat then picks up some new
34  toys)])]
35  (0.9)
36  SI:  she didn’t [like Snow] White=
37  A:  [  ohhh   ]  =that’s not very nice,
38  (1.7)
39  SI:  ’s not very nice if you kill someone.=
40  A:  =°mm°
41  SI:  I’m feeling ve::ry hungry= ((SI smiles))
42  A:  ((smilie voice))  =are you getting [really hungry?]  
43  [((SI looks towards
44  A grinning))]
45  SI:  yeah

The adult asks a question in line 25 which is unrelated to SI’s retelling of Snow White. This turn coincides with SI’s continuation of the retelling, in line 26, which results in overlap. This occurs during A’s TCU and is the only excerpt from the interactions involving children with ASD which exhibits this. The sequential disalignment of this excerpt is discussed in more detail in section 5.3.2.3.2. These two excerpts were the only ones exhibiting overlapped speech in the interactions involving children with ASD.

There were five cases (out of 16) of overlap preceding an OCRI in the interactions involving TD children, and three (out of 11) in the interactions involving children with ASD. More interestingly, in the interactions involving TD children repair involving overlaps overwhelmingly occurred as ‘interruptions’ which take place during the adult’s unfinished TCU (4 out of the five excerpts), while only one of these occurred during a TCU in the interactions involving children with ASD. This is a somewhat surprising result, as it has been established that children with ASD find subtle social cues difficult to navigate, thus the assumption may be made that they would be less able to understand when it is an appropriate time to take a turn within interaction. However, it is also established that children with ASD find initiation of talk difficult and this finding may be reflective of this group of children initiating less talk in general. As with all findings in this thesis, with low numbers of excerpts examined, caution must be taken in making generalisations from this finding about children with ASD. This finding is also not necessarily an indication that the children with ASD overlapped less than TD children, but rather that it did not happen in the environment preceding an OCRI in these data. For example, excerpts such as ID 521 and ID 525 (shown in full in appendix B), demonstrate instances of children with ASD interrupting a TCU produced by the adult.

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5.3.2.2 Repair Initiated after misspeaking

While examining the environments preceding an OCRI in interactions involving TD children, I found that problems associated with misspeaking were observable in the trouble source turn in seven out of the 16 instances of OCRI. Instances of misspeaking by the child were found in the trouble source turn in five excerpts from the 11 interactions involving children with ASD.

Excerpt (32) illustrates an example from the interactions involving children with ASD where the child’s speech is so quiet that it is not audible to either the adult or two transcribers, as demonstrated by ‘X’ in the transcript. In this excerpt, the adult is administering the semantic fluency task and is asking the child, SO, to list things one can eat or drink. She initially asks this question in lines 1-3.

(32)  ID 527: 42-SO. 46:17 (ASD: 4;1)
Semantic fluency task. Both participants were on the floor, but SO has left the play mat and is now seated on the couch in the back of the room which means his whole head is off camera. A is crouched in front of SO on the mat, facing him.
1   A: could you tell me some different things that you could eat (.)
2   or drink, (.) and say them as fast as you can and keep going
3   until I say stop. So tell me some things to eat (.) or drink
4   ((beep))
5   (10.0)
6   A: what could you eat or drink
7   (2.0)
8   A: you could eat an apple,
9   (0.4)
10  A: or you could drink milk
11  (0.7)
12  A: what else could [you eat or drink.]
13     (((SO bends his whole body forward at the
14     waist and up again,)))
15     (9.8)/(SO hits his right hand on the couch three times then
16     sits still on the couch looking around the room))
17  A: tsk what else could you [eat or drink.]
18     (((SO bends his whole body forwards
19     then up again,)))
20   (10.0)
21  SO: ‘’X’’
22   (1.7)
23  A: >what could you eat or drink.<
24  SO: ‘’X’’
25   (5.2)
26 -> A: [what did you say?   ]
27     [[[A leans in towards SO))]
28   (1.5)
29  SO: ‘’XXXX’’
30   (1.9)
31  A: yeah? (.) what could you eat or drink.
32   (1.6)
33  A: tell me some things that you could eat or drink.
34   (1.3)
35  SO: ‘’XX (.) XX’’
36   (3.1)
A: you know what that one was really really hard, 

A: [ well good ] effort. good try. shall we go and see mum and 

dad.

SO: yea::h.

This task should be fairly straight forward for the children in this study. However, SO is struggling to list things you could eat or drink, demonstrated by the long gaps in lines 5, 15 and 20. In response to the non-response from the child, A rephrases the question multiple times, in lines 6, 12 and 17. When SO does respond in line 21, the response is very quiet and only one syllable long. A then asks the question again in line 23 which causes SO to again produce one syllable which is very quiet. After a 5.2 second gap, A initiates the OCRI, ‘what did you say?’ as she leans forward which indicates that low volume was a factor in her inability to understand the trouble source turn.

The following four abridged excerpts also contain some degree of misspeaking in the turn prior to the OCRI. The following excerpt, (33), demonstrates an ungrammatical trouble source turn at line 6 when LT says, ‘somebody’s not ‘n there’. The grammatically correct production of this turn would be ‘nobody’s in there’.

(33) ID 517: 12-LT. 34:45 (ASD: 5;7) – abridged

Free play session. Participants are sitting on mat facing one another. LT is playing with an orange toy truck; intently watching it as he slowly makes it drive around the play space. A watches him but isn’t really involved in the play; she acts more as a spectator.

LT: somebody’s not ‘n [there;]

((LT looks to A with a slight shake of his head))

A: sorry?

LT: [someone’s not in there;]

((LT picks up the truck and is looking in the front window))

In excerpt (34), the child, PO, produces a turn in line 20 where the first word is very difficult to make out. My best guest at transcribing this word is ‘beco’, which I believe is an atypical pronunciation of the word ‘because’. This turn precedes an OCRI produced by the child’s mother.

(34) ID 526: 38-PO. 1:38:00 (ASD: 4;8) – abridged

Testing session has finished and both participants are packing up toys. This is a session conducted in the participant’s home. PO’s mother, who has been in a different room for the whole session, enters the room somewhere around turn 16 as indicated by A now addressing her talk to her. All participants are off camera for the whole of this excerpt.

((in adult-directed voice)) .hh tsk we’re all done

Mum: all do:ne [oh god] it's warm in here isn't it.=

A: [ye::ah]

PO: =(beco) you take too lo::ng.

Mum: pardon?

PO: it- .h we saw a digger?
Excerpt (35) shows an instance where the child, ML, produces a turn in line 12 which begins with an outbreath, followed by an undecipherable syllable and three more syllables which I have guessed to be ‘where are they’. The sentence finishes with the word ‘tamagotchis’\(^\text{13}\) and the adult’s name which are both clearly articulated.

(35) ID 524: 34-ML. 20:40 (ASD: 4;1) – abridged

WPPSI-III – object assembly subtest. Participants are sitting at table, facing one another. A is often not visible, ML is very engaged in the task throughout this whole excerpt and does not look up at A at all. During the repair sequence ML is intently looking down at the puzzle continuing to work on it.

11 (10.8)  
12 ML: .h X (where are they) tamagotchis (.)(A’s name)).  
13 (0.5)  
14 -> A: sorry?  
15 (0.3) /((ML is focused on completing puzzle in front of him))  
16 ML: (where are they) tamagotchis

The final excerpt in this group is below at (36). In this excerpt the child, ML, has a turn directly prior to A’s OCRI, including a word which is difficult to transcribe and presumably difficult for A to hear and/or understand.

(36) ID 525: 34-ML. 1:25:18 (ASD: 4;1) – abridged

Free play session. Participants are sitting on the mat, facing one another. ML is engaged in solitary play with the orange truck. A watches on but is not very involved with the play.

23 L: it’s ma:ki:::ng,  
24 (4.7)  
25 A: mm it’s=  
26 ML: [=g] to see mummy?  
27 [(ML stops playing and is crouching on all fours  
28 looking down to the ground))  
29 (0.6)  
30 -> A: [sorry?  
31 [((A looking towards ML))  
32 ML: to see mummy?

In line 26 of excerpt (36), the first word of the turn is atypically pronounced, with just the ‘g’ sound being clearly articulated. The target word for this syllable could potentially be ‘go’, ‘get’ or ‘good’ and the diversity of these options makes it difficult for the adult to know whether this is a request, direction or question. She responds to the turn with an OCRI in line 30.

While misspeaking was apparent in each of the excerpts examined in this section, it did not appear to be the main factor which led to a breakdown in intersubjectivity. This is in line with findings from interactions involving TD children presented in section 5.3.1.2. In analyses of both groups of children, misspeaking may have been a contributing factor to the breakdown of intersubjectivity.

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\(^{13}\) Tamagotchis are handheld electronic ‘pets’.
The first excerpt examined in this section, (32) demonstrates an instance where the child produces a turn so quiet and minimal that we cannot know whether it is a legitimate answer to A’s question. However, the final four excerpts all show instances where there are words that are difficult to transcribe or contained grammatically incorrect turns which are possibly difficult for the adult to hear or comprehend. In all four of these, the trouble source turn additionally appears to be a distinct topic shift from the preceding talk. For this reason all three excerpts are also discussed in the following section which looks at inapposite turns.

5.3.2.3 Repair initiated after sequentially inapposite turns

In section 5.3.1.3, analysis of the interactions involving TD children supported findings from Drew (1997) that the sequential environment preceding the OCRI often contained a topic change which was unmarked from the perspective of the ‘other’. This same sequential environment was found in the interactions involving children with ASD, however there are some qualitative differences between the excerpts from interactions involving TD children and children with ASD, which will be discussed at the end of this section.

The following excerpt, (37), exemplifies an unexpected topic change in the turn prior to the OCRI. It takes place only 11 minutes into the testing session, during the WPPSI-III, information subtest. The child, AA, has already responded to a number of questions in this test so he has demonstrated understanding of what the task involves, as shown in lines 1-2 of the excerpt.

(37) ID 521: 30-AA. 11:10 (ASD: 7;3)
WPPSI-III - information subtest. Participants are sitting at table, facing one another. A is completely off-camera.
1   A:  good. it does well done. what day comes after Saturday.
2   AA:  Sunday!
3   A:  perfect.
4   (0.9)
5   A:  what are shoes made of.
6   (6.2)/(AA leans forward on the table holding his chin in his right hand))
7   AA:  hm tsk tsk
8   (6.0)
9   AA:  dunno.
10  A:  that’s ok, that’s a tricky one. (.) tsk how many days make=
11  AA:  [=a duck!
12  [(AA looks up at A, keeps eye gaze))
13  (0.7)
14  -> A:  so(h)rry?
15  AA:  duck
16  A:  duck go(hh)od.
17  (1.3)
18  A:  how many days make a week.
19  (3.5)
20  AA:  Monday Tuesday Wednesday Thursday
21  (0.6)
22  A:  good
When AA is asked the question, ‘what are shoes made of’ (line 5), there is a gap of over six seconds, followed by some thinking noises in line 8 and another six second gap in line 9. AA then produces an acceptable non-answer to a question, ‘dunno’, in line 10. Rather than a second pair part (SPP) to A’s first pair part (FPP), this is an account for why he can’t provide a SPP; because he does not have the knowledge to do so. In line 11 A acknowledges this response as acceptable (‘that’s ok’) and provides a reason for AA’s non-answer (‘that’s a tricky one’). She then moves the task on to the next question, marking this shift with a brief pause and a tongue click. While A is producing the next question, AA emphatically says ‘a duck!’ in lines 12-13, while he makes eye contact with A.

This contribution can be seen as unexpected in two ways. Firstly, the trouble source turn in line 12 occurs as an interruption to the adult’s TCU where she is midway through asking ‘how many days make a week’. The type of utterance in which AA could potentially interrupt the adult’s first pair part, could either be a turn which preempts the rest of the question and provides a collaborative TCU (in which case ‘a week’ would be a likely response from AA) or a response which gives an answer to the question the child anticipates the adult will ask (in which case ‘seven’ would be a likely response). This answer ‘a duck’ does not fall into either of these categories. It also does not appear to be a delayed second pair part to a previous question, providing a belated answer to the question ‘what are shoes made of?’ which AA effectively ‘passed on’ in line 10. It appears unrelated to any previous discussion in this recording, at least to this analyst. This, of course, does not exclude some link, semantic or otherwise, existing for the child, however, it does provide some indication that the unfamiliar adult may also find this difficult to contextualise. Additionally, the laughter particles mid-lexeme in A’s response to the repairable and the repair proper (lines 15 and 17) adds support that the adult found this an unexpected answer to the test question. It is worth noting that AA uses ‘duck’ as an unusual response to various questions in the remainder of this session, however, this is the first time he has used it.

The following excerpt, (38), which was also discussed at (35), also demonstrates an unexpected turn from the adult’s perspective. In this interaction the adult and child, ML, are engaged in the object assembly task and ML puts together the pieces in a puzzle of a house before the adult presents ML with a puzzle of an apple in line 8. As with the previous excerpt, the child has already demonstrated understanding of what this task involves when the excerpt begins.

(38) ID 524: 34-ML 20:40 (ASD: 4;1) WPPSI-III - object assembly subtest. Participants are sitting at table, facing one another. A is often not visible, ML is very engaged in the task throughout this whole excerpt and does not look up at A at all. During the
repair sequence ML is intently looking down at the puzzle continuing to work on it.

1  ML: it’s b- big house.
2  A: it is a big house, it’s a nice house isn’t it.
3  (2.4)
4  ML: the house is (.) standing up.
5  A: yeah huh it is standing up. ]
6  ML: [pop those here.]
7  (0.8)
8  A: now this is another big one, this is a big red apple.
9  (0.7)
10  ((beep))
11  (10.8)
12  ML: .h X (where are they) tamagotchis (.) ((A’s name)).
13  (0.5)
14  -> A: sorry?
15  (0.3)/((ML is focused on completing puzzle in front of him))
16  ML: (where are they) tamagotchis
17  (1.3)/((ML is focused on completing puzzle in front of him))
18  A: tamagotchis?
19  (42.8)/((ML is completing puzzle on table in front of him))
20  A: oh good working. ((beep)) that was very very good. well done that was very patient, that was perfect

After silently working on the puzzle for 11.5 seconds, the child asks the adult something about ‘Tamagotchis’. Note that the child even addresses the adult at the end of the question, indicating that he is directing the question to her, transcribed as ‘((A’s name))’. Tamagotchis have not been mentioned previously in this interaction and seem unrelated to the apple puzzle, or the broader task, which ML is completing. Further, ML has his head down, consistently working on the puzzle for the extent of this repair sequence, making no eye contact with A.

Unlike the examples of unexpected topic change discussed in Drew (1997), and also most of the excerpts from interactions involving TD children in this data set, it is difficult to understand the relevance of the turns from the children in the previous two excerpts, (37) and (38). However, both can clearly be characterized as unexpected from the perspective of the adult, as they appear to be unrelated to anything in the testing context, the play space or their shared world.

The following excerpt, (39), which has already been discussed at (36), also displays an example of the trouble source turn being an unexpected topic change. During this excerpt the adult and child, ML, are engaged in the free play session and in a play scenario where the truck is racing and crashing into things.

(39) ID 525: 34-ML. 1:25:18 (ASD: 4;1) – abridged
Free play session. Participants are sitting on the mat, facing one another. ML is engaged in solitary play with the orange truck. A watches on but is not very involved with the play.

1  (ML is holding a truck and a block and makes them bang into one another})
2  ML: crash.
In line 26, ML initiates a request to see his mother. In these sessions the children are told they can request to see their parents at any time. Thus it is not the request itself which is problematic for A, but rather the way in which this request is executed, which involves ML interrupting A’s incomplete TCU in line 25 to produce the request. Additionally, as outlined at (30), the articulation of this turn is difficult to hear, which perhaps further contributes to A’s production of an OCRI.

The following excerpt, (40), which was also discussed at (33), displays a turn prior to an OCRI which is an acceptable contribution to the play context but is unusually executed. Similarly to excerpt (39), this occurs during the child-led free play session, which is free from many restrictions in these sessions on what an appropriate next action looks like.

(40) ID 517: 12-LT. 34:45 (ASD: 5;7)
Free play session. Participants are sitting on mat facing one another. LT is playing with an orange toy truck; intently watching it as he slowly makes it drive around the play space. A watches him but isn’t really involved in the play; she acts more as a spectator.
1 A: [it’s a noisy car isn’t it. huh ]
2 [((LT looks up at A, then down again to the truck))]
3 (2.3)
4 A: truck.
5 (12.5)/{(LT is still driving truck around slowly)}
In line 1, the adult comments that the ‘car’ is noisy. This is phrased as a statement with a tag question, however there is a lack of response by the child, LT, which neither participant treats as problematic. In line 4, the adult repairs the term ‘car’ from line 1 to ‘truck’ which is followed by 12.5 seconds of quiet, solitary play by LT. Then LT produces a statement in line 6 which is awkwardly phrased but can be paraphrased as saying the truck does not appear to have any occupants (further evidence of this meaning appears in the turns following the OCRI). This contribution is relevant in that LT has been playing with the truck for some time but may catch A off guard as she has not been directly involved in this game and has been acting like a spectator to LT’s play. LT’s turn in line 6 lacks any cues to warn A that he will begin talking, the ‘somebody’ in the turn appears to be introducing a new protagonist to the play sequence and the reference to the truck (i.e. ‘there’ in line 6) also appears to be unclear as this is not accompanied by any non-verbal cues such as gesture or eye gaze towards the truck.

The following excerpt, (41), also discussed at (34), is another instance where the trouble source turn by the child, PO, is an inappropriate turn, however, this excerpt differs from all others in this chapter, as the OCRI is produced by the mother of the child, rather than the adult researcher. I have included this in the analysis as it appears to follow a fairly typical environment preceding an OCRI being produced and it is an interesting deviant case when considering the turn containing the repair proper. This session is also the only one which takes place outside the laboratory setting. The repair sequence occurs after the session has been completed and PO and A are packing up while they
discuss PO’s upcoming birthday party. While all participants are off camera for the duration of this excerpt, I have inferred when the mother returns to the testing room due to the tone of A’s voice, as her turn ‘oh wow five years old’ in line 16 is addressing PO, while her turn in line 17, ‘we’re all done’, is directed towards the mother.

(41) ID 526: 38-PO. 1:38:00 (ASD: 4;8)
Testing session has finished and both participants are packing up toys. This is a session conducted in the participant’s home. PO’s mother, who has been in a different room for the whole session, enters the room somewhere around turn 16 as indicated by A now addressing her talk to her. All participants are off camera for the whole of this excerpt.

1  ((A and PO are packing up toys))
2  PO: it's time for you to go.
3  A: it is almost time for me to go, and you've- you've done really
4    really well. I've really enjoyed playing with you PO;
5  (0.8)
6  A: you've done excel[ent.]
7  PO: [(but)] when you see me again at- (0.4) you
8    when (it’s::).hh you have to come. (0.2) you you (0.3) you uh
9    you know how you get-
10  (0.6)
11  PO: th-a- you you have to come to my party.
12  A: oh are you having a ;party.
13  (0.4)
14  PO: it's only: (0.3) only: (0.5) only a birthday for me, I'm
15    turning fiv[e.
16  A: OH WOW, five years old
17  (in adult-directed voice)) .hh tsk we're all done
18  Mum: all done [oh god] it's warm in here isn't it.-
19  A: [ye::ah]
20  PO: =(beco) you take too lo::ng.
21  -> Mum: pardon?
22  (0.5)
23  PO: it- .h we saw a digger?
24  Mum: digger;c
25  PO: and the,
26  (1.1)
27  PO: and we played Teddy?
28  Mum: cOOh, what did Teddy do.
29  (0.6)
30  PO: nn goed (.) different things,
31  A: yeah >can you [remember what-<]
32  PO: [AND WE] (wrapped/rocked) the baby again.
33  Mum: yeah,
34  (1.0)
35  PO: you gonna take these back home;
36  A: [yeah], I'm gonna take them back with me.
37  Mum: [yeah] ((smilie voice))
38  A: he’s done really really well. he’s done great.

After A’s comment ‘we’re all done’ to PO’s mother in line 17, PO’s Mother responds with an acknowledgement of A’s comment by repeating ‘all done’, which A confirms with ‘yeah’ in line 19. This confirmation overlaps with a comment from PO’s mother on the warm temperature of the room, which further indicates she has just walked into the room, finishing with the tag question ‘isn’t it’. The following turn in line 20 is the trouble source turn with PO stating ‘(beco) you take too
It is difficult to know what this is referring to and with all participants off camera, there is no non-verbal information to assist. Line 20 does not seem to be an obvious response to either the discussion about the session being over or the room being too warm, although it could be tenuously linked to either. For example, PO could be responding to the fact that the testing is now done, but adding that the session, or the adult, took ‘too long’, or it could be in relation to the room being warm because they have spent ‘too long’ in the room, either because the adult researcher took ‘too long’ to complete the session or the mother took ‘too long’ to return. The following turns do not help to reveal the meaning of this turn as the topic appears to be dropped by the child, which is discussed further in section 5.4.2.3. Whatever the child’s meaning, from the perspective of the other participants in the interaction, it constitutes a turn which appears to be sequentially inapposite to the turns prior to it and this results in the production of an OCRI.

All five of the excerpts examined in this section are consistent with Drew’s account (1997), as they can be seen as instances where the trouble source turn can be seen as an unexpected response from the perspective of the adult and other participants who are present. In my analysis of the sequentially inapposite turns preceding OCRI in the interactions involving TD children, I divided the excerpts into two groups; one where the sequentially inapposite turn was due to the child having difficulty with the task demands, and another where the inapposite turn was due to turns disaligned with the activity being pursued. Examining the interactions involving children with ASD, however, this distinction appears less apparent, and perhaps less useful.

Of the excerpts already discussed in this section, it is difficult to categorize them as demonstrating a lack of either understanding or alignment with the pursued activity. In the interests of keeping the analysis consistent with the TD sections, the following two sections still outline the two areas defined in section 5.3.1.3; sequentially inapposite turns due to a lack of understanding of the task demands and due to activity disalignment. However difficulties which arise from this categorisation are discussed.

5.3.2.3.1 A lack of understanding regarding the task demands

There is only one clear excerpt demonstrating a lack of understanding of the task requirements by the child and even this is difficult to categorise due to the presence of untranscribable speech on the child’s part. This excerpt, (42), was also presented at (32) as an example of OCRI being initiated after misspeaking. This excerpt takes place 46 minutes into the testing session during the semantic fluency task. Up until line 17, A is attempting to coax SO to list things he can eat or drink, however, she has not received a response from SO which could be counted as an answer to this request.
(42) ID 527: 42-SO. 46:17 (ASD: 4;1)
Semantic fluency task. Both participants were on the floor, but SO has left the play mat and is now seated on the couch in the back of the room which means his whole head is off camera. A is crouched in front of SO on the mat, facing him.

1 A: could you tell me some different things that you could ea:t (.) or dr:ink, (.) and say them as fast as you can and keep going until I say stop. so tell me some things to ea:t (. ) or dr:ink ((beep))
2 (10.0)
3 A: what could you eat or drink
4 (2.0)
5 A: you could Eat an apple,
6 (0.4)
7 A: or you could dr:ink milk,
8 (0.7)
9 A: what else could [you eat or drink.]
10 [((SO bends his whole body forward at the waist and up again,))]
11 (9.8)/((SO hits his right hand on the couch three times then sits still on the couch looking around the room))
12 A: tsk what else could you [EA:t or drink. ]
13 [((SO bends his whole body forwards then up again))]
14 (10.0)
15 SO: *"X"
16 (1.7)
17 A: >what could you eat or drink.<
18 SO: *"X"
19 (5.2)
20 A: [what did you say? ]
21 [(A leans in towards SO))]
22 (1.5)
23 SO: *"XXXX"
24 (1.9)
25 A: yeah? (.) what could you ea:t or dr:ink.
26 (1.6)
27 A: tell me some thi:ngs that you could eat or drink.
28 (1.3)
29 SO: *"XXX (.) XX`
30 (3.1)
31 A: you know what that one was really really hard,
32 [((beep beep))] (beep beep))
33 A: [ well good ] effort. good try. shall we go and see mum and dad.
34 (1.6)
35 SO: yea::h.

The adult restates the task question in many ways (lines 1-2, 3, 6, 12 and 17) and SO’s lack of response indicates that answering this question is problematic for the child for some reason, while A’s continued attempt to ask the question also marks the lack of response as problematic. In line 21 SO gives the first verbal response of the excerpt, however it is spoken so quietly it is unlikely that A hears SO’s turn and following this, his next three turns are also spoken very quietly. Speaking softly may be a resource used by children when they do not understand the appropriate response which is expected from them, or they do not know the answer to a question.
Noticeably absent from this group of OCRI excerpts are instances where the child is ‘feeling out’ the task demands or seeking clarification on the details of a task, as in excerpts from interactions involving TD children. For instance, in the excerpts from the interactions involving TD children, the children showed evidence of feeling out how tasks were meant to operate and thus how they should behave, with questions such as ‘keep Doll out?’ (ID 503) during the test of pretend play, and ‘where are the blocks?’ (ID 509) during A’s initiation of the block design subtest. However, OCRI’s produced by A did not occur in this environment in the interactions involving children with ASD.

This could possibly be seen as evidence that the children with ASD did not engage in as much of this style of interactive behavior where they actively attempted to find out more about task demands by asking questions. While this is speculative, such a response is broadly in line with what we know about children with ASD initiating talk less frequently than their typically developing peers (Jones & Schwartz, 2009; Rendle-Short, 2014). It would be worth further analysis, as such a finding could be relevant in learning contexts, such as school classrooms.

5.3.2.3.2 Activity disalignment

This section examines sequentially inapposite turns which are due to a disalignment of activities pursued by participants. As with the last section, the excerpts examined here were less clear examples of this category than those identified in interactions involving TD children.

The following excerpt, (43), is difficult to conclusively place in either the previous category or the category of activity disalignment. Excerpt (43) was displayed previously at (31) in abridged form. It occurs in the child-led, free play session and, although the adult hopes that the child will engage in pretend play, the instructions to the child are simply that they can ‘play with anything they want’.

During this session, and approximately 3 minutes before this excerpt, the child, SI, fashions a ring out of pipe cleaners and puts it on her finger commenting that it is ‘a ring’. She then takes it off her finger, says it is a ‘crown… for Dolly’ and places it on the doll’s head. The play then proceeds down other avenues for 3 minutes before the excerpt below begins, where the child initiates a discussion about princesses in line 5. This leads to SI telling details about the storyline of the fairy tale Snow White and the seven dwarfs, in particular, details regarding Snow White’s relationship with the Queen.

(43) ID 520: 15-SI. 23:51 (ASD: 4;11)
Free play session. SI and A are sitting on the play mat but SI has her back to A for the majority of this and is not physically orienting to A until the repair initiation in line 29, when SI turns her body and looks at A for the first time. SI is playing with the doll and a white plastic bowl rather absentmindedly while she is talking when this begins.

1 SI: look at that.
A: woo:::h, (0.4) it's another crown;

SI: wee ha ha (0.8) you know which princesses I like?

A: which princesses.

SI: Snow White.

A: oh she’s nice isn’t she.

SI: but the Queen’s not

A: no she’s not (0.2) she’s wicked.

SI: .hh

A: (0.8)

SI: she’s (a a) very nasty when she wants to kill Snow White=

A: =°mm°

SI: cos she does- cos Snow White’s even (. ) more beautiful than the !Que:n and she doesn’t li:ke Snow White.=

A: =°mm°

SI: tsk what’s [Doll] (. ) [‘ere)

A: [and-] [((A begins to point towards SI/Doll but cuts the gesture off))]

SI: [yeah because she didn’t like her,

A: going to kill her?

SI: [((SI turns and looks towards A))] [((SI looks down again, lies on mat then picks up some new toys))]

A: =°mm°

A: [ ohhh ] =that’s not very nice,

SI: ‘s not very nice if you kill someone.=

A: =°mm°

SI: I’m feeling ve:::ry hungry= ((SI smiles))

A: ((smilie voice)) =are you getting [really hungry?]

[(((SI looks towards A grinning))]

This contribution by SI is conversational in nature which disaligns with the adult’s task aims where she is attempting to facilitate pretend play. So while SI is ‘doing conversation’ in this excerpt, A, led by the task requirement, is ‘doing play’ or at least attempting to ‘do play’. However, as discussed in chapter 4, the adult is constrained in this task by how much she can lead the play session. There is evidence of this disalignment with pursued task in lines 25-26 where A draws on a toy (the doll) in their common play space in an attempt to redirect SI’s attention back to playing rather than story re-telling. However, this happens at the moment in which SI attempts to carry on with the story which results in the participants talking in overlap and then A initiating repair.
The following excerpts, (44) and (45), both illustrate contributions to the talk which are unexpected because they are metacommments which the child produces about the task rather than turns which align with the task demands. Excerpt (44), which also appeared at (30), occurs in the block design subtest very early on in the session. The excerpt begins with A introducing a new part of the task to the child, MT.

(44) ID 519: 14-MT. 3:53 (ASD: 6;9)

WPPSI-III - block design subtest. Participants are sitting at the table facing one another, but only MT is visible on camera.

1 A: task and now we're going to be doing something a little bit different with the blocks because this time, (1.6)
2 A: I'm going to put the blocks (.)
3 A: [so they look like this picture.] ([A slides open book showing a picture of a pattern towards MT])
4 MT: [Leanne has [that. ]]
5 A: sorry? (0.4)/([MT slides book towards him])
6 MT: [Leanne has this. ]
7 A: oh, does she? huh huh yeah, it's very similar, you've just done one very similar. tsk now just watch me because I'm going to put the blocks to make this picture,

Over lines 1-8, the adult is explaining a new part of the task, with new stimulus materials (a book with block design pictures in it). MT interrupts with a metacomment about the task resources in line 10. MT appears to be making a connection between the stimulus material in this task and a task he has previously done for another researcher (Leanne) at the same laboratory. It does not appear that MT is having difficulty working out what is expected of him, more that he has recognised a similarity with a previous experience and shifts to a conversational frame to share this with A.

From A’s perspective, MT is introducing a new topic and has not marked it as a topic change. Perhaps more troublesome for A is that this was an unexpected turn because of the asymmetry in the interaction at that point in time. As previously discussed, when the adult is explaining a task it puts her in a position where she has primary rights to be the speaker, which necessarily places the child in the role of the receiver of the task instructions. This role would usually mean that the child is mostly listening to the instructions which would mean that the child would have little cause to talk unless they are clarifying instructions. From the child’s point of view we can see that his contribution about the testing book being familiar to him is very relevant to his experience in the testing session, however from the adult’s perspective, this was a fairly unexpected turn and an unexpected time to produce it.
The following excerpt, (45), is another example of the adult producing an OCRI after a metacomment about a task, rather than a comment directly furthering the task. This excerpt occurs during the test of pretend play where the adult is attempting to elicit a play scenario where the child, AA, needs to use the Teddy as a protagonist to ‘do’ something. This excerpt is also the only example where the adult initiated open class repair using the token ‘what?’.

(45) ID 522: 30-AA. 58:14 (ASD: 7;3)
Test of pretend play – Stimulus object is Ted. Participants are sitting on the mat, facing one another.

1  A: there he goe o:h good one. very good=
2  AA: =this is gonna be funny.
3
4  A: I need one piece of wool
5  (0.3)
6  A: .hh well we might- (.) we’ve got a few things we’ll do without
7  the wool. could you make Ted do something else, what else could
8  Ted do.
9  (.)
10  ((AA holds Ted above his head with his right hand))
11  A: ooh what’s he doing?
12  (0.5)/(AA begins to move Ted in the air above his head))
13  AA: [n:y:e:::::::]t
14  [([AA is moving Ted in slow circles in the air)])
15  A: o:h is that a plane?
16  AA: yep [ and ] something else
17  A: [very-]
18  AA: [click click-a-click click-a-click click-a-click click-a-click
19  [(AA still holding Ted above his head but now using a rocking
20  motion to move him)]
21  A: is that a helicopter?
22  ((AA gives 2 nods of his head))
23  A: very good=
24  AA: =and this is funny
25
26  -> A: wha(h)t?
27  AA: this is funny
28  A: [it’s funny?]  
29  AA: [watch this.]
30  (3.0)/(AA slowly and deliberately moves his head to the right
31  scanning the room))
32  AA: wait there was- there wasn’t-
33  ((AA holds Ted in his right hand and slides him around on the 32
34  mat))
35  A: oo:h wow. is that a train.

In lines 11-13, AA makes Ted act out ‘being a plane’, which A correctly guesses in line 14. AA then acts out ‘something else’ for Ted to do/be, using a very convincing helicopter noise and again moving Ted high in the air. A guesses that Ted is being a helicopter in line 20, which AA confirms is a correct guess by two quick nods of the head. A then gives AA positive feedback in line 22 (‘very good’), which AA’s next turn latches on to with a turn that appears to be a metacomment about the play rather than furthering the play. This turn appears to be a pre-announcement forecasting the comical nature of the play to come (line 23).
The adult responds to this with a breathy ‘what’ token, which was not a common OCRI device for her to use in these interactions. It is difficult to know whether she produced this turn as an OCRI or whether she was building on the child’s turn and asking him ‘what is funny?’. Either way, the child orients to it as if it is a repair initiator, by repeating what he has previously said and the adult responds to this by repeating the information as if it were new, indicating that line 24 was intended as a repair initiation.

In this section I have examined three different excerpts containing instances of contributions by the child which were disaligned with the task in the turns preceding OCRIs. The first excerpt was a fairly clear example of the adult attempting to elicit play scenarios while the child wanted to discuss a fairy tale and the following two excerpts both illustrated instances where the child has produced metacommments about something outside of the activity that A is pursuing.

5.3.2.4 Summary of analysis of turns preceding OCRI in interactions involving children with ASD

There were some differences in the environments preceding OCRI between the interactions involving TD children and those involving the children with ASD. When analysing the presence of evidence of mishearing in the trouble source turn, I divided excerpts into two categories which captured the potential reason for the mishearing; an evidenced lack of orientation and the presence of overlap. When examining an evidenced lack of orientation by the adult in the turns preceding the adult’s production of an OCRI, the rates of this were fairly similar in both interactions involving TD children (three out of 16 excerpts) and children with ASD (two out of 11 excerpts). There were five cases (out of 16) with the presence of overlap preceding an OCRI in the interactions involving TD children and only three (out of 11) in the interactions involving children with ASD. Perhaps more interestingly, instances of overlap in the trouble source turn across the groups looked quite different. In the interactions involving TD children these overlaps overwhelmingly occurred as ‘interruptions’ which take place during the adult’s unfinished TCU (four out of the five excerpts) while only one of these occurred during a TCU in the interactions involving children with ASD.

The frequency of instances of misspeaking in the trouble source turn followed a similar pattern, with seven out of the 16 excerpts demonstrating problems associated with misspeaking in the trouble source turn in interactions involving TD children compared with five out of 11 instances of this in the

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14 Three of these excerpts originated from the one child’s testing session.
interactions involving children with ASD. These occurred for a range of reasons across both groups, with volume and inarticulate speech accounting for the majority of the occurrences.

In line with my analysis of the interactions involving TD children, and with findings from Drew (1997), I found that in the interactions involving children with ASD, many turns preceding an OCRI were sequentially inapposite. In my analysis of turns preceding OCRI in the interactions involving TD children, I found that many of these showed evidence of the child trying to understand the demands of the clinical testing environment. Interestingly, in the interactions involving children with ASD, I found only one instance demonstrating the child trying to feel out the task demands. The other issue I examined regarding sequentially inapposite turns preceding an OCRI, was evidence of activity disalignment between participants. In the interactions involving TD children there were four instances of this which came about due to the task defined activity and the children’s differing expectation of what this means (i.e. differing understandings of the word ‘play’) or more intentional refusals to comply with the activity as defined by the task (i.e. proposing new rules of a test). In the interactions involving children with ASD, this was rare, with only one clear example of negotiation over the activity at play, and interestingly this occurred during the child-led session. The categories used to divide the sequentially inapposite turns in the interactions involving TD children were not so obvious a division in the interactions involving children with ASD. While many of these instances involved sequentially unexpected turns, or unmarked topic changes, finding an underlying reason on which to categorise the nature of the misunderstanding was much more difficult for the excerpts from interactions involving children with ASD.

5.4 Analysing the turns following open class repair initiation

In section 5.3, I examined the environments in which repair involving OCRI occurs in the interactions involving TD children and children with ASD. This section examines the turns following an OCRI, or the ways in which the children in the interactions respond to the adult’s production of an OCRI. Schegloff states there is a relationship between the perceived type of trouble source which other-initiated repair is responding to, and the way a speaker will go about repairing the trouble (2007; 151). If other-initiated repair results from a straightforward trouble in hearing/understanding, and this is evident to both participants, then the repair will take the form of a ‘repetition, clearer articulation, alternative word selection, …[or] the addition of information’ (Schegloff, 2007; 151). However, sometimes other-initiated repair occurs in different environments than those displaying straightforward difficulties in hearing, speaking or understanding. For example, when the initiation may be signalling potential disagreement, the repair might be an adjustment to the strength of the
trouble source utterance, or some sort of backing down or modification to the prior turn by the speaker of the trouble source (Schegloff; 2007; 154).

5.4.1 Analysing the turns following OCRI in interactions involving TD children

As discussed in section 5.3.1, there were 16 instances of repair involving open class repair initiators in the interactions with TD children. Of these, 14 elicited a repair attempt from the child, one case was immediately repaired by the adult researcher (ID 509) and one was repaired by the child’s mother after the adult researcher had initiated repair multiple times with a non-response from the child (ID 512). ID 509 (involving 28-CB) will not be examined here as in this excerpt the adult repairs the trouble source immediately after she initiates repair, thus the child is not given any opportunity to carry out repair. ID 512 (involving 33-JR), will be discussed here as this excerpt represents an interesting deviant case study where the child is unable, or unwilling, to repair his problematic utterance. This excerpt is discussed further in section 5.4.1.6.

Schegloff (2004) states that repair which follows an OCRI device will often take the form of a ‘re-saying’. This is because OCRI devices display only minimal access to the problematic talk on the part of the repair initiator. In Schegloff’s words, OCRI’s ‘claim only that something was heard to have been said’ (2004; 98). As such, participants often orient to OCRI devices as if they are a result of a lack of hearing or as a general request for a repetition, at least in interactions between English-speaking adults. In line with this account, the majority of the TD children in this data set reacted to the OCRI with a response which can be categorised as a ‘re-saying’.

Within this category of ‘re-sayings’ produced after an OCRI device, Schegloff (2004) differentiates between instances where speakers give a direct repetition of the trouble source turn, with near identical intonation, and instances where the repair has some reduction of or addition to the trouble source turn but is clearly still designed to do the job of ‘repeating’. In these latter examples, the content which is either missing in the case of reductions or added in the case of additions is not arbitrary, but is carefully selected to clarify the trouble source turn for the listener. Thus, in the case of reductions, the content left out is designed to disencumber or simplify the message being relayed and in the case of additions the content added is designed to add further specification to the problematic utterance for the listener’s benefit. In both of these circumstances there is content which can be viewed as ‘dispensable’; whether it is deemed so in the original utterance or the repeat of the original utterance, there has been a shift in the speaker’s understanding of what is necessary and sufficient for the listener.
Thus, the difference between the trouble source and the repair offers an independent analyst some insight into how a speaker is re-designing their turn to better meet the recipient’s needs. Thus a repair turn can provide some evidence of what the speaker of the repair assumes to be the reason for the breakdown of intersubjectivity.

In line with this, the types of repair attempts covered in this chapter include:

1. Full lexicosyntactic repetition of the trouble source:
   a. with same intonation
   b. with altered intonation
2. Partial repetition of the trouble source:
   a. with additional content
   b. with reduced content
3. Other

Table 5.3 gives an overview of the distribution of the types of repair strategies used by the TD children in this data set.

<table>
<thead>
<tr>
<th>Excerpt Number</th>
<th>1. Full lexicosyntactic repetition of the trouble source</th>
<th>2. Partial repetition of the trouble source</th>
<th>3. Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1a. with same intonation</td>
<td>1b. with altered intonation</td>
<td>2a. with additional content</td>
</tr>
<tr>
<td>ID 501: 8-LS. 9:44</td>
<td></td>
<td>ID 507: 27-IY. 59:30</td>
<td></td>
</tr>
<tr>
<td>ID 513: 33-JR. 37:25</td>
<td></td>
<td>ID 516: 55-TV. 1:01:36</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.3 Types of repair attempt by excerpt number from the interactions involving TD children

Table 5.4 gives examples of each repair type used by TD children. This table is intended as an overview only, with each excerpt discussed in detail in the following pages. For ease of comparison, I have simplified transcripts here by removing pauses and non-verbal information.
<table>
<thead>
<tr>
<th>Repair category</th>
<th>Excerpt ID number</th>
<th>Transcript (Simplified to remove pausing and non-verbal information)</th>
</tr>
</thead>
</table>
| | | 13 -> A: sorry?
| | | 14: IY: **(XXX)** |
| 1.b. Full lexicosyntactic repetition with altered intonation | ID 503: 8-LS. 40:44 | 63: LS: keep Doll (.). out?
| | | 64 -> A: hey?
| | | 65: LS: keep [Doll] out?
| | ID 504: 8-LS. 1:15:26 | 14: LS: did you see the TV in there.
| | | 16 -> A: sorry?
| | | 10: LS: did you see the TV in there.
| | ID 501: 8-LS. 9:44 | 8: LS: this one's hard:
| | | 10 -> A: what was that sorry?
| | | 11: LS: this one's hard.=
| | ID 513: 33-JR. 37:25 | 8: JR: I've seen a baby (.). pig(.).le:t:
| | | 9 -> A: sorry?
| | | 10: JR: I've seen a baby [piglet]
| | | 17 -> A: sorry?
| | | 18: JR: I can ea:sily do [ puzzles:.. ]
| | ID 502: 8-LS. 12:08 | 3: LS: >(I got) timer< on my watch
| | | 4 -> A: sorry?
| | | 5: LS: I've got a timer on my watch
| 2.a. Partial repetition of the trouble source with reduced content | ID 514: 51-JW. 5:05 | 7: JW: um [me and you.]
| | | 9 -> A: sorry?
| | | 10: JW: [me and you.]
| | | 15 -> A: what was that?
| | | 17: JM: (dove).
| | ID 516: 55-TV. 1:01:36 | 2: TV: sometimes I need to >(cough a bit)<.
| | | 4 -> A: sorry?
| | | 6: TV: sometimes I >(cough a bit)<.
| | ID 507: 27-IY. 59:30 | 9: IY: no::, I know how to (.). (do it. wanna be a sleep-over) friend.
| | | 11 -> A: [wh- what was that sorry? ]
| | | 13: IY: *sleep-over friend*
| 3. Other | ID 510: 28-CB. 6:41 | 4: CB: is there a nose [there]. (.)
| | | 7 -> A: sorry?
| | | 9: CB: [there’s no n:ose there.]
| | ID 515: 52-NC. 36:52 | 7: NC: can I be baby?
| | | 9 -> A: sorry?
| | | 11: NC: I want (to) play goldilocks.
| | | 24 -> A: sorry?
| | | 25: I cA:n't make a hole.

Table 5.4 Excerpts demonstrating repair categories used by TD children

5.4.1.1 Full repetition of the trouble source with same intonation

Full lexical repeats of the trouble source turn are also referred to in previous literature as ‘recycling’ (Schegloff, 1987; Fox & Jasperson, 1995). Schegloff (2004) states that lexical repeats which occur with near identical prosody, at least to the naked ear, treat the source of the breakdown in understanding as being a problem associated with hearing, or as a request for repetition.
The sole example in this data set of this type is excerpt (46). Here the child is struggling to give a verbal response to the question ‘what is a shoe?’, asked by the adult in lines 1 and 8. As discussed at excerpt (11), this child’s trouble source turn is difficult to hear, so it is difficult to argue that the repair proper in line 14 is an exact repeat of the trouble source turn in line 12. However, both of these turns have the same intonation contour and sound as if they contain the same phonemes, so I have included them in this categorisation.

(46) ID 506: 27-IY. 12:52 (TD: 4;5)
WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another.
1   A:  tell me what is a shoe.
2   (4.2)
3   IY:  [I've got a *(silver) one]*
4   [((IY lifts her foot up to show A and is looking at it just above the table)]
5   IY:  "it's got (flowers) on it."
6   A:  ah you have haven't you, yeah, those very pretty shoe.
7   IY:  could you tell me, what- what is a shoe.
8   IY:  um (7.8)/((IY is restless and moving about in her chair))
9   A:  a shoe is something you put on your foot. yeah?
10  IY:  **(XXX)**
11  A:  sorry?
12  IY:  **(XXX)**
13  A:  yeah, a shoe is something you put on your foot. that's right.
14  now
15  IY:  I heard- I heard that noise
16  IY:  ((bang))
17  A:  did you, the XX (the bang)

Use of this strategy suggests that IY has attributed the source of the trouble to a lack of hearing or comprehension on the part of the adult or that they have oriented to the OCRI as being a request for a repetition (Schegloff, 2004). However, the trouble source turn in excerpt (46) is difficult to understand, and classified earlier as containing a problem of misspeaking. Thus in this case, full repetition of the trouble source turn is unlikely to help restore intersubjectivity between the two participants. Re-saying with improved articulation would be a better strategy in this circumstance. However, this assumes that the child has adult-like articulation as a resource to be able to use it as a repair, which may not be the case. A does not orient to line 14 as if it has restored intersubjectivity. Instead, in line 15 she repeats her turn from line 11 to progress testing. Essentially this disregards the insertion sequence in lines 12-14 as irrelevant to the testing requirements.

5.4.1.2 Full repetition of the trouble source with altered intonation

Most repetitions that operate as repair have some sort of additional emphasis. As Couper-Kuhlen (1996) points out, examining prosody in repetition is a complicated business as there are a minimum of six ways in which we can talk about prosody in the environment of repetition. Such intonational
differences can be examined at the syllabic level where repetition of length, loudness or pitch can be examined, or at the phrasal level where repetition of speech rate, loudness or register can be examined (Couper-Kuhlen, 1996; 369).

Curl (2004, 2005) analysed the prosodic patterning of repetitions produced in other-initiated repair, the majority of which occurred after an OCRI. She found two types of prosodic patternings. The first had quieter volume, more compressed pitch ranges, faster tempo and similar articulatory settings, whereas the second type had louder volume, a more exaggerated pitch range, slower tempo and longer domain articulatory resettings. She found that the type of OCRI device used by the other (i.e. ‘what?’, ‘huh?’, ‘sorry?’) had no bearing on which prosodic patterning occurred in the repair, rather this appeared to be related to its sequential organisation. Building on the work of Drew (1997), Curl found these prosodic patterns to be correlated with the trouble source turn and, more particularly, whether this turn was fitted, or sequentially well suited, or disjunct, which I have referred to as ‘sequentially inapposite’ in section 5.3, to the prior turn.

As discussed in section 5.3, sequentially relevant turns, or fitted turns, are appropriately designed to follow the previous turn. They may consist of turns which are topically aligned and continue the sequence in progression or alternatively may be turns which begin a new topic or sequence after a collaborative closing of the previous sequence (Curl, 2004; 277). In these instances, Curl found that the repetition which constituted the repair was ‘upgraded’ or, spoken with louder volume, exaggerated pitch range, slower tempo and longer domain articulatory resettings. In disjunct or sequentially inapposite turns, which can be characterised as turns in which the speaker fails to display orientation to the prior turn or sequence structure or topic, the repeat was produced with similar or slightly ‘downgraded’ prosody. Specifically, this consisted of quieter speech, similar or smaller pitch ranges, shorter syllable durations, and similar articulations when compared to the trouble source (see Curl, 2004 for more details). This research suggests that the prosody of the repair proper is relative to the self’s prior turn, rather than the other’s immediately preceding turn.

Detailed phonetic analysis is beyond the scope of this investigation. However, I will discuss which aspects of the talk have been altered during the repetition in line with aspects outlined by Couper-Kuhlen (1996) and Curl (2004). Additionally, while non-verbal content is not a main feature of this analysis, interactionally it is often significant, thus when gestural or other non-verbal information is orientated to as important interactionally, I also discuss this.

Excerpt (47) features a direct lexicosyntactic repetition of the trouble source, with altered intonation. This excerpt occurs during the test of pretend play.
Test of pretend play – stimulus objects are Doll, and a white plastic cup and then Doll, a black plastic box and white plastic counter. Participants are sitting on mat facing one another.

A: well done.

LS: she gets out too.

((LS removes Doll from the box))

A: oh, good one.

LS: there she goes.

A: that was really good,

LS: keep Doll out?

A: hey?

LS: keep [Doll] out;

((LS points to Doll))

A: yeah, we’ll keep could you show me how Doll puts a plate on a table?

((LS turns box upside down and makes Doll put counter on the top of it))

In line 63, when LS first produces ‘keep Doll out?’ there is emphasis on the word ‘Doll’ as the beginning of it is spoken with additional loudness, which may be likely a result of the fact it is said in overlap with the adult’s speech. This turn could demonstrate an increase in loudness to gain the right to speak (Schegloff, 1987). On the repetition of the trouble source the phrasal stress is moved to the word ‘out’ and the questioning intonation is less marked. Additionally, LS adds a deictic pointing gesture towards the doll, while saying the word ‘Doll’, to potentially aid A’s understanding of the reference. Thus LS adjusts his production of the turn to assist A’s understanding.

Excerpt (47) features a repair which consists of a prosodically ‘downgraded’ repeat of the trouble source, as demonstrated most noticeably by the smaller pitch range and the absence of increased volume. In line with Curl’s findings (2004; 2005), this occurs in an instance where the trouble source turn was sequentially inapposite to the prior talk.

Similarly, excerpt (48) demonstrates a repair which is a full lexical repetition with a change in the intonation of the turn in terms of sentential stress.

Transition from sun-moon stroop task to the generation of object substitutions task, which is a transition from the table to the mat. The camera is recording the table and they have already left the table when this excerpt begins so both participants are off-camera.

((A opens the testing room door))

A: sorry?

LS: did you see the TV in there.

((LS turns box upside down and makes Doll put counter on the top of it))
When spoken in the trouble source turn in line 14, this turn has the verb, ‘see’, emphasised by a jump in pitch. However in the repair proper which occurs in line 18, the subject, ‘you’, now carries the sentential stress and ‘see’ is emphasised with less intensity when compared to its production in line 14. This excerpt was classified in section 5.3.1.1.1 as an OCRI device occurring after a lack of orientation. As such examples occur after silence, it is not possible for them to be inapposite. However, in excerpt (48), LS produces his turn preceding an OCRI before A is accountable to interact with him, and does not include any prefacing to warn A that talk is coming.

This appears to be a common repair strategy for this child with the following excerpt, (49), also produced by LS. Out of the four repairs LS produces in response to OCRI devices, three were repaired using full lexical repetition with changed intonation.

(49) ID 501: 8-LS. 9:44 (TD: 6:6) – abridged
WPPSI-III - information subtest. Participants are sitting at table, facing one another. A is completely off-camera.
6 A: what are shoes made of.
7 (1.6)
8 LS: this one's hard;
9 (2.2)
10 -> A: what was that sorry?
11 LS: this one's hard;=
12 A: =that one's hard isn't it. (.) shall we try the next one;

During excerpt (49) the child makes a metacomment about the nature of A’s question being difficult in line 8, which was classified in section 5.3.1.3.1 as a sequentially inapposite turn. This utterance has slightly rising intonation, however when he repeats it as a repair in line 11, it is said with falling intonation. The final excerpt, (50), demonstrating repair carried out using a full lexical repetition with a change in intonation comes from a different child, JR.

(50) ID 513: 33-JR. 37:25 (TD: 4:5) – abridged
Tigger-Piglet inhibition task. Participants are sitting on the mat facing one another.
5 A: tsk now
6 (0.9)
7 A: we’re going [to] -
8 JR: [I ]’ve seen a baby (. ) pig(. )le:t;
9 -> A: sorry?
10 JR: I’ve seen a baby [piglet]
11 A: [you’ve] seen a [ baby piglet have you ]
12 [((JR nods head a few times))]

In section 5.3.1.3.2, this excerpt was categorised as an OCRI device occurring after a sequentially inapposite turn. In it, JR produces the turn, ‘I’ve seen a baby piglet’, in line 8, with the emphasis on the main verb, ‘seen’, and ‘piglet’ said with some disfluency, evidenced by the brief pause between the two syllables of the word and the lengthened final vowel. In contrast to this, in the repair produced in line 10, the child emphasises the subject of the sentence, ‘I’, and produces the rest of
the turn with improved fluency. Additionally, the trouble source turn is produced with slight questioning intonation, however this has flattened out in the repair turn.

This section shows that repetition of a trouble source turn with altered intonation is a reasonably common repair strategy for the TD children. In these excerpts, children orient to the breakdown of intersubjectivity as if it is a problem of comprehension. Altering intonation in a turn which is otherwise syntactically and semantically the same, may imply that the speaker is making the assumption that the hearer has heard but not understood the turn. If the recipient had not heard the utterance because, for instance, the turn overlapped with a loud noise, the speaker would likely just repeat the turn with the same intonation contour.

Excerpts (47), (49) and (50) all demonstrate trouble source turns which are sequentially inapposite to the preceding talk. In line with Curl’s findings (2004; 2005), each of these excerpts exhibit intonation in the repair turn which is ‘downgraded’ when compared to the trouble source turn. Except (48) also demonstrated a ‘downgraded’ repair. Although it is impossible to categorise the trouble source turn in this excerpt as inapposite as it essentially occurs after a period of silence, as discussed in section 5.3.1.3, such examples still constitute unanticipated turns as they are produced before the adult becomes ‘accountable’ to take part in the interaction, and in excerpt (48) the trouble source turn is produced without any warning that talk is coming.

5.4.1.3 Partial repetition of the trouble source with additional content

When Schegloff talks about dispensability in repair sequences (2004), he notes that content can be dispensed with either during the trouble source or during the repair proper. Repair with a change in content often involves changes to the syntax of a turn. However, Fox & Jasperson (1995; 108) note that repair must still operate within ordinary syntactic constraints. For example, they found that if the repair is initiated in a post-verbal phrase, the verb is never repeated at the beginning of the repair segment. Thus, the reduction in the repair turn is produced in line with syntactic constraints of the language in which it is spoken.

In this section, I will cover examples where the dispensable information occurs in the repair proper, thus the repair consists of the trouble source turn with additional information added. Excerpts where the dispensable information occurs in the trouble source turn, or where the repair is a re-saying of the trouble source turn with reduced content, are discussed in section 5.4.1.4. The first excerpt demonstrating partial repetition with additional content is shown at excerpt (51).
In excerpt (51), the child, JR, produces the trouble source turn in line 14 quickly and omits the subject of the sentence, ‘I’. This represents a TCU-initial ellipsis. When JR produces the repair in line 18, he includes the subject to form a grammatically complete sentence, speaks the sentence more slowly, places sentential stress on the adverb ‘easily’ and produces the word more closely to the target form. This excerpt supports findings by Schegloff (2004) that the subject, especially a first person subject, is often dispensed with in either a trouble source turn or the repair proper.

Another excerpt demonstrating partial repetition with additional material in the repair turn is presented below at (52).

In excerpt (52), the auxiliary verb, ‘have’, and the indefinite article, ‘a’, are absent from the original formulation of the utterance in line 3. However, in the repair which occurs in line 5, the sentence is produced in a syntactically correct form.

Both excerpts discussed in this section show the children reproducing their trouble source turn in a slower and more grammatically intact form in the repair proper. This indicates that the children have assessed that the adult has not understood the trouble source turn as a whole and are reproducing their turns in a way which will assist the adult’s comprehension.
5.4.1.4 Partial repetition of the trouble source with reduced content

In the interactions involving TD children there were four instances where, after an OCRI device, the child responded with a partial repeat of the trouble source turn with reduced content in the repair. That is, there is content in the trouble source turn which is dispensed with in the repair. The first two excerpts discussed in this section demonstrate a full lexicosyntactic repetition with an omission of ‘um’ in the repair proper turn, which constitutes a very minimal change.

(53) ID 514: 51-JW. 5:05 (TD: 4;0)

WPFSI-III - information subtest. Participants are sitting at table, facing one another.

1  A:  so maybe I’ll pop the lid on, (0.2) and now they can go here, (0.3)
2  A:  tsk and now could you tell me (. ) what colour is grass.
3  JW:  (. ) mm [ ah ]
4  A:  [what] colour is grass.
5  ( ((JW looks towards A))]
6  JW:  um [me and you.]
7  ((JW makes hand gesture towards himself then A))]
8  -> A:  sorry?
9  JW:  [me and you.]
10 ((JW makes hand gesture towards himself then A))]
11 A:  yeah;
12 JW:  mm
13 A:  d’you know what colour grass is.
14 (0.5)
15 JW:  [Erm (let’s) (. ) number (. ) that one.]
16 (((JW stands and leans over towards A and points to something on her test sheet))]
17 A:  that one;
18 ( ((JW holds up two fingers with palm facing towards his face))]
19 20 JW:  [yeah.]
21 (((A moves test sheet to her chest covering the answers and JW sits back down on his seat))]
22 A:  how many ears do you have.
23 JW:  [two!]
24 (((JW stands and leans over towards A and points to something on her test sheet))]
25

In excerpt (53) the child, JW, repairs his problematic turn (lines 7-8) with a full lexical repetition of the turn (lines 10-11), with almost identical intonation, at least to the naked ear. JW also repeats the non-verbal content of this turn which is a deictic hand gesture which is synchronised with his verbal reference to himself and the adult respectively (lines 8 and 11). The ‘um’ at the beginning of the trouble source turn (line 8) is not included in this repetition as it is not a part of the repairable utterance. In this excerpt, the ‘um’ is operating to keep the turn, or to demonstrate to the adult that JR is formulating a response to the initiation of an IRE sequence produced in line 5, so the adult is less likely to take a turn (see Gardner, 2008, for this use of ‘um’) or perhaps, and relatedly, is used to signpost that the child speaker has upcoming speech which is worth listening to (see Rendle-Short, 2004, for this function of ‘um’). This means that the work the ‘um’ is ‘doing’ is moderating the
interaction by conveying that there is still talk to come, rather than contributing a response to the
initiation.

The following excerpt, (54), also demonstrates a full lexical repetition where the intonation of the
trouble source turn is the same as the intonation of the repair.

**Excerpt (54)**

ID 505: 13-JM. 29:38 (TD: 5;2)

WPPSI-III – vocabulary subtest. Participants are sitting at table facing
one another.

1 A: what is a bicycle.
2 (1.9)
3 JM: °°bicyc°°
4 (5.3)
5 JM: a bike,
6 A: yeah, good one. it is a bike. (.) can you tell me a little
7 bit more?
8 (22.0)
9 A: can you tell me a bit more about a bicycle.
10 JM: nuh.
11 A: you’re not sure, that’s alright. what are lollies.
12 (0.8)
13 JM: .hh um, (dove/numb).
14 (0.9)
15 ~> A: what was that?
16 (0.3)
17 JM: (dove).
18 A: *mm* good, can you tell me a bit more.
19 (1.0)
20 A: what are lollies:. 
21 (5.1)
22 JM: for eat.
23 A: yeah good one. they're for eating. good one.
24 (2.3)
25 A: that’s right they are they’re for eating. tsk. what is a dog.

In this excerpt it is difficult to understand what the child is saying in line 13 as a response to the
question ‘what are lollies’? However even without knowing what the child is referring to, the repair
in line 17 sounds very close in intonation to the trouble source turn in line 13. The trouble source
turn occurs after a gap of 0.8 seconds, an outbreath and an ‘um’ which operates as a turn-holder to
convey to the adult that he is formulating a response. It is the one syllable word after this, ‘dove’,
which is the response to the initiation by the adult’s question in line 11. It is this part of the turn
which is repeated in line 17 as the repair proper. As with excerpt (53), the ‘um’ in line 13 is not
repeated as it is moderating the interaction rather than being part of the repairable turn.

Excerpt (55) is another example of material being dispensed with in the repair turn, however, in this
case, the information dispensed with is more substantial. Here the child, TV, is eating an apple so his
speech is difficult to understand.
In excerpt (55), in line 6, TV repeats most of the trouble source turn (line 2), word for word, but leaves out the modal component ‘need to’. In line with Fox & Jasperson’s observation (1995; 108), the repair turn still operates within ordinary syntactic constraints, as leaving out the modal component of this sentence still makes the repair a syntactically correct sentence. Arguably, it also makes the turn a simpler sentence for the adult to comprehend. Thus, this change appears designed to ‘disencumber’ the message for the recipient (Schegloff, 2004).

The three excerpts in this section so far have explored instances which convey a very similar message in the repair proper even though it contains reduced content. Excerpts (53) and (54) in particular only displayed an omission of an ‘um’ in the repair, which were arguably moderating the interactions rather than being part of the repairable part of the trouble source turn. These excerpts suggest that the child has analysed the source of the trouble as either a mishearing or as a lack of comprehension of the turn as a whole.

In addition to instances of dispensability of minor aspects of talk, Schegloff (2004) also discusses instances of repair sequences which include dispensable content but seem to illustrate a more specific analysis of the problem with intersubjectivity. In some cases, this can lead to a repetition of one word or phrase from the trouble source indicating that this is a logical candidate for the cause of the confusion. For instance, Schegloff states that in adult conversation, these are common in trouble sources which contain technical language, unusual words or recognitional reference forms (2004; 107). The follow excerpt, (56), shows an instance of this.

(56) ID 507: 27-IY. 59:30 (TD: 4:5) – abridged
Test of pretend play – stimulus object is Ted. All other toys are off the mat to the right of A. Participants are sitting on mat facing one another.
8 A: can you make Teddy get ready for bed.
9 IY: no::, I know how to (. ) (do it. wanna be a sleep-over)
10 (. ) friend.
11 -> A: [wh- what was that sorry? ]
12 [((A leans in towards IY))]
13 IY: ‘sleep-over friend’
14 A: a sleep-over friend, yeah, can you sh- can you show me.
15 (1.0)
16 IY: we need X the doll.

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In excerpt (56) the child, IY, produces a turn which is difficult to hear and understand for both the adult and myself as the analyst in lines 9-10. After repair has been initiated, IY repeats just one phrase from her previous utterance, ‘sleep-over friend’ (line 13). This demonstrates that IY is putting forward ‘sleep-over friend’ as the candidate solution for restoring the breakdown in intersubjectivity. In line with Schegloff (2004), this could be seen as a problematic phrase due to its novelty.

Schegloff notes that in these instances the repair proper usually consists of a grammatically incomplete sentence such as a word or a phrase rather than a complete sentence. It does not consist of a summary or paraphrase of the main gist of the trouble source turn but rather demonstrates an insight into what aspect of the problematic turn the speaker has deemed problematic from the other’s perspective (see Schegloff, 2004; 117).

5.4.1.5 Other types of repair strategies

In analysing the repair proper in interactions involving TD children thus far, the excerpts can be characterised as demonstrating a full or partial repetition of the problematic talk in the trouble source turn. All except the last excerpt at (56) (ID 507) can be categorised as essentially constituting a ‘re-saying’ of the message in the trouble source turn. In the excerpts analysed in this section the repair turn adds further information to contextualise the problematic turn. While these excerpts are still topically related to the trouble source turn, it is not appropriate to refer to these as a ‘re-saying’ of the trouble source turn.

The following excerpt, (57), shows CB completing the WPPSI-III, block design subtest.

(57) ID 510: 28-CB. 6:41 (TD: 5;0)
WPPSI-III – block design subtest. Participants are sitting at the table facing one another. There are two red blocks side by side on the table in front of CB.

1 A: huh huh now see if you can make (. ) these match.
2 (3.8)/((CB completes block design))
3 A: oh, we(h)ll done! that was excellent.
4 CB: is there a nose [there]. (. )
5 {((CB is pointing to the join between the two blocks))
6 -> A: sorry?
7 (A looks at CB and leans forward looking at CB’s blocks))
8 CB: [there’s no n:ose there.]
9 {((CB taps finger against the blocks))
10 A: yeah, like a nose. it is like a nose. it’s like a face, isn’t it. .hh now, very good. tsk, now this time I’ve got some different blocks to show you.

The trouble source turn which the child, CB, produces in line 4, has interrogative syntax indicating that CB is asking the adult a question. A question is a First Pair Part (FPP) of an adjacency pair and
would usually initiate a second pair part (SPP) in response, such as an answer to the question. Rather than a SPP, the adult responds to this with an OCRI. This is an acceptable response as repair can be initiated anywhere in a turn sequence, but it is not the most expected response type to occur in this environment. CB’s turn following the OCRI in lines 9-10 still contains many of the same words but is now in the format of a statement rather than a question. Additionally, CB taps the block to also provide additional non-verbal information for the adult to use to understand the turn. The trouble source turn suggests uncertainty while the repair suggests certainty. In the repair, CB is now expressing the view that there is no nose there.

This differing content of the trouble source and the repair could indicate two things; a change in the way the child chooses to express similar information or a change in the child’s knowledge state over the time between the trouble source and repair turns. The first explanation is unlikely in this context and would usually be more relevant to a socially sensitive situation, such as if the child was attempting to give a directive to the adult. The second explanation is more likely, where the example demonstrates the change in the child’s epistemic status. The extra time CB gains by the adult initiating repair may have confirmed his belief that the blocks look as if they are missing a nose.

This excerpt highlights the dynamic nature of interaction. The interactional context in which the trouble source is produced may be quite different from the context in which the repair gets carried out. This is because no two sequential environments will ever be equal (Schegloff, 2004), but also because interaction occurs along a time progression and the level of understanding or the stance taken towards an issue may change over this time.

This following excerpt, (58), occurs during a transition between tasks when the adult is attempting to introduce the test of pretend play.

(58) ID 515: 52-NC. 36:52 (TD: 4;4)
Transition from the semantic fluency task to the test of pretend play.
Participants are on the mat. NC is lying on the mat on his stomach with his legs bent and his feet in the air.
1 A: you came up with some good ones then (. ) and we are gonna play
2 with the [other toys, `cause I've got some things here.
3 [((A turns her body to her right (away from camera) to
4 look through the toy box)]
5 NC: oh.
6 A: n ow, let's have a [little look]
7 NC: [ can I be ] baby;
8 (0.5)
9 -> A: [ sorry? ]
10 [((A looks back towards NC))]
11 NC: I want (to) play goldilocks.
12 A: well (. ) what do you reckon you [could do with these?]
During lines 1-6, A is introducing and setting up the task. In line 7, NC seems to request a character which he could play in the game by saying ‘can I be baby’. After the adult initiates repair in line 9, rather than give a repeat of the problematic turn, NC provides the adult with the context for his request by stating the game he wants to play. In section 5.3.1.3.2, this excerpt was analysed as problematic primarily due to the disalignment of the trouble source turn (line 7) with A’s prior turn, with the word ‘play’ being interpreted within a conversational frame for the child and in an institutional frame for the adult. NC’s repair strategy in line 11, where he explains that he wants to play Goldilocks, shows awareness of the source of the trouble in line 7 as it seeks to explain the relevance of the trouble source turn rather than just re-say it.

The following excerpt, (59), shows another example of a repair strategy which attempts to provide contextualisation rather than a repetition of the trouble source turn. This occurs during the free play session where the participants are surrounded by toys and objects designed to stimulate pretend play.

(59) ID 508: 27-IY. 1:17:53 (TD: 4;5) – abridged
Free play session – stimulus items include the white plastic bowl, the black plastic stick, the white plastic counter and a cardboard tray like a takeaway tray from a bakery. There are also other toys and objects in reach. Participants are sitting on the mat facing one another.

((IY makes a stirring motion with a stick in a plastic bowl))

A: ah (mix) some water*
IY: and now I need some milk
A: ah: a bit of milk
((IY still stirring the stick around the bowl))
IY: now let it cook.
A: ah now it cooks.
((IY picks up the cardboard tray and is trying to push the stick through the middle of it))
IY: they can’t eat it X til I make a hole.
A: sorry?
IY: I can’t make a hole.
A: can’t make a hole? oh that’s okay.
IY: what happens if it- what- if you- would you- when I make a hole are you gonna get a (shock).
A: it might break. it might be a good idea not to break- make a hole in there.

In excerpt (59), the child, IY, is pretending to make a birthday cake and gradually pretends to add more ingredients to a plastic bowl, before she leaves the bowl aside, so that the cake can ‘cook’. She then picks up a cardboard tray and using the stick she has been previously using as a spoon, unsuccessfully attempts to puncture a hole through the tray in lines 21-22. It is demonstrated that IY
is hoping to make a hole in the paper tray by her complaint in line 23 that ‘they can’t eat it [the cake] X until I make a hole’. This is the turn which precedes the adult’s OCRI in line 24. As outlined in section 5.3.1, there are potentially many factors which make the trouble source turn problematic, including that it is not clear who ‘they’ refers to, why eating the cake is contingent on a hole being made in the cardboard tray (for example, it has not been established what pretend object the tray represents in the story), and there is also a syllable which is untranscribable.

After A produces an OCRI, IY produces a repair in line 25. This repair is a statement which appears to be a recasting of the problem she was trying to convey in the trouble source turn. While her main frustration in the trouble source turn was that they cannot eat the cake and the lack of ability to make a hole was the reason for this, in the repair proper her simplified message is simply that she can’t make a hole in the tray.

This could indicate that the child is reducing the message down to her desired action; to puncture the cardboard tray. Thus, she dispenses with her reason for performing the action, disencumbering the message for the adult. Alternatively, it could also be demonstrative of the dynamic nature of interaction and could suggest a change in IY’s mental state and her processing the source of her frustration.

The excerpts examined to this point have demonstrated a variety of repair strategies which TD children have used in response to OCRI devices. Responses have been variable due to the range of sequential environments in which they occur, however, all can be categorised as an attempt to repair the trouble source turn and restore intersubjectivity. The majority of these examples have been made up of repairs which appear to be direct re-sayings of the trouble source. For instance, five out of the 14 excerpts examined here have consisted of a full lexical repetition of the trouble source, either with same or altered intonation. Another five have consisted of a re-saying of the trouble source turn with dispensable material either in the trouble source turn or the repair proper. The final excerpt analysed in section 5.4.1.4, (56; ID 507), displayed dispensable material in the trouble source turn with the child selectively repeating the phrase which she identified as problematic in the repair. Finally, in this section, I have examined three instances where the child produces a repair which adds further contextualising information to the trouble source turn to restore intersubjectivity. The next section will cover the one example in the TD group where repair fails to be carried out by the child.
5.4.1.6 A deviant case

The following excerpt is immediately interesting as it is the sole case in this collection of open class repairs in the TD interactions where a child is provided with the opportunity to repair, in fact, multiple opportunities to repair, and yet does not do so. As with any deviant case in a data set, the finding of an exception may encourage a deeper understanding of the real ‘rule’ at play. For instance, in Schegloff’s exploration of telephone openings he formulated the ‘distribution rule’ which states that the receiver of the telephone call always speaks first (1968). However, his discovery of one example (out of approximately 500 calls) in which the caller spoke first prompted him to re-evaluate this analysis and led to a deeper understanding about the nature of a telephone ringing and of the initiation sequencing present in telephone calls. He realised that the interactants oriented to the ringing of the telephone as if it were the first pair part in a summons-answer sequence, similar to a recipient’s name being verbally called out in face-to-face interactions. In line with this, the recipient saying ‘hello’ upon answering the telephone was equivalent to them answering with a standard summons response, or second pair part, such as ‘yes’. In the deviant case the call recipient neglected to produce a standard answer to the summons of a telephone ringing and thus, after a 1 second silence, the caller produced the summons a second time with a ‘hello’. Resaying the summons is a typical response from the speaker when a summons goes unanswered (1968; 1083).

As discussed in section 5.3.1.3.2, the excerpt to be discussed here, (60), contains the boldest case of disalignment within this subset of excerpts. In this excerpt, JR has been complying with the task demands until line 20 where he actively rejects the adult’s pursued activity by declining to answer the adult’s request for more information about lollies. As suggested in the previous section, JR even appears to propose a new activity for the participants to undertake, which is disaligned with both the task activity and the participants’ established roles as test administrator and test taker.

(60) ID 512: 33-JR. 23:04 (TD: 4:5) – abridged
WPPSI-III – vocabulary subtest. Participants are sitting at table facing one another. Most of A is off-camera, Mum is completely off-camera
11 A: well done. tsk, what are lollies.
12 (0.9)
13 JR: hh something that you e:at
14 A: goo:d.
15 (0.8)
16 A: can you tell me a bit more¿
17 (0.8)
18 JR: mm
19 (1.4)
20 JR: no [ you gotta ] tell me something then I’ll tell it=
21 [((JR points to A))]
22 =back to you.
23 -> A: sorry?
JR’s rejection of the adult’s pursued activity occurs in lines 19-22 where, after a pause, he says ‘no, you gotta tell me something then I’ll tell it back to you’, while he points to the adult on the first production of the pronoun ‘you’. JR’s mother orients to his turn as being a ‘laughable’ utterance (Glenn, 2003), as demonstrated by her laughter in lines 24, 26, 28 and 30 and her use of smilie voice in lines 27-28. Thus she displays her understanding of the trouble source as being comical rather than antagonistic. There is still the potential for the unfamiliar adult to treat it as posing a challenge, rather than as ‘doing’ joking. The adult’s response to the trouble source turn is to produce an OCRI. As discussed in section 5.1, OCRI’s do not highlight the direct source of trouble, they just make public that trouble has occurred. This gives the child no indication of whether the adult has simply not heard or understood the utterance or that the problem she is raising is interactional in nature. That is, it gives no indication to other participants whether the adult is orienting to the trouble source turn as conflictive or joking.

Schegloff (2007; 103) has identified instances of OCRI which essentially act as ‘pre-disagreements’ as they offer speakers of trouble source turns opportunities to downgrade their opinions or beliefs in the repair proper (see Schegloff, 2007; 103-104). Thus, the adult’s use of a repair initiator after a potentially antagonistic turn may, in fact, lead JR to believe that she is orienting to his prior turn as indicating conflict and is giving him the opportunity to downgrade it. After the adult produces an OCRI in line 23, there is a 4 second pause which indicates that responding to the repair initiation is problematic for the child. During this time, JR and his mother both seem to be orienting to the previous turn as ‘laughable or ‘non-serious’, demonstrated by the mother’s giggling and the child’s sustained smile in line 24. After at least 6.7 seconds have lapsed, and the adult has initiated repair twice more (using ‘lollies?’ and ‘what was that?’ in line 25), the child remains unable or unwilling to provide a repair attempt. It may be problematic for JR to respond as he has understood the adult’s
OCRI to be foretelling disagreement. There may be evidence for foretelling disagreement in A’s actions as, at this point in time, she is the only participant present who has not oriented to the prior talk as if it is ‘laughable’ or a joke.

After repair is initiated by an ‘other’, there is a strong onus on the speaker of the trouble source to make an attempt to repair the trouble source and this is usually what happens among adult English speakers and in adult-child interactions. Thus, even if an ‘other’ initiates repair, the repair proper is most commonly carried out by the speaker of the trouble source, or the ‘self’ (Schegloff et al., 1977). However, the speaker of this trouble source, JR, declines the opportunity to self-repair. This could also be a result of his mother being with him to potentially speak on his behalf if he cannot express himself. Thus with a familiar adult with him, there is perhaps less onus on the child to respond.

Schegloff states that in instances where OCRI’s are produced the repair initiation is a first pair part of an adjacency pair as it essentially takes the form of a question or an interrogative (2007; 101). When a first pair part is produced it creates an environment where a response is conditionally relevant, thus a lack of a response is ‘officially noticeable’ (Schegloff, 1968; 1083). This excerpt is ‘interactionally atypical’ within this data set because the child’s reaction to this first pair part interrogative (‘sorry?’) is not a second pair part, preferred or dispreferred, but is actually a lack of a response, or a non-response.

Following the first non-response from the child, the adult produces the word ‘lollies’ with rising intonation and immediately produces a second OCRI (‘what was that?’). After two additional repair initiations from the adult and enough time for the child to offer a repair attempt, the repair proper is carried out by a different participant (his mother), who also has epistemic access to the information required to repair the trouble source, as she demonstrates having heard it when it was produced in lines 20-22. The mother’s repair begins by marking the turn as reported speech by saying ‘he said’ and she then repeats the content of the trouble source turn. She does however add additional information to the content when she refers to ‘something else’ rather than simply ‘something’ in line 27. The mother’s interpretation of the child’s trouble source turn appears accurate as the child makes no attempt to repair it, thus does not orient to it as inaccurate. In line 29 the researcher reacts to the mother’s repair as new information with the use of two change-of-state tokens ‘oh’ (Heritage, 1984a), the first of which is said particularly emphatically, and her renewed understanding of the previous talk is also demonstrated lexically by the use of ‘I see’. Additionally, the two syllables of laughter suggest that she has finally understood the comedy of the situation as she now understands what the child said.
The adult’s demonstrated understanding of the trouble source turn as a request for assistance with the task as is displayed in lines 31-32 (‘well I can’t give you any more help’) is perhaps a move to downplay the contentious nature of the trouble source turn. She then produces positive feedback by saying ‘you’re on the right track’, confirms the correctness of the child’s previous answer (‘you do eat lollies’), and essentially re-issues the same question again (‘Is there anything else you can tell me about lollies’). This restores her role as task administrator. She eventually receives an answer to her request for further information about lollies in line 38 (‘they’re not good for you’), which restores her pursued activity as the one all participants are orienting to as underway.

The trouble source turn in this excerpt appears to go through a number of interpretations as it passes through the turn of each participant present in the interaction. This potentially changes the content of the turn, but more importantly can arguably be seen to be achieving ‘social’ work, with the adult smoothing over a turn which is potentially problematic from an interactive perspective.

5.4.2 Analysing the turns following OCRI in interactions involving children with ASD

The previous section analysed the repair strategies TD children used after the adult in this data set initiated repair using an OCRI device. This section will now examine the repairs carried out in similar sequential environments by children with ASD. As outlined in section 5.3.2, there were fewer OCRI devices used by the adult during the interactions involving children with ASD compared to those produced in the TD interactions (11 as opposed to 16). However in all of the 11 instances of OCRI, the child with ASD attempted to respond to the OCRI, including in one case where the repair attempt happened simultaneously with the adult’s other-repair attempt. One of these cases has been excluded from analysis in this section (ID 527), as the child’s (42-SO) talk in the trouble source turn and the repair proper was untranscribable so that meaningful analysis of the repair strategy has not been possible.

As already discussed, repetitions or ‘re-sayings’ as a repair strategy may use the same words to repeat the trouble source, with or without a change in intonation, or give a partial repetition of the turn containing the trouble source, with either reduced or additional content (Schegloff, 2004). In line with Schegloff (2004), and the analysis of repair strategies used by TD children in this data set, I have divided excerpts into the following categories:
1. Full lexicosyntactic repetition of the trouble source
   a. with same intonation
   b. with altered intonation
2. Partial repetition of the trouble source
   a. with additional content
   b. with reduced content
3. Other

Table 5.5 shows the distribution of the types of repair strategies among the children with ASD in this study.

<table>
<thead>
<tr>
<th>Excerpt</th>
<th>1. Full lexicosyntactic repetition of the trouble source</th>
<th>2. Partial repetition of the trouble source</th>
<th>3. Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1a. with same intonation</td>
<td>1b. with change in intonation</td>
<td>2a with additional content</td>
</tr>
<tr>
<td>ID 523: 30-AA. 1:35:46</td>
<td>ID 524: 34-ML. 20:40</td>
<td>ID 517: 12-LT. 34:45</td>
<td></td>
</tr>
<tr>
<td>ID 521: 30-AA. 11:10</td>
<td>ID 519: 14-MT. 3:53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID 522: 30-AA. 58:14</td>
<td>ID 526: 38-PO. 1:38:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

*Table 5.5 Type of repair attempt by excerpt number from the interactions involving children with ASD*

The ways in which the children with ASD have carried out repair following an OCRI device appears to differ from the TD children. As described in section 5.4.1, a full lexical repetition of the trouble source, either with the same or altered intonation, was a common repair strategy for the TD children, with five out of the 14 excerpts examined demonstrating this strategy. In the interactions involving children with ASD, there are no instances where the child oriented to the OCRI device as a request for a full lexical repetition of the trouble source turn. However, the children from both groups overwhelmingly demonstrate that they have understood the adult’s OCRI to be requesting a repetition of some sort. In all but one excerpt from the interactions involving children with ASD (ID 526), the children responded to the OCRI with a type of a ‘re-saying’ of the trouble source. The most common type of repair in the interactions involving children with ASD is a partial repetition of the trouble source turn with reduced content. 10 out of the 14 excerpts examined from the interactions involving TD children contained a repair attempt which could be classified as a re-saying of the trouble source turn. This compares to nine out of 10 excerpts occurring in the interaction involving
children with ASD. All of the repair attempts from TD children were topically related to the trouble source turn, while nine out of the 10 excerpts from the interactions involving children with ASD were topically related. The one instance where this is not the case (ID 526) is examined in section 5.4.2.4 as a deviant case.

Table 5.6 gives examples of the repair strategies used by the children with ASD. As with table 5.4 in section 5.4.1, this table is intended as an overview only with each excerpt discussed in detail in the following pages. For ease of comparison among excerpts I have simplified transcripts here by removing pauses and non-verbal information. As there are no excerpts in the categories of 1.a or 1.b. above, these have been excluded from the table.
The following sections will cover partial repetition, first with additional content in the repair proper in section 5.4.2.1, and then with reduced content in the repair proper in section 5.4.2.2. The excerpts which fall under the ‘other’ category will then be discussed and finally this section will finish by examining a deviant case which is the one example where the child does not respond to the repair initiation with a re-saying of the trouble source and instead changes the topic. Thus this is included in the ‘other’ excerpts in tables 5.5 and 5.6 but will occur in a separate section in the analysis which follows.
5.4.2.1 Partial repetition of the trouble source with additional content

As outlined in section 5.4.2, these types of repairs consist of a partial repetition of the trouble source including additional material. This means that content which the speaker considered dispensable in the trouble source turn, is now deemed important to add to the repair proper. The following excerpt, (61), demonstrates this. In this excerpt, the child, LT, and the adult are returning to the room from a break.

(61) ID 518: 12-LT. 38:48 (ASD: 5;7) – abridged

Transition from a break. The beginning of this excerpt takes place outside the room and for most of the interaction neither participant is on camera. LT briefly becomes visible on the camera in line 19 when he picks up the toy box.

6 (2.2)/((LT and A re-enter room. LT is helping A clean up the toys from the mat from the last session, but camera is already pointed to the table, where the next task is based))
7 LT: we can play in the carpet?
8 (0.3)
9 -> A: sorry?
10 (0.2)
11 A: .h ye[ah? I’ll just- I’ll tidy these aw-]
12 LT: [we can play with (.) a:::ll ] XXXX play (with in)
13 the carpet.
14 A: ye:ah,

The participants begin tidying up the toys in the room, when LT asks if they can play on the carpet in line 9. This is the turn which A orients to as repairable. While some of LT’s repair in lines 14-15 is not transcribable, the turn contains the whole of the trouble source turn, i.e. ‘we can play... in the carpet’. However there appears to be some additional detail included in the repair, such as what they are playing with. This potentially contextualises LT’s original turn to make it more accessible to A. However, the disfluent nature of the extra content in the repair proper arguably is not the aspect which resolves this misunderstanding from A’s perspective.

There is one other excerpt which can be seen as consisting of a repetition of the trouble source with additional material. Excerpt (62) occurs when the adult and the mother of the child, AA, are conversing outside the testing room, while AA is still playing by himself in the testing room.

(62) ID 523: 30-AA. 1:35:46 (ASD: 7;3)
Session has finished. A has left the room but AA continues to play in the room and is still on camera. A and Mum talk outside - their speech is audible in the background but I cannot make out what is being said.

1 (AA picks up Ted and makes him ‘hold’ a stick in each paw and waves them as if he is sword fighting))
2 AA: pish:oo:: pish:oo:: sh:oo ((said in time with sword movements))
3 (6.4)/((AA Looks across at the other toys, selects the orange truck and moves it into the play space))
4 AA: oh oh
5 (7.7)/((AA picks up truck in his left hand and looks it over intently))
6 AA: [HEY MUM CHECK THIS OUT! ]
The trouble source turn occurs in line 9 where AA calls out for his mother’s attention. After A responds to his summons with a repair initiation in line 13, AA repeats the whole trouble source turn, prefacing it with ‘I said’. Schegloff (2004) states that some turn-initial aspects of a repetition may only be proximally relevant in one of its deliveries. An example of this was seen in the TD excerpts ID 514 at (53) and ID 505 at (54) where ‘um’ was dispensed with in the repair proper, because it was only proximally irrelevant in the trouble source turn. Similarly, in excerpt (62) the function of ‘I said’ is to link it to the adult’s prior turn and to mark the repair as reported speech. Thus, ‘I said’ was not relevant in the trouble source turn.

Interestingly, the repair in line 15 still repeats the attention-getting device ‘hey’ and term of address, ‘mum’, even though the child has obviously gained an adult’s attention and an attention-getting device may be deemed irrelevant at this point. However, it is the wrong adult who has answered his summons, which may be grounds for repeating the whole of the attention-getting device, ‘hey mum’, to demonstrate that the wrong addressee had responded.

5.4.2.2 Partial repetition of the trouble source with reduced content

Repairs comprising a partial repetition of the trouble source with reduced content were common in the interactions involving children with ASD, with four cases in total. The first excerpt, (63), illustrating this type of repair follows on nicely from excerpt (62), as it represents an instance where the child selectively dispenses with a turn-initial part of the utterance as it loses its proximal relevance. This excerpt is produced by the same child, AA, during the test of pretend play.

(63) ID 522: 30-AA. 58:14 (ASD: 7;3)
Test of pretend play – Stimulus object is Ted. Participants are sitting on the mat, facing one another.

1 A: there he goes o:h good one. very good=
2 AA: =this is gonna be funny.
3 I need one piece of wool
4 (0.3)
5 A: .hh well we might- (. ) we’ve got a few things we’ll do without
6 the wool. could you make Ted do something else, what else could
7 Ted do.
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8  (.)
9  (AA holds Ted above his head with his right hand))
10    A:  ooh what’s he doing?
11  (0.5)/((AA begins to move Ted in the air above his head))
12    AA:  [nye::::::tw]
13        [((AA is moving Ted in slow circles in the air))]
14    A:  oh is that a plane?
15    AA:  yep [ and ] something else
16    A:  [very-]
17    AA:  [click click-a-click click-a-click click-a-click click-a-click
18        [(AA still holding Ted above his head but now using a rocking
19        motion to move him)]
20    A:  is that a helicopter?
21    AA:  [very good]=
22    A:  [click click-a-click click-a-click click-a-click
23    AA:  =and this is funny
24    A:  wha(h)t?
25    AA:  this is funny
26    A:  [it’s funny?]
27    AA:  [watch this.]
28  (3.0)/((AA slowly and deliberately moves his head to the right
29        scanning the room))
30    AA:  wait there was- there wasn’t-
31    ((AA holds Ted in his right hand and slides him around on the 32
32    mat))
33    A:  oo:h wow. is that a train.

After AA pretends that Ted is a helicopter in lines 17-19, and the adult provides a positive evaluation of this (‘very good’), he states in line 23 ‘and this is funny’. The conjunction ‘and’ in the turn-initial position of this turn links forthcoming action to his previous action. This device allows AA to act out another scenario by linking it to the previous action, as this session is intended to be led by the adult. 15 Schegloff (2004; 99) states that when a token is only contextually relevant to the environment in which the trouble source occurred, and not the turn of the repair proper, it may be deemed dispensable in the repetition. This excerpt demonstrates this, with the repair proper repeating the turn in full, minus the conjunction ‘and’ as its role linking the turn to the previous action is no longer relevant.

Similarly the following excerpt, (64), also contains material in the trouble source turn which is dispensed with in the repair proper.

(64) ID 524: 34-ML 20:40 (ASD: 4;1)
WFFSI-III - object assembly subtest. Participants are sitting at table, facing one another. A is often not visible, ML is very engaged in the task throughout this whole excerpt and does not look up at A at all. During the repair sequence ML is intently looking down at the puzzle continuing to work on it.
1    ML:  it’s b- bi:g house.

15 Compare the success of this bid to lead a play scenario with the one in line 2. In line 2 AA introduces a new scenario using similar words (‘this is gonna be funny’), however is unsuccessful when the adult uses her next turn to introduce the next test play scenario, explicitly rejecting the child’s bid.
A: it is a big house, it’s a nice house isn’t it.
(2.4)
ML: the house is (.) standing up.
A: yeah huh it isn’t standing up.
(0.8)
ML: [pop those here.]
A: now this is another big one, this is a big red apple.
(0.7)
((beep))
(10.8)
ML: .h X (where are they) tamagotchis (.). ((A’s name)).
(0.5)
A: sorry?
(ML is focused on completing puzzle in front of him))
ML: (where are they) tamagotchis
(1.3)/(ML is focused on completing puzzle in front of him))
A: tamagotchis?
(42.8)/(ML is completing puzzle on table in front of him))
A: oh good working. ((beep)) that was very very good. well done
that was very patient, that was perfect

In excerpt (64), the trouble source turn in line 12 begins with a syllable which is difficult to hear and transcribe, which is then dispensed with during the repair proper in line 16. Additionally, the trouble source includes a turn-final term of address (transcribed as ((A’s name))) which directs the question to the researcher and is not repeated in the repair in line 16. Throughout this whole excerpt there is no eye gaze from ML towards A. Thus the use of a term of address may be used in the absence of other interactional behaviours, such as eye gaze. Schegloff (2004) states that it is common for an address term to be deemed dispensable in the repair proper, especially if the desired recipient has demonstrated their attention by producing the repair initiator, as happens in excerpt (64). A’s response in line 14 to the trouble source implies that ML has the attention of the intended addressee, which makes the address term redundant. The intonation on the repeated section of the trouble source and the repair proper are the same.

The following excerpt, (65), displays another instance of partial repetition of the trouble source.

During this excerpt the child, AA, gives an unusual response to the test question in line 12.

(65) ID 521: 30-AA. 11:10 (ASD: 7;3)
WPPSI-III - information subtest. Participants are sitting at table, facing one another. A is completely off-camera.
A: good. it does well done. what day comes after Saturday.
AA: Sunday!
A: perfect.
(0.9)
A: what are shoes made of.
(6.2)/((AA leans forward on the table holding his chin in his right hand))
AA: hm tsk tsk
(6.0)
AA: dunno.
A: that’s ok, that’s a tricky one. (. ) tsk how many days make=
AA: [a duck!}

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In line 12, AA produces the trouble source turn, ‘a duck’, to which A responds with an OCRI device in line 15. AA then repeats the trouble source turn, this time omitting the turn-initial definite article, ‘a’. Schegloff (2004) does not talk specifically about omitting articles in repetitions, however, the absence of this article could indicate that the child has isolated the word ‘duck’ as the primary source of the misunderstanding, similarly to IV’s use of ‘sleep-over friend’ discussed at excerpt (56). While this is not a problematic repair strategy in itself, AA appears to have misidentified the difficulty A has with this trouble source turn, which is arguably not a problem of hearing the lexical item, but more likely a problem comprehending how this fits with the conversational context.

Similarly, the last excerpt, (66), demonstrates an instance where the child has pulled out one aspect of the trouble source turn and repeats only this. This excerpt occurs during the free play session where the child is playing in a fairly solitary manner and the adult is mainly watching and providing some commentary.

(66) ID 525: 34-ML. 1:25:18 (ASD: 4;1)
Free play session. Participants are sitting on the mat, facing one another. ML is engaged in solitary play with the orange truck. A watches on but is not very involved with the play.

1 ((ML is holding a truck and a block and makes them bang into one another))
2 ML: crash.
3 A: oh huh huh huh it crashed. huh huh huh
4 (2.3)
5 ML: jump
6 A: huh huh huh
7 (1.5)
8 ML: [boo:m jump.
9 ((ML holds the truck in the air and makes it hit the ground twice))
10 A: oh it’s jumping.
11 (4.7)/((ML playing with truck and makes it hit the ground twice more and then ‘land’ in a plastic bowl))
12 ML: crash:::
13 (9.9)/((ML is driving the truck along the ground))
14 ML: it’s making racing then crash.
15 A: [oh racing
16 [((ML crashes the truck into the white plastic bowl))
17 ML: POW
The trouble source occurs in line 26 when the child, ML interrupts the adult with a turn about his mother. Again, it is difficult to make out the turn-initial syllable in the trouble source and as discussed in section 5.4.2.2, this word could possibly be ‘go’, ‘get’ or ‘good’ which can change the intended activity of the turn. The child dispenses with this syllable during the repetition of this turn in line 32. While the repair turn is ungrammatical it still adequately performs its communicative function, as demonstrated by the adult organising a break so that the child can visit his mother.

5.4.2.3 Other types of repair strategies

So far I have examined excerpts from the interactions involving children with ASD which involve partial repeats with additional or reduced content. This section discusses excerpts containing repair attempts categorised as ‘other’ in section 5.4.2. In the repairs categorised as ‘other’ in the interactions involving TD children, I found that while these repairs were still topically related to the trouble source turns, they were not ‘re-sayings’ of the trouble source turns. Instead they appeared to be providing additional information for the adult to contextualise the trouble source turn. This type of repair was not found in the repairs in response to OCRIs in the interactions involving children with ASD. There are three repair attempts categorised as ‘other’ in the interactions involving children with ASD (excluding ID 526, which is discussed in section 5.4.2.4 as a deviant case). These still appear to be a ‘re-saying’ of the trouble source turn but feature a change in the lexemes chosen.

Excerpt (67) is an instance where the trouble source turn and repair are very similar, except for a change in an indexical expression. At the beginning of this excerpt, the adult is introducing part of the block design task.

(67) ID 519: 14-MT. 3:53 (ASD: 6;9)
WPPSI-III - block design subtest. Participants are sitting at the table facing one another, but only MT is visible on camera.
1    A:    tsk and now we’re going to be doing something a little bit different with the blocks because this time,
A: I'm going to put the blocks (.).
A: [so they look like this picture.] (((A slides open book showing a picture of a pattern towards MT)))
A: tsk [n-]
MT: [Leanne has [that. ] (((MT grins and puts both hands on the book)))
 MT: Leanne has this. ] (((MT plays with the pages of the book, still smiling)))
A: sorry?
MT: [Leanne has this. ] (((MT plays with the pages of the book, still smiling)))
A: oh, does she? huh huh yeah, it's very similar, you've just done one very similar. tsk now just watch me because I'm going to put the blocks to make this picture,

After the child, MT, makes a comment about another researcher at the laboratory, ‘Leanne’, using the same stimulus book, the adult initiates repair. The repair produced by MT in line 14 is very similar to the trouble source turn, however, the intonation is altered so that the second syllable of ‘Leanne’ is emphasised, and the indexical expression ‘that’ has been changed to ‘this’. Egbert, Golato & Robinson (2009) found that when others initiate repair using the OCRI device ‘what?’, in both German and English, underspecified indexical expressions are often clarified in the repair proper. For example they found that pro-terms, or pro-expressions, such as ‘it’, ‘this’ or ‘that’ were changed to full noun phrases in the repair, such as ‘the folder’, ‘the token’ or ‘the ticket’. The change of one underspecified indexical expression (‘that’) for another (‘this’) demonstrated in excerpt (67) appears to be unusual, with Egbert et al., (2009) not mentioning such a phenomenon. Further, the referent in this excerpt appears to be clear, as MT puts both his hands on the book as he says ‘that’ in the trouble source turn. However, the non-verbal content may be extremely important in understanding this excerpt as the referent in this instance is being slid across the table towards the child during the repair sequence. The referent change from ‘that’ to ‘this’ appears to match the change in the physical environment over time, as between lines 10 and 14, MT puts his hands on the book, brings it closer to his body and begins playing with its pages. Thus, this change is unlikely to be motivated by clarifying an indexical expression for the adult and more about the change in the object’s physical proximity to the speaker’s body. This excerpt again highlights the moment-by-moment unfolding of these sequences and that the repair will potentially be delivered in a different environment to the trouble source turn, with a different context now relative to the interaction.

The following excerpt, (68), is also a case where the repairable and the repair are almost direct repetitions, with one referring expression changed with seemingly little effect. This excerpt occurs during the free play session where the child, LT, is playing with an orange truck while the adult watches.
Free play session. Participants are sitting on mat facing one another. LT is playing with an orange toy truck; intently watching it as he slowly makes it drive around the play space. A watches him but isn’t really involved in the play; she acts more as a spectator.

1  A:  ['t's a noisy car isn’t it. huh]
2  [(LT looks up at A, then down again to the truck)]
3  (2.3)
4  A:  truck.
5  (12.5)/((LT is still driving truck around slowly))
6  LT:  somebody’s not ‘n [there:]
7  [(LT looks to A with a slight shake of his head)]
8  (0.9)
9  -> A:  sorry?
10  (0.5)
11  LT:  [someone’s not in there; ]
12  [(LT picks up the truck and is looking in the front window)]
13  A:  (ink) inside¿ I’m not sure, [is anybody in there;]
14  (0.2)
15  A:  can you see anybody
16  LT:  let’s (. ) take a look.
17  (23.4)/((LT intently examines the truck, starting with all side windows and finishing by looking at the underside of the truck))
18  A:  is there anybody in there
19  (0.9)
20  LT:  X
21  (0.5)
22  LT:  no. ((sounding disappointed))
23  A:  nobody tsk-aw.
24  (LT continues playing with truck)

LT produces the trouble source turn, ‘somebody’s not ‘n there’, in line 6 and looks to the adult, awaiting a response. When A initiates repair, LT repeats the trouble source with very similar intonation, however, in the repair he has substituted the referent ‘someone’ for ‘somebody’. This term is potentially problematic for A, firstly as the utterance is ungrammatical, but secondly as there is no referent in the play space which could correspond to ‘someone’. LT is talking about the lack of a person, so ‘nobody’ or ‘no one’ would potentially be a better choice for this nominal expression. However, the deictic term ‘there’ in line 6 is arguably causing more difficulty for A in understanding this turn. Although LT has been playing with the truck it is unclear that this is what he is referring to with this expression. Further the adult is aided in understanding what this is referring to in the repair by LT’s actions in line 13 where he picks up the truck and looks in its front window. This action non-verbally indicates to the adult to where ‘in there’ refers. There is evidence that A understands LT’s trouble source turn by line 14, which is likely to be a result of the non-verbal actions in line 13, rather than the verbal repair in line 12.
The follow excerpt, (69), which takes place during the free play session, is also an instance where the information conveyed in the repair proper is similar to the trouble source turn.

(69) ID 520: 15-SI. 23:51 (ASD: 4:11)
Free play session. SI and A are sitting on the play mat but SI has her back to A for the majority of this and is not physically orienting to A until the repair initiation in line 29, when SI turns her body and looks at A for the first time. SI is playing with the doll and a white plastic bowl rather absentmindedly while she is talking when this begins.

1     SI: look at that. 
2       (1.1)
3     A: woo:::h, (0.4) it's another crown¿
4       (1.1)
5     SI: wee ha ha (0.8) you know which princesses I like?
6       (0.5)
7     A: which princesses.
8       (0.5)
9     SI: Snow White.
10    A: oh she’s nice isn’t she. 
11 (0.7)
12    SI: but the Queen’s not 
13       (0.2)
14    A: no she’s not (0.2) she’s wicked.
15       (0.2)
16    SI: .hh
17       (0.8)
18    SI: she’s (a a) very nasty when she wants to kill Snow White= 
19       =°mn°
20       (0.7)
21    SI: cos she does- cos Snow White’s even (. ) more beautiful than 
22       the Queen and she doesn’t like Snow White= 
23       =°mn°
24       (0.2)
25    A: tsk what’s [Doll] (. ) (‘ere)
26 SI: [and-] (((A begins to point towards SI/Doll 
27       but cuts the gesture off)))
28 (. )
29 -> A: [sorry what were you saying (“sorry”) Snow White (who) was= 
30 (((SI turns and looks towards A))]
31    A: =going to kill her? 
32    SI: [yeah because she didn’t like her, 
33 (((SI looks down again, lies on mat then picks up some new 
34       toys))]
35       (0.9)
36    SI: she didn’t [like Snow] White=
37         [ ohhh ] =that’s not very nice,
38       (1.7)
39    SI: ‘s not very nice if you kill someone.= 
40       =°mn°
41    A: I’m feeling very hungry= ((SI smiles))
42       ((smilie voice)) =are you getting really hungry? 
43       (((SI looks towards 
44       A grinning))]
45    SI: yeah

In excerpt (69), SI has been talking about Snow White and the Queen. Her story reaches a TRP in line 22, which is followed by an agreement token from A, and a 2 second pause. In line 25, A self-selects as next speaker, however, during her turn, SI produces the linking word ‘and’ in line 26, which
indicates she still has more to say. A then produces the repair initiation turn, beginning with an OCRI, ‘sorry what were you saying?’ and following it with a more specific question, ‘Snow White (who) was going to kill her?’. The answer to this second question appears to be already established in lines 12, 14 and 18, where SI says, ‘the queen’s not [nice]’, A responds, ‘no she’s not, she’s wicked’ and then SI refers to the Queen as ‘she’ in the context of wanting to kill Snow White in line 18.

In line with this referent already being established, SI seems to orient to the repair initiation in lines 29-31 as if it is initiating an open class repair when she states in lines 32-36, ‘yeah because she didn’t like her, she didn’t like snow white’. This is a re-formulation of her previous turns in lines 18 and 21-22 where she states that ‘she [the Queen]’s very nasty when she wants to kill Snow White’... ‘cos Snow White’s even more beautiful than the Queen and she [the Queen] doesn’t like Snow White’. In the repair proper, SI changes the tense from present progressive to past and provides what Schegloff (2004; 117) terms a ‘simplification’ of her previous turns. A simplification is a repair strategy which provides a summary or paraphrase of the main gist of the trouble source turn/s (Schegloff, 2004; 117). Typically they occur when the trouble source consists of multiple clauses, as is the case in excerpt (69).

In contrast to previous examples discussed in this chapter, the adult does not appear to be initiating repair on a specific word or even a turn but rather on the child’s right to continue the story. This exchange can be seen as a negotiation over who is talking and in initiating repair, A hands the right to talk back to SI. What A is repairing may be conceptualised as her own interruption of the child’s story, in which case SI’s continuation of the story is an appropriate repair strategy.

This section has examined other types of repair strategies which children with ASD have pursued in response to the adult producing an OCRI in a clinical testing environment. While the ‘other’ repair strategies analysed in the interactions involving TD children often resulted in the children providing further contextualising information to their trouble source turn, the excerpts examined in this section appear to reflect the changing environmental context in which the repairs are produced, as opposed to the trouble source turn. Up until this point, all excerpts examined from the interactions involving children with ASD have demonstrated repairs which act as a ‘re-saying’ of the trouble source turn, including those discussed in this section. The following section examines the one instance where the child produces a repair proper which is not a re-saying or even topically related to the trouble source turn.
5.4.2.4 A deviant case

As previously discussed, ID 526, presented at excerpt (70), shows a case where the repair does not appear to be identifiable as a ‘re-saying’ of the same basic message, and is not even recognisable as topically related to the trouble source turn. As such it stands alone as an excerpt where the response is deviant when compared with the other excerpts examined in this chapter. This session took place in the child’s own home at the family’s request. The excerpt occurs after the session has officially ended and the adult and the child, PO, are packing up toys and chatting about PO’s upcoming birthday. Thus the talk has shifted from being institutional in nature to conversational.

(70) ID 526: 38-PO. 1:38:00 (ASD: 4:8)
Testing session has finished and both participants are packing up toys. This is a session conducted in the participant’s home. PO’s mother, who has been in a different room for the whole session, enters the room somewhere around turn 16 as indicated by A now addressing her talk to her. All participants are off camera for the whole of this excerpt.

1  (A and PO are packing up toys))
2   PO: it's time for you to go.
3   A: it is almost time for me to go, and you've- you've done really really well. I've really enjoyed playing with you PO;
4    (0.8)
5   A: you've done excellent.
6   PO: when (it’s:::) hh you have to come. (0.2) you you (0.3) you uh you know how you get-
7    (0.6)
8   PO: tha- you have to come to my party.
9   A: oh are you having a ;party.
10  (0.4)
11  PO: it's only: (0.3) only: (0.5) only a birthday for me, I'm turning five.
12  (in adult-directed voice)) .hh tsk we're all done
13  Mum: all done [oh god] it's warm in here isn't it.=
14  A: [ye::ah]
15  PO: =beco) you take too lo::ng.
16  -> Mum: pardon?
17    (0.5)
18  PO: it-.h we saw a digger?
19  Mum: digger;
20  PO: and the,
21    (1.1)
22  PO: and we played Teddy?
23  Mum: oOOh, what did Teddy do.
24    (0.6)
25  PO: nn goed (. ) different things,
26  A: yeah >can you [remember what-<]
27  PO: [AND WE] (wrapped/rocked) the baby again.
28  Mum: yeah,
29    (1.0)
30  PO: you gonna take these back home;
31  A: [yeah], I'm gonna take them back with me.
32  Mum: [yeah] ((smilie voice))
33  A: he’s done really really well. he’s done great.
All participants are off-camera during this excerpt so non-verbal information cannot be included in this analysis. However, as discussed at excerpt (41), I infer that PO’s mother enters the play space just before line 17, as indicated by A’s use of adult-directed speech (‘we’re all done’). PO’s mother responds to this by acknowledging A’s statement by saying ‘all done’, and then making a comment consistent with having come into a new space (‘oh god it’s warm in here isn’t it’). The trouble source turn occurs latched onto this comment in line 20 and it is PO’s mother rather than the adult researcher who initiates the repair in line 21.

As discussed at (41), it is difficult to know what PO’s trouble source turn, ‘beco you take too long’, is in response to or who it is directed towards. It can be seen to be disaligned with the previous turn, and more importantly, this turn could potentially be understood as an accusation or a complaint. PO could be asserting that either the researcher’s testing has taken too long, or that his mother has taken too long to return to the room, and either of these things could be reasons for the room becoming warm. When PO’s mother initiates repair on this turn, PO hesitates before providing a response. After a 0.5 second pause, a cut-off false start and an out-breath, he states ‘we saw a digger’ which acts as a telling of what he and the adult have been doing in their play session. This turn appears to be unrelated to the trouble source turn in line 23, although potentially the false start at the beginning of this turn could have been an attempt to produce a relevant repair. Without non-verbal information to assist, there is no evidence for why this was abandoned. The statement which follows the OCRI device (‘we saw a digger’) appears to be a topic shift, which PO’s mother accepts when she repeats ‘digger’ in the line following the topic shift. This action by the child can potentially be seen as doing the interactionally sophisticated work of abandoning a conflictive statement and successfully changing to an interactionally ‘safe’ topic of listing things the participants have done.

This excerpt has numerous commonalities with ID 512 from the TD group which I analysed as a deviant case study at excerpt (60). Both these trouble sources are clear examples of sequentially inapposite turns and both have the potential to be interactionally fraught. Both excerpts occur when the children’s mothers are present which could make the children comparatively bold in their pursued activities and both children appear to recognise the potential for the disagreement and respond to the repair initiator with a dispreferred response. The TD child, JR, does this by providing a non-response, while the child with ASD, PO, does this by a change of subject.

Schegloff points out that OCRI devices can act as ‘pre-disagreements’ and the way that both JR in ID 512 and PO in ID 526 appear to orient to these OCRI devices indicates that this may be how the children have interpreted their use here. There is little in the adult’s or the mother’s tone while
initiating repair to indicate that this is how they intended the utterances to be understood. Thus at the very least these two excerpts demonstrate that a lack of comprehension of a contentious turn can offer the speaker of the trouble source an opportunity to potentially re-assess the action they pursued in the trouble source turn.

5.4.3 Summary of the analysis of the turns following an OCRI

When an adult produced OCRI within these interactions, children from both groups overwhelmingly demonstrated that it required a response. This was apparent in 14 (from a possible 15) of the excerpts from interactions involving TD children and all 11 of the excerpts from interactions involving children with ASD. The most common response to an OCRI device produced by an adult was to produce a ‘re-saying’ of the trouble source turn. This was demonstrated in 10 of the 15 excerpts from interactions involving TD children compared with nine of the 11 excerpts from interactions involving children with ASD. Further, the vast majority of responses included a topically relevant response to the trouble source turn with 14 of the 15 excerpts from interactions involving TD children and nine of the 11 excerpts from interactions involving children with ASD being of this kind.

5.5 Conclusion

This chapter examined the environment preceding, and responses to, an OCRI device produced by an adult in a clinical testing setting. It began by introducing the concept of ORCIs and providing a quantitative overview of the findings outlined in this chapter. I then analysed the turns prior to the OCRI device being produced, first in interactions involving TD children and then in interactions involving children with ASD. Next I analysed the environment following the adult’s production of an OCRI by examining the repair strategies used by children to respond to OCRI; again by first discussing responses by TD children, followed by discussion of responses by children with ASD.

This chapter furthers current research on OCRI by examining this in the context of child-adult dyads in a clinical setting, including TD children and those with ASD. The focus on clinical settings has brought out difficulties that children in clinical testing environments face. Acknowledging the limitations of sample size, and the limitations of comparisons using CA outlined in chapter 3, this chapter also begins to tease out differences in interactional repair behaviours between TD children and children with ASD.

In analysing the turns preceding the adult’s production of an OCRI, there were few obvious differences between the two groups. This is unsurprising as the OCRI device was produced by the
same adult in both groups of interactions, except in one instance where it was produced by a child’s mother. It can be expected that a similar environment would lead to the production of an OCRI device for the adult participant, although the fact she was aware of which diagnostic group each child belonged to while administering the testing may have influenced this. Having acknowledged this, there were some qualitative differences in the environment preceding an OCRI device in the two groups. Notably, when analysing instances of mishearing in the trouble source turn, I found that in the interactions involving TD children, mishearing was due to overlap in the trouble source turn in five out of 16 instances analysed; of these four were overlaps due to an interruption by the child within an incomplete TCU produced by the adult. When examining the environment preceding OCRI in the interactions involving children with ASD, I found only one example of a child interrupting the adult’s TCU.

Additionally, there were qualitative differences in the type of sequentially inapposite environment which occurred preceding an OCRI between the two groups. In analysing the sequentially inapposite turns in the interactions involving TD children, I divided excerpts into those demonstrating evidence of a sequentially inapposite turn while the child was clarifying or seeking out information on the task demands, and those demonstrating disalignment between participants on the activity that was taking place. The former category is closely related to the clinical environment in which these interactions occur and the latter supports previous findings by Drew (1997) on the environments preceding OCRI in English speaking adults. When analysing sequentially inapposite turns in the interactions involving children with ASD, in line with Drew (1997), these evidenced unmarked topic shifts. However, from the child’s perspective, the reasons for the inapposite turns were unclear and I found it difficult to divide these into the two categories I had found appropriate for the excerpts from interactions involving TD children. In particular, there was only one excerpt from interactions involving children with ASD which demonstrated the child attempting to work out the task demands. Such a finding appears to be consistent with previous research demonstrating that child with ASD initiate fewer turns (Jones & Schwartz, 2009; Rendle-Short, 2014). However such a conclusion needs to be treated with caution as this finding does not necessarily mean that this group of children did not demonstrate information seeking behaviours, just that, for whatever reason, such behaviours did not result in the production of inapposite turns which then elicited an OCRI device for the adult.

When analysing the environment following the adult’s production of an OCRI device, I found that the children who produced the trouble source turn overwhelmingly produced a repair (24 out of 27 excerpts). This supports previous findings for both English speaking adults (Schegloff et al., 1977) and children (Forrester, 2008; Forrester & Cherington, 2009) that other-initiated repair provides an
opportunity for the self to provide the repair proper and that self-repair is preferred in such sequences. Children from both groups demonstrated understanding that an OCRI device required a response, and most of the time, this response consisted of some sort of re-saying of the trouble source turn.

The TD children commonly (five out of 14 excerpts which elicited a response) responded to an OCRI device with full lexicosyntactic repetitions of the trouble source with the same or altered intonation. Notably, four of these five excerpts used a change in intonation to help clarify the trouble source turn for the adult. Interestingly, the children with ASD never used full lexicosyntactic repetition with same or altered intonation to repair a trouble source turn. This finding aligns with previous research findings that children with ASD have specific difficulties both understanding and producing intonation (see McCann & Peppé (2003) and Boucher (2012) for review articles). This could explain the absence of using intonation to assist the adult’s understanding of the prior turn, however it does not explain why full lexicosyntactic repetition was not produced by this group. This warrants further study.

While direct repetitions were not found in most of the instances of OCRI in interactions involving children with ASD (nine out of 10), the repairs produced did consist of re-sayings, or near repeats, of the trouble source turn. Further, where there were changes in the repair proper, they were very minor and usually appropriate. For instance, in ID 523, TV changed his turn from ‘HEY MUM CHECK THIS OUT’ to ‘I said hey mum check this out’ to mark his repair as reported speech and to change volume to account for the adult researcher now being in the same room. Additionally, in ID 522, AA altered his trouble source turn from ‘and this is funny’ to ‘this is funny’ as the linguistic environment of the repair proper had changed and the conjunctive ‘and’ was no longer relevant to the repair proper turn. Likewise, in ID 519, MT changes the referent from ‘that’ to ‘this’ (‘Leanne has that’ to ‘Leanne has this’) which is aligned with the environmental change as he touched the book with his hands and moved it across the table towards him, making the pronoun ‘this’ more appropriate. These are all instances where the linguistic form of the repair is altered to align more with the local environmental context in which it is produced. However, compared to the excerpts from interactions involving TD children, repairs from children with ASD were rarely designed with recipient’s imagined needs in mind, or with a clear aim of negotiating or maintaining intersubjectivity.

In repairs produced by TD children, there are instances where the children appear to change the repair turn to directly identify and address what was problematic for the adult in the trouble source turn. For instance, in ID 511, to accurately convey his assertion, ‘I can easily do puzzles’, JR speaks
the repair proper more slowly, produces a grammatically complete sentence, and properly articulate the problem word ‘easily’, when compared to the trouble source turn. Additionally, in ID 508, IY disencumbers the confusing trouble source turn, ‘they can’t eat it X until I make a hole’ to only repeat the source of her frustration in the repair proper, ‘I can’t make a hole’. Likewise, in ID 515, NC provides context for his unusual request, ‘can I be baby?’ by explaining the reason for his disaligned turn, ‘I want to play goldilocks’. In the repairs classified as ‘other’, TD children tended to add contextualising information to allow the adult to understand the relevance of the trouble source turn. In contrast to this, there were no instances in the interactions involving children with ASD where they added contextualising information to resolve difficulties with intersubjectivity.

In contrast, repairs produced by children with ASD were often focused on the local environmental context. For example, there were instances such as ID 524 where ML repeats ‘(where are they) tamagotchis’ after an OCRI initiated on the turn ‘X (where are they) tamagotchis, ((A’s name))’. In this excerpt, ML alters the turn to account for the change in environmental context between the turns by excluding the adult’s name, as it is clear by the repair proper turn that he already has her attention. However, it is difficult to see that this addresses the source of the adult’s confusion with the trouble source turn, which is how this turn about tamagotchis fits with the previous talk. The same can be said of ID 524 where AA repairs the unusual response of ‘a duck’ to simply ‘duck’, and also in ID 517 when LT changes repairs ‘somebody’s not ‘n there’ to ‘someone’s not in there’. While repetition of the trouble source turn is a successful repair strategy in contexts involving a lack of hearing or orientation, these repair attempts show evidence that the children have not accurately identified the source of the trouble as turns which are sequentially inapposite to the surrounding talk. These excerpts seem to provide good opportunities for the children to provide additional contextualising information for the adult, however, in each there is an absence of this indicating that the children have misidentified the source of the trouble, or are unable to provide a recipient designed response, which is a response tailored to meet the interactional perspective and requirements of the participant it is directed towards. Thus, repairs from the children with ASD show limited evidence that the children can take the adult’s perspective to identify the likely reason for the adult’s production of an OCRI device. Such a finding broadly aligns with current literature on children with ASD having particular problems with understanding other people’s perspectives, outlined in chapter 2.

However, there are also instances from the TD children where it is difficult to understand the motivation behind the repair strategy used. Further, it is also worth noting that for the most part in
the interactions with both the TD and ASD groups, OCRIs were only produced a single time and the interaction proceeded as if intersubjectivity had been restored.

This chapter also examined two deviant cases of OCRI where the children in the interactions did not provide a repair attempt after an OCRI device. In ID 512, JR produces a problematic turn which challenges the adult’s pursued activity and potentially also her role as test administrator. This results in JR’s non-response to the adult’s multiple attempt to initiate repair, with his mother eventually performing repair. In ID 526, PO produces a trouble source turn which could potentially be viewed as a complaint or criticism. After an OCRI device produced by his mother, PO diplomatically changes the subject rather than repair the potentially problematic turn. The rarity of these excerpts demonstrate the preference for self-repair among the children in this data set, and also demonstrates that in the rare instances where a dispreferred response is produced, it appears to be after a trouble source turn which is potentially interactionally fraught. Interestingly, the child with ASD deals with this interactional difficulty with great success when his mother accepts his change of topic. In contrast, the TD child’s non-response after a OCRI produces multiple attempts from the adult to initiate repair and intersubjectivity is only restored when his mother supplies a repair. The next chapter furthers the work begun here, by examining a more subtle marker of breakdown in intersubjectivity, which I have called prosodically marked yeah.
6 Prosodically marked yeah

6.1 Introduction

I approached the analysis of this data set with a keen interest in demonstrated breakdown, maintenance and restoration of intersubjectivity. However, in line with CA methodology, I examined the data in an ‘unmotivated’ way (Sacks, 1984; 27) by listening to the interactions without preconceptions about how maintenance, breakdowns and restoration of intersubjectivity may look. During this endeavour, I began to notice a marked version of ‘yeah’ that the adult often used which seemed to indicate that she was unsure about what had been said. This token usually occurred after unclear or confused turns and was often followed by a repair attempt by the child. I began collecting instances of this phenomenon and soon had a pool of excerpts to examine. The analysis of these excerpts forms the basis of this chapter. I have termed the phenomenon ‘Prosodically Marked Yeah’ (PMY).

PMY is a prosodically marked version of the response token ‘yeah’ produced by the adult in this corpus which may result in the child producing a repair of their previous turn. This response token does not appear to be an explicit initiation of repair, as it does not always elicit a repair attempt. However, PMY always has strongly rising terminal intonation which is characteristic of other-initiated repair initiators, such as OCRI devices, and is also consistent with the fact that rising intonation appeals to participants for a response. Additionally, they have a high pitch onset (in comparison with the adult’s other talk), and contain tremulous laugh particles, which also serves to lengthen the token, or increase its duration. This pitch onset and contour combined with the paralinguistic feature of laughter within the token gives the impression that the prior turn has not been heard or completely understood and that a further response is necessary to maintain or restore understanding. High pitch onset with rising intonation will henceforth be referred to as ‘high onset high rising’. Throughout this chapter, PMY will be represented as ‘ye (hh) ah?’ within the transcripts, with the number of (h)’s indicative of the number of tremors of laughter present, and the question mark (?) indicative of the rising terminal pitch.

In terms of the sequential organisation, PMY often occurs after a turn which contains factors which potentially make it problematic for the maintenance of intersubjectivity, and more importantly, the children in the interactions frequently orient to these tokens as if they require some form of response. Sometimes, but not always, the response elicited takes the form of a repair and at other times it is an affirmation token or a continuation of previous talk. An example of PMY is at excerpt
This excerpt occurs during the WPPSI-III, information subtest, where the child is asked general knowledge questions.

(1) ID 608: 37-HS. 12:20 (TD: 5;0)\(^\text{16}\)

WPPSI-III – information subtest. Participants are sitting at table, facing one another.

1 A: tell me the four seasons of the year.
2 (0.6)
3 HS: um summer.
4 A: yeah >can you think of another¿<
5 HS: ooh its not summer anymore¿
6 A: no:
7 HS: it’s AU: Tu: mn
8 A: yeah? (. ) and what are the other two¿ j- can you think of the other sea:sons.
9 (0.4)
10 HS: mm
11 (1.3)
12 HS: uh
13 (1.4)
14 HS: I’ll tell you the name of the calendars.
15 A: yeah,
16 HS: um there’s October November December January February March
17 A: oh [very-]
18 HS: [it’s mar-] [it’s MA:rch.]
19 [(HS throws both arms in the air)]
20 A: yeah it is March [very] good=
21 HS: [ X ] =yeah ‘cause um ah
22 (2.5)
23 .hh I’ve got- I’ve got- I found some old tiddies.
24 -> A: ye(hh)ah?
25 HS: yeah some old teddies um (. ) (its) um there’s Snow Teddy and
26 Mo:rris=
27 A: =ah[hh:]
28 HS: [he ] [he’s my n- he’s my (one). ]
29 [(HS folds arms across his chest)]
30 A: wow. ( . ) what’s the opposite of south.
31 HS: west.

In line 1, the adult produces the test prompt, ‘tell me the four seasons of the year’ which serves as an initiation in an IRE sequence, which, as outlined in chapter 4, are commonly elicited in this task.

HS responds to this with the names of two seasons but struggles to produce all four. Instead he tells A that he will tell her the months of the year, or the ‘calendars’, which he does in lines 17 and 19. When he gets to the month of March, he exclaims that it is currently March (which is the month in which testing took place). The adult agrees with HS (‘yeah it is March’) in line 21 and produces a positive evaluation (‘very good’). HS then initiates a new topic of conversation in lines 22-24. This begins with a bid for the floor in line 22 which the adult allows, demonstrated by the 2.5 second

\(^{16}\) All data excerpts in this chapter are also in appendix C. The bracketed number at the start numbers the excerpt relative to the current chapter, while the ID number is the unique identification number allocated to each excerpt for analysis purposes. The ID number is used every time the excerpt is discussed so the reader can find other instances where the excerpt is discussed, if desired. For more detail on the labelling of excerpts, see section 3.3.2.1. and appendix A.
pause which follows it in line 23 where the adult does not speak. HS maintains his turn at talk in line 24 where, after an audible outbreath and two false starts, he announces that he ‘found some old tiddies’. This turn is potentially repairable for a number of reasons. Firstly, this turn is disaligned with the overall structure of stacked IRE sequencing established in this subtest. That is, in the slot where the adult would usually initiate a new question, the child instead initiates a topic of conversation. As demonstrated in chapter 5 and in Drew (1997), unmarked sequentially disaligned turns often occur before repair initiations. Further, HS presents his turn in lines 22-24 as if it is connected to a prior turn with the lexeme ‘(be)cause’ indicating a further expansion of the topic of ‘months of the year’. However this turn appears to be unrelated to the prior topic and has not been previously discussed by the participants (at least not in within this recording). Presenting this as connected to the prior talk potentially makes this turn difficult to understand from the adult’s point of view. Additionally, the child’s turn is disfluent with two cut offs, followed by two self-initiated, self-repair attempts, the hesitation markers ‘um’ and ‘ah’, an audible out breath and a 2.5 second gap. The child also produces an atypical pronunciation of the word ‘teddies’, which means this turn potentially contains an unclear referent which frequently elicits repair (Schegloff, 1987, 1992). All these factors potentially increase the risk that the participant may not understand HS’s turn in lines 22-24.

The adult responds to HS’s potentially problematic turn from lines 22-24 with a brief response, the lexeme ‘yeah’, which looks like an agreement or acknowledgment token. However, the prosody is very different from that found in a prototypical acknowledgement token, or continuer. Specifically, this ‘yeah’ is prosodically and paralinguistically marked as it begins at a relatively high pitch and is dramatically high rising in pitch contour as well as containing the paralinguistic feature of tremulous laughter (as opposed to pulsing laughter) for two syllables. It is this token I refer to as PMY throughout the chapter.

The child responds to this in line 26 by confirming his previous assertion (using ‘yeah’), then repeating the object of the sentence produced in his previous turn (‘some old teddies’). Notably, during this re-saying, he repairs his pronunciation of the word ‘teddies’ by producing a version which is close to typical adult pronunciation. He then goes on to expand on the new topic by providing the teddies’ names, ‘Snow Teddy’ and ‘Morris’. Thus, by re-saying an aspect of his own prior turn and improving his articulation of a part of this turn, there is evidence of HS orienting to the adult’s PMY from line 25 as if it were initiating repair. Additionally, the adult’s response to this repair in line 28, ‘ahh:’ produced with falling terminal intonation, is a change-of-state token indicating that her knowledge state has changed and intersubjectivity has been restored.
This chapter examines the set of excerpts where the adult has produced a ‘yeah’ token which is marked by a comparatively high onset with rising intonation and contains tremulous laughter within it. The children in these interactions do not always respond to the PMY produced by the adult as if they are initiating repair as HS has done in excerpt (1). However in the majority of instances, children do treat these as requiring some sort of response which includes affirmative response tokens and continuation of the topic. Additionally, PMY overwhelmingly occurs following a turn which can be demonstrated to be problematic for the maintenance of intersubjectivity, from the adult’s perspective.

In section 6.2, I first lay out the scope and motivation for this chapter and then provide a description of the phenomenon under review, PMY. The chapter then closely aligns with chapter 5, where I begin by discussing the turn/s preceding the PMY by examining excerpts from the interactions involving the TD children, followed by interactions involving children with ASD. I then focus on the turn following the PMY, or the child’s response to the PMY, where again I first discuss excerpts from the interactions involving TD children before those involving children with ASD.

6.2 Prosodically marked yeah in this data set

6.2.1 Scope and motivation

In analysing this phenomenon, I have narrowed the selection of excerpts down to only examine ‘yeah’ tokens produced with this distinctive prosody and intra-token laughter particles. As this is exploratory research focused on a phenomenon which has not been described previously, it was unclear to me whether the lexeme used, the distinctive prosody or the presence of laughter particles were all vital components to perform related social action. In order to present the most robust analysis, additional variables were limited.

It is possible that similar prosodic and paralinguistic features produced with other lexemes may convey a similar interactional meaning. Within this data set, the adult occasionally uses similar prosody on other lexemes to similar effect, as demonstrated in excerpt (2) below. However, there is an especially interesting mismatch between the semantic content of assent conveyed in the lexeme ‘yeah’ and the lack of certainty conveyed in the prosody. Just as I have shown in chapter 5 that

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17 In chapter 5, the turn/s preceding the OCRI device were referred to as the trouble source. In this chapter, this environment will be referred to as the turn/s preceding the PMY, as it is less well established that turns preceding a PMY are necessarily a trouble source.
'sorry?' is this adult’s OCRI of choice, it is possible that ‘yeah?’ is this adult’s prosodically marked response token of choice.

(2) 56-TB. 48:35 (TD: 4;5)
Free play session. Both participates are sitting on the mat facing one another. They are playing a game where the toys are having a picnic and TB has been labelling different objects as food.

1  TB:  ta [daaa ]
2  (TB drops a counter in the black plastic box)]
3  A:  ooh so what are these, what have you got here=
4  (0.5)
5  TB:  =x
6  (0.8)
7  TB:  yatainers.
8  (1.4)
9  ->  A:  o::h?
10  (0.3)
11  TB:  to put some more food [in.]
12  A:  [ o:]h containers to put more food in,
13  great.
14  TB:  mm hm.

In excerpt (2), the child, TB, refers to an object in line 7 as ‘yatainers’. After a 1.4 second pause, A responds to this with the token ‘oh’ produced with high onset, high rising and lengthened intonation, however, note that it does not contain tremulous laughter. TB orients to this as if the adult requires more information and adds information about the purpose of the item he has just referred to (in line 11). This provides enough contextualising information for the adult to understand the word as ‘containers’, as demonstrated in line 12 by the news marker ‘oh’ produced with falling intonation, the repetition of the target word ‘containers’ and a reduced repetition of the child’s prior turn (‘to put more food in’). The child demonstrates agreement with this interpretation in line 14.

The use of these prosodic features on the token ‘oh’ in excerpt (2) has the effect of eliciting a repair from the child. In this study, I made the decision to constrain this collection for analysis to include only ‘yeah’ tokens as these were the most numerous and the choice of lexeme could have an effect on the response which is elicited. However, other lexemes produced with similar prosody may have a similar effect and warrant further research.

With this constraint, I identified 43 excerpts containing ‘yeah’ tokens which appeared to act as PMY across the whole data set. This initial collection was further constrained to exclude excerpts which lacked laughter mid-token and excerpts where the token exhibited comparatively low pitch onset. After adhering strictly to the three features of the token (described in more detail in section 6.2.2.1), 28 excerpts remained and it is these excerpts which are examined in this chapter.
The decision to focus on this phenomenon grew from unmotivated looking for sequences involving maintenance, breakdown and restoration of intersubjectivity. When transcribing these interactions, this token was one of the more prevalent examples where intersubjectivity appeared to be threatened. Additionally, the fact that PMY appeared to be a more ambiguous token, when compared to phenomena such as OCRI, was potentially of interest so as to discover more robust differences between the two groups of children in this data set. In chapter 5, I found that there were some differences in the repair strategies used by the TD children and the children with ASD, however, both groups overwhelmingly oriented to OCRI devices as if repair was required and this usually took the form of a re-saying. In support of this, in the original study for which this data was collected, the two groups were found to be so similar that no statistically significant differences in pretend play or executive functioning abilities were identified between the groups (Kelly, 2007). The fact that this token appeared to be a more subtle marker of problems with intersubjectivity, suggested that it might provide a better opportunity to tease out differences between the two groups of children taking part in these interactions. As this is a phenomenon which is previously undescribed, I spend the next section on a more detailed characterisation of it before I give an overview of its occurrence in this data set.

6.2.2 Describing the phenomenon

‘Yeah’ has garnered some attention in previous CA literature for its use as a response token. Gardner defines response tokens as not necessarily displaying ‘understanding’, but also not claiming that there is a need for repair (2001; 23). However, he adds that response tokens are extremely flexible and their function is interpreted by listeners on the basis of both sequential positioning and intonational and prosodic features (2001; 22). Response tokens can be further categorised as continuers (most typically ‘mm hm’ or ‘uh huh’), acknowledgment tokens (‘yeah’ or in a weaker form ‘mm’), newsmarker tokens (typically ‘oh’) and change-of-activity tokens (such as ‘okay’ or ‘alright’). Continuers are used by listeners to pass up the opportunity for a more substantial turn, and essentially tell the speaker that they understand the talk in progress is not yet at an end (Schegloff, 1997). Typically, they have slightly rising intonation. In contrast, acknowledgement tokens typically have falling intonation, and are more ‘retrospective’ in nature. This means that they acknowledge the preceding talk, rather than add support for the upcoming talk (Gardner, 2007; 321). In Gardner’s in-depth analysis of the prototypical weak acknowledgement token ‘mm’, he found that it is occasionally used as a repair initiator (2001; 93). In these instances he notes that the token always has rising terminal pitch, which is characteristic of both OCRI devices and PMY.
The adult in these interactions produces the lexeme ‘yeah’ frequently. Often it is produced as a minimal response to the previous turn, or what Schegloff has referred to as a ‘quasi-turn’ (1997; 33). In the majority of these instances it is produced with one of two distinctive terminal pitch contours: a slightly rising terminal pitch which gives it the function of a continuer, or a falling terminal pitch which gives it the function of either an acknowledgment or an agreement token. However, the response token ‘yeah’ also occasionally teams with a distinctive high rising terminal pitch. When this intonation is produced in conjunction with a range of other lexemes (such as ‘sorry’, examined in chapter 5), it is typically initiating repair. In the excerpts examined in this chapter, the semantic component of ‘yeah’ as an affirmation, associated with positivity and assent, is at odds with the intonational contour which, minimally, is expressing a need for a response and in some cases seems to be indicating uncertainty or confusion regarding the prior turn. As Enfield (2013; 447) eloquently states:

\textit{...since variation in pitch is independent of lexical formulation of the utterance, the expression of ‘uncertainty’ can be restricted to the prosodic channel while allowing the speaker to maintain a more optimistic, presupposing formulation in the lexico-syntactic components of the utterance.‘}

In support of this, Stivers & Rossano (2010; 8) found in their analysis of turns in English and Italian which mobilise a response, 89 per cent of instances lacked interrogative morphosyntax and were instead produced using interrogative intonation, or rising final intonation. Thus, intonation seems to play a greater role in response elicitation than the lexico-morphosyntactic formulation of the turn.

PMY appears to be a response mobilising device. Drawing on CA research on questioning (see Steensig & Drew, 2008; and Stivers, 2010), we would expect that the social action achieved by use of a PMY could be to initiate repair, seek information, request confirmation and/or to act as a challenge to the authenticity or accuracy of a prior turn.

The complex nature of PMY tokens and the multiple possible social actions they might initiate, makes the identification of this phenomenon more difficult than for the OCRIs examined in the previous chapter. Therefore, I spend section 6.2.2.1 discussing the prosodic and paralinguistic features of this phenomenon, which make this an especially marked version of the lexeme ‘yeah’. I have found no previous research which describes the use of ‘yeah’ as a repair initiator, therefore what follows is based on my own observations of the one adult speaker’s usage of this token, and draws more broadly on CA literature on response mobilising, questioning and intonation. Generalisations on the use of PMY in the wider population cannot be made based on this research.
However, as I argue in this chapter, within the context of these clinical interactions, the sequence organisation of such instances of PMY is systematic with regards to both the preceding turn and the following one. That is, there is underlying organisation surrounding these tokens with regards to both what the token occurs after and also how the child participants then respond to it.

6.2.2.1 Features of the phenomenon

There are three features which lead to me identification of PMY:

1. the token occurs as a minimal response or a quasi-turn (Schegloff, 1997);  
2. the intonation contour is high onset and terminally high rising; and  
3. laughter particles occur mid-token, which also lengthen the token.

These three features and their relationship with specific social actions are discussed in sections 6.2.2.1.1 to 6.2.2.1.3.

6.2.2.1.1 A minimal response

PMY occurs as a minimal response to a previous turn. That is, the response token ‘yeah’ is the sole component of its turn. This results in a very brief turn by the adult, or what Schegloff (1997; 33) refers to as a ‘quasi-turn’. Quasi-turns are sequentially designed to forego a more extensive turn and convey an understanding that the talk in progress is not yet at an end. Thus they essentially hand the conversational floor back to the prior speaker.

In the interactions in this data set, and also demonstrated in chapter 4, the adult often gives some sort of expansion or assessment in response to a child’s turn, even if the activity it is accomplishing is at odds with the current task’s pursued activity (see excerpt (1) in section 4.3.1 for an example). However, when the adult produces a PMY, she provides a fairly minimal contribution to the talk rather than provide proactive encouragement for expansion or assessment. Therefore, PMYs are somewhat unusual responses from the adult in these interactions. The absence of expansion on the part of the adult could suggest she has not completely understood the child’s last turn and thus she has limited options to build on or extend the contribution. However, this could also be a feature of the clinical environment where the administrator needs to convey a neutral response when an incorrect answer is provided, or could also be a device to resist activities which are not aligned with the task which is underway.
6.2.2.1.2 High onset, high rising intonation

PMY has a distinctive intonation contour which begins from a high onset and continues to a high rising terminal pitch. This is shown in figure 6.1, as analysed in Praat (Boersma & Weenink, 2016), where the blue dotted line on the bottom half of the graph shows the pitch contour for an example of PMY. For comparison, an instance of ‘yeah’ used as an agreement token is shown in figure 6.2.

Figure 6.1 Praat graph demonstrating PMY
The blue line shows the high onset and rising pitch contour, interspersed with syllables of laughter; taken from line 23 of excerpt ID 609

Figure 6.2 Praat graph demonstrating ‘yeah’ produced as an agreement token
The blue line shows the low onset and rise-falling pitch contour of the agreement token ‘yeah’; taken from line 28 of excerpt ID 609

High rising terminal pitch appeals to the listener for a response. This function of rising terminal pitch is seen in questions which rely on pitch contour to perform the function of asking a question, rather
than using questioning syntactic structure (for example see Stivers & Rossano, 2010), but has also been documented in other contexts where rising terminal pitch occurs. An example of this is the work by Guy & Vonwiller (1984, 1989) which demonstrates that rising terminal pitch applied to statements or declaratives, known as Australian questioning intonation or uptalk, is used to mobilise markers of understanding or affiliation from conversational partners. Additionally, this broad function can be seen in repair initiation. For example, as mentioned earlier, Gardner (2001; 93) found that the response token ‘mm’ always occurs with a high rising terminal pitch when used as a repair initiator, as did the OCRI devices examined in chapter 5 of this thesis. Minimally, we can assume that the high rising terminal pitch featured in PMY appeals to the participant for a response.

Research on pitch onset is less well established when compared to research on terminal pitch. However, interactional research shows that pitch onset levels can also be interactionally significant within talk (for a nice demonstration of this see Couper-Kuhlen, 2001). Relative to the surrounding talk of the adult, PMY uniformly begins at a high pitch onset. The intricacies of pitch onset and its relationship to response mobilisation are yet to be examined from a CA perspective, however drawing on linguistic literature there is evidence to suggest that high pitch onset can also be indicative of mobilising a response in some contexts. Fletcher & Harrington (2001) and Fletcher, Stirling, Mushin & Wales (2002) found that high pitch onset was correlated with questioning or information seeking functions in experimentally elicited, but spontaneously produced, Australian English. More specifically, Fletcher et al. (2002) examined utterances with high rising terminal pitch and found that low onset rising pitch contours were overwhelmingly correlated with explanations, opinions and instructions, whereas high onset rising intonation was correlated with information requests. Thus, both the high rising intonation and the high pitch onset of PMY potentially contributed to the function of appealing to the participant for a response to the turn.

6.2.2.1.3 Tremulous laughter particles

The final element which makes PMY prosodically marked is the presence of laughter particles within the token. This takes the form of a distinct tremulous laughter. Laughter is not a linguistic construction but an acoustic one. It is readily associated with humour, however laughter does not have an apparent semantic or syntactic meaning. The meaning of laughter is created from the social context and interactional positioning of the laughter token, which can contribute to a diverse range of social actions such as affiliation, disaffiliation, identity displays and relationship building (see Glenn, 2003 for an account). The CA analysis of laughter is a relatively new area of study and, to my knowledge, there is no previous research specifically focused on laughter interspersed within lemmes. The interactional significance of laughter within the PMY is not clear. However, studies
which analyse medical encounters, which occur in institutional and asymmetric interactional settings, could potentially be relevant to this discussion. These show that laughter can be used as an affiliative device in awkward or embarrassing moments by both medical professionals and their patients (Ragan, 1990; Mallett & A’Hern, 1996).

The presence of laughter within the PMY also serves to lengthen the token which gives it prominence compared to the surrounding talk. Excerpts were also found with aspiration or a breathy quality rather than a fully developed laughter. These excerpts were excluded from this analysis if they did not meet the criteria of high onset, rising terminal pitch and being a minimal turn to reduce the risk of analysing a range of divergent response tokens. However if they met these criteria and if there was an audible pulsing of outbreath mid-token which produced the token with minimally two syllables, rather than the standard single syllable for the word ‘yeah’, these were included in the analysis.

In summary, drawing from relevant literature, I posit that these three elements of the PMY potentially contribute to the functions which the token performs. These are:

1. The minimal nature of the turn gives the conversational floor back to the child and allows them to respond or continue in some fashion.
2. The high rising pitch contour appeals to the participant for a response because of both the high pitch onset and also the rising terminal pitch.
3. Laughter tokens potentially give the PMY an affiliative quality.

The following section examines the prevalence of PMY within this data set.

6.2.3 Overview of findings

In the interactions involving TD children, a total of 16 instances where the adult produces a PMY were identified. In the interactions involving children with ASD, 12 instances were identified where the adult produced a PMY. See table 6.1 for an overview of the interactions containing PMY. These numbers are remarkably similar to chapter 5 where 16 instances of OCRI were found in interactions involving TD children and 11 were found in interactions involving children with ASD. In the interactions involving children with ASD, seven out of the 12 excerpts containing PMY occurred in interactions with female children, while no PMY occurred in interactions involving female TD children.
Table 6.1 Participant details against PMY occurring in sessions involving TD children and children with ASD

<table>
<thead>
<tr>
<th>ID</th>
<th>Gender</th>
<th>Age</th>
<th>Number of Excerpts containing PMY</th>
<th>ID</th>
<th>Gender</th>
<th>Age</th>
<th>Number of Excerpts containing PMY</th>
</tr>
</thead>
<tbody>
<tr>
<td>51-JW</td>
<td>Male</td>
<td>4;0</td>
<td>5</td>
<td>29-MV</td>
<td>Female</td>
<td>4;3</td>
<td>2</td>
</tr>
<tr>
<td>55-TV</td>
<td>Male</td>
<td>4;4</td>
<td>1</td>
<td>19-CT</td>
<td>Female</td>
<td>4;8</td>
<td>2</td>
</tr>
<tr>
<td>57-KD</td>
<td>Male</td>
<td>4;4</td>
<td>1</td>
<td>38-PO</td>
<td>Male</td>
<td>4;8</td>
<td>1</td>
</tr>
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<td>Male</td>
<td>5;0</td>
<td>3</td>
<td>20-GM</td>
<td>Male</td>
<td>4;9</td>
<td>1</td>
</tr>
<tr>
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<td>Male</td>
<td>5;0</td>
<td>3</td>
<td>15-SI</td>
<td>Female</td>
<td>4;11</td>
<td>1</td>
</tr>
<tr>
<td>13-JM</td>
<td>Male</td>
<td>5;2</td>
<td>1</td>
<td>22-LL</td>
<td>Female</td>
<td>5;7</td>
<td>2</td>
</tr>
<tr>
<td>4-CJ</td>
<td>Male</td>
<td>5;7</td>
<td>2</td>
<td>14-MT</td>
<td>Male</td>
<td>6;9</td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26-FM</td>
<td>Male</td>
<td>6;10</td>
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<td></td>
<td>16</td>
<td>Total</td>
<td></td>
<td></td>
<td>12</td>
</tr>
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</table>

The PMY is always produced by an adult speaker.

The remainder of this chapter will analyse PMY in interactions involving both groups of children. In section 6.3, I examine the turn/s preceding the adult’s production of PMY; first in interactions involving TD children, followed by examining the same environment in interactions involving children with ASD. In section 6.4, I examine the turn/s following the adult’s production of PMY; again, first in interactions involving TD children, then in interactions involving children with ASD.

### 6.3 Analysing the turns prior to prosodically marked yeah

In chapter 5, I examined turns preceding open class repair initiators (OCRIs) produced by the adult to identify potential factors in the interactional environment which might cause repair to be initiated. These were:

1. After evidence of mishearing, which was further divided into excerpts which show a lack of orientation and those that demonstrate the presence of overlap.
2. After demonstrated misspeaking on the part of the child.
3. After the presence of sequentially inapposite turns which I further categorised as those which were due to the child trying to ‘feel out’ the task demands, and those where there was evidence of disalignment between pursued actions between participants.

I found that often the excerpts contained more than one of these potential sources of misunderstanding and posited that the more of these that occurred, the more likely it may be for an OCRI device to be produced. The unifying feature in these excerpts was that OCRI occurred after a turn by the child which was in some respect ‘unexpected’ from the adult’s perspective. In line with
previous research looking at turns preceding OCRI in adult speakers of English (Drew, 1997), my findings showed that OCRI overwhelmingly occurs after problems with turn sequentiality.

To be consistent with chapter 5, I consider the same potential sources of trouble examined in chapter 5 in the turns prior to PMY. However, the order in which I cover these differs. In this chapter, I first discuss instances of mishearing, followed by sequentially inapposite turns and I finally discuss evidence of misspeaking. This is due to the increased number of excerpts I identified demonstrating misspeaking in the turn/s preceding PMY. Thus, I have expanded the analysis of turn/s demonstrating misspeaking to include instances of untranscribable speech and instances containing unclear referring expressions. As PMY can elicit a number of responses in addition to repair initiation, detailed in section 6.4, there may not always be problematic talk in the turn prior to PMY which requires repairing. However, I have still consistently identified potentially problematic talk in the turns prior to PMY and have found analysing it in accordance with the categories identified in chapter 5 to be a useful starting point. All excerpts analysed in this chapter appear in appendix C.

6.3.1 Analysing the turns prior to PMY in interactions involving TD children

6.3.1.1 PMY produced after mishearing

In chapter 5 I identified instances of OCRI produced after evidence of mishearing and further divided these into mishearing due to a lack of orientation towards the child from the adult or the presence of overlap which could potentially inhibit the adult’s ability to hear the talk the child had produced. A lack of orientation typically happened during transitions between tasks, particularly breaks which led to the child and adult moving between rooms. However, lack of orientation could also occur when the adult was paying attention to something else in the room, such as the administrative set up of tasks. The presence of overlap typically occurred when there were multiple participants talking at once, however could also include instances where talk overlapped with other noises in the laboratory, such as the door closing.

In contrast to chapter 5, I found no PMY in the interactions involving TD children occurring after a turn containing evidence of a lack of orientation. Thus this factor will not be covered in the analysis of PMY in interactions involving TD children. There were five excerpts which exhibited the presence of overlap in the turn preceding a PMY produced by the adult which will be discussed below.
6.3.1.1.1 The presence of overlap

In the interactions involving TD children, there were five instances of overlap in turns prior to PMY produced by the adult. However, in all excerpts where overlap occurs, the period of overlap is brief. In support of findings from chapter 5, in excerpts discussed here, the presence of overlap does not appear to be the sole factor which could lead to a breakdown in intersubjectivity. In particular, all excerpts examined in this section additionally contain instances of misspeaking in the turn preceding a PMY, which could also potentially impede understanding.

Excerpt (3) demonstrates the presence of overlap in the turn preceding a PMY. This excerpt occurs in the WPPSI-III, vocabulary subtest. In line 1, the adult asks the sixth question of the subtest, ‘what’s a dog’.

(3) ID 609: 37-HS. 24:45 (TD: 5;0)
WPPSI-III – vocabulary subtest. Participants are sitting at table, facing one another. A is off-camera for the duration of this excerpt. HS is sitting with his arms crossed and resting on the table.
1   A: what’s a dog?
2    (0.3)
3  HS: ah
4    (1.1)
5  HS: how do you make dogs
6    (0.5)
7  A: tsk I’m not sure that you can make dogs but what is a dog.
8    (0.7)
9  HS: A::h it gets bones, it digs for bones,
10  A: goo::d.
11    (1.5)
12  A: d’you know anything else about dogs ↑tell me a bit more.
13  HS: hm::
14    (1.0)
15  HS: they run- they fe:tch.
16  A: good ve(h)ry good.
17    (3.9)
18  HS: tsk have you seen Futurama;
19  A: I have seen Futurama, do you like Futurama;
20  HS: =>yeah< (1.0) yeah ’cause there’s a- (0.3) a robot who loves
21  p hh (0.7) ((gulp)) (0.9) u:m (1.1) humans. h
22  [an] alien loves a human.=
23  -> A: [oh] =ye(hh)ah?
24  HS: [th- the- the alien girl loves a human.]
25  [((holding hand up and beats out once, rolls eyes at end))]
26  A: oh::d tsk that’s silly isn’t it;
27  HS: yeah,
28  A: yeah. (.).hh >can you tell me< what’s a letter.

The child, HS, offers multiple responses, in lines 5, 9 and 15, to the question asking for a definition of a dog. In line 16, A provides an evaluation of the final response (‘good ve(h)ry good’) and there is a pause before A asks the next test question. However, in the next turn (line 18), instead of another question produced by A, HS self-selects as next speaker and initiates a new topic of conversation which is outside the task activity, by asking if the adult has seen the television program Futurama.
After A responds affirmatively to this question, HS expands on the topic of *Futurama* in lines 20-24. This turn is disfluent, evidenced by numerous self-repairs, gaps and pauses. Additionally, HS’s production of the indefinite article ‘an’ in line 22 occurs in overlap with the adult’s newsmaker token ‘oh’ in line 23. This could perhaps be problematic for the adult as ‘an alien’ is a new protagonist in the child’s story, however, the overlap is brief and does not occur on the subject noun ‘alien’ which would likely cause more problems in understanding. It seems unlikely that this instance of overlap would result in a breakdown of intersubjectivity for the adult.

The following four excerpts all exhibit instances of minor overlap in the turns preceding a PMY. As all excerpts are discussed later in the chapter these appear here in abridged format, and will only be briefly discussed.

(4) ID 610: 51-JW. 9:06 (TD: 4:0) – abridged

**WPPSI-III – object assembly subtest. Participants are sitting at table, facing one another.**

7 A: no: now let’s see what we’ve got he[re. ]
8 JW: [([“let”]’s) XXXX°].
9 ((A puts out puzzle pieces face down on table in front of JW))
10 face down on table in front of JW)
11 -> A: ye(hh)ah?

(5) ID 614: 51-JW. 1:06:32 (TD: 4:0) – abridged

**Generation of object substitutions task, with pencil as stimulus object. Participants are sitting on the mat facing one another, but A is off camera.**

23 JW: gn:::[: ]
24 A: [What el]se could you [pretend that could] be.
25 JW: X X X . ]
26 XX XX(ring) the doctor.
27 (0.5)
28 -> A: ye(hh)ah?


**Generation of object substitutions task, with cardboard tube as stimulus object. Participants are sitting on the mat, facing one another.**

15 A: ye(h)ah it could go round in circles, what could it be( .)
16 “what could you [pret]end it could be”.=
17 JM: [u:m ] = (a) XX XX?
18 -> A: ye(hh)ah?

(7) ID 608: 37-HS. 12:20 (TD: 5:0) – abridged

**WPPSI-III – information subtest. Participants are sitting at table, facing one another.**

21 A: yeah it is March [very] good=
22 HS: [ X ] =yeah ’cause um ah
23 (2.5)
24 hh I’ve got- I’ve got- I found some old tiddies.
25 -> A: ye(hh)ah?

As with excerpt (3), the period of overlap in excerpts (4), (5), (6) and (7) are all brief and arguably would not lead to a breakdown in understanding. In excerpt (4), the word that occurs in overlap,
‘let’s’, was not the most problematic part of the turn for me to transcribe, as demonstrated by the following four syllables transcribed as ‘X’. In excerpt (5), the speech in overlap was unable to be transcribed, however, so was the following talk which the PMY was arguably responding to, as demonstrated by the final intonation of line 25. In excerpt (6) the word which occurs in overlap is ‘um’, which is used to moderate interaction rather than convey conversational content, and, while the syllable in overlap in excerpt (7), line 22 is untranscribable, it appears to be inconsequential to the content the child is attempting to convey in a similar way to the ‘um’ in excerpt (6). In addition to the presence of overlap, all excerpts in this section also contain problems with speaking in the turn prior to a PMY. This is demonstrated by untranscribable syllables which occur outside of the overlap in excerpts (4), (5) and (6); gaps and pauses, and self-repairs in the turn prior to the PMY in excerpts (3) and (7); and the atypical pronunciation of the word ‘teddies’ as ‘tiddies’ in excerpt (7). These excerpts are each discussed further in section 6.3.1.3, as excerpts demonstrating misspeaking in the turn prior to the production of a PMY. Excerpts demonstrating misspeaking were the most numerous instances analysed in this chapter, thus I discuss these last and expand on the analysis presented in chapter 5. In section 6.3.1.2 I discuss excerpts containing sequentially inapposite turns.

6.3.1.2 PMY produced after sequentially inapposite turns

In chapter 5, many of the excerpts involving OCRI contained sequentially inapposite trouble source turns. This finding supported work by Drew (1997) which found sequentially inapposite turns often occur before the production of OCRI devices. Further, in chapter 5, I found that instances of inapposite turns could be attributed to the children either trying to test out what was required of them in the task, or their pursued activity being disaligned with the adult’s pursued activity. When examining the same factors in the environment preceding the adult’s production of a PMY, I found that sequentially inapposite turns occurred less frequently prior to PMY’s than before OCRI. In turns preceding PMY in interactions involving TD children only one excerpt showed a sequentially inapposite turn due to a lack of understanding regarding the task demands, while six excerpts demonstrated sequential inapposite turns due to disalignment between pursued activities.

6.3.1.2.1 A lack of understanding regarding the task demands

Only one excerpt identified in the interactions involving TD children demonstrates a sequentially inapposite turn preceding the adult’s production of a PMY due to the child not understanding the task demands. Excerpt (8) occurs in the WPPSI-III approximately 18 minutes into the session. The participants have just completed the object assembly subtest and A’s first turn represents the
transition from the object assembly subtest into the information subtest. The first test question, ‘what is a shoe’, is produced in line 4 by the adult.

(8) ID 612: 51-JW. 18:11 (TD: 4:0)
Transition from WPPSI-III – object assembly subtest to WPPSI-III – vocabulary subtest. Participants are at the table, facing one another, but JW is standing up leaning forwards over the table looking at A’s sheet.
1 JW: can I (. ) try another one?
2 A: .h well we don’t have any more puzzles, but we have got a
3 couple more things to do, tsk .hh now (0.4) could you tell me
4 (0.2) what is (. ) a shoe.
5 (1.2)
6 JW: [on the:re.]
7 [[(JW lifts up his right leg so that A can see his shoe,
8 then puts it down again))]
9 A: ye:ah. that is one isn’t it. so what is it, what is a shoe?
10 JW: [it’s Spi:derman (1.3) I [got Sp-]]
11 [((JW sits and lifts up his right leg onto the table))]
12 -> A: [ye(hh)a]h?
13 JW: I got Spi:derman on mine.
14 [((JW puts his leg down and sits
15 properly in the chair))]
16 A: your- Spiderman is on yours. [he’s great [isn’t he?]]
17 JW: [and- and I] have
18 Spiderman (two/too), X Spiderman XX.
19 A: oh real:ly.
20 JW: yeah.
21 A: wow.

JW’s response to the question, ‘what is a shoe?’ is to show A an example of a shoe by picking up his right leg, briefly holding up his foot and shoe so that A can see them and verbalising a reference to his shoe by saying ‘on there’ (line 6). He then puts his foot and shoe back down, under the table. As previously mentioned, showing the adult an example of a shoe is a reasonably common response to this question by children in this data set and one that would probably be sufficient in less institutional contexts of interaction. However, to award a correct answer, A is trying to elicit a verbal functional definition of a shoe, something like ‘a shoe is something you put on your foot’. As discussed in chapter 4, the nature of the test puts certain constraints on what the adult can deem to be an appropriate response and the type of response by the child that she will therefore pursue.

After JW shows his shoe to A, she agrees with JW that it is an example of a shoe (‘that is one isn’t it’), but treats this turn as insufficient by further pursuing a verbal definition of a shoe in line 9, by asking ‘so what is it, what is a shoe’. JW’s response to this is to again lift his right foot onto the table in line 11 so that A can see his shoe, which acts as a non-verbal repair of his action in line 7. He does not provide the verbal definition pursued by the adult. Rather while showing A his shoe, he says ‘It’s Spiderman’, which is a description of what is on his shoe rather than a definition of a shoe more generally. After a 1.3 second pause (line 10), during which JW keeps his foot visible on the table, the adult and child begin speaking at almost the same time. The rest of the child’s talk in line 10 is
spoken at almost the same time as the adults’ PMY\textsuperscript{18} in line 12 and thus the PMY is not in response to any further talk by the child due to the timing, although the 1.3 second pause may be relevant to the adult’s production of the PMY.

JW’s response to the question ‘what is a shoe’ in line 7 is to show his shoe to the adult and provide a verbal description of what is on the shoe. This is a sequentially inapposite turn which demonstrates the child’s lack of understanding of the desired task response. As discussed in chapter 4, and also evident from this excerpt, the WPPSI-III, vocabulary subtest begins with no instruction that a correct answer to the question entails a verbal functional definition of the object which is general in nature. The children are required to work out the task demands through the interactive processes of doing the task. Interestingly, JW also demonstrated difficulty transitioning to the WPPSI information subtest 13 minutes prior to this. This was discussed in chapter 5, ID 514, where he responded to the test question ‘what colour is grass?’ by saying ‘me and you’ and pointing towards the adult and himself.

\textbf{6.3.1.2.2 Activity disalignment}

There were six excerpts identified in the interactions involving TD children where the turn preceding the adult’s production of a PMY constitutes a sequentially inapposite turn due to activity disalignment. As with excerpt (8), the following excerpt, (9), is also produced during the WPPSI-III, vocabulary subtest, however, it occurs much later in the testing session after CB has already demonstrated understanding of the type of response required for the subtest questions. By this stage of testing, CB is showing signs of disengagement with the task.

(9) ID 606: 28-CB. 32:55 (TD: 5;0)

\textit{WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. Prior to this CB has been asking A about the functions of the cameras and microphone in the room.}

1 A: \textit{.hh now we’ve just got a- a couple more things left to do, just}
2 \textit{a few more, and then we’ll go see how your mum’s getting on.}
3 tsk .hh but could you tell me, what is (.).
4 \textit{a lea:f.}
5 (1.6)
6 CB: \textit{ºfalls downº.}
7 \textit{[((CB moves his right arm downwards))}
8 A: \textit{YE:ah they do fall down, can you tell me a bit mo:re?}
9 CB: \textit{eh the wind blows them .h \textbf{>it goes<} \textit{[((whistling noise))]]}
10 \textit{[((CB puts both arms in the air and sways them))]

\footnote{In line 10, by the naked ear and using \textit{Audacity}, the child begins speaking just before the adult as represented in this transcript. Note also the departure here from the standard CA convention of taking a new line for the pause and a new line for the child resuming talk. This was a departure chosen to ensure the reader could see that the actions in line 11 overlapped all talk and silence in line 10. It demonstrates a limitation of depicting verbal and non-verbal interplay using brackets. Likewise the difficulty depicting the overlap occurring between lines 10 and 12.}
As discussed in chapter 4, the design of this task specifically elicits IRE sequences where the adult produces the initiation and the evaluation and the child produces the response. In this excerpt, A asks the test question ‘what is a leaf’ in line 3 which initiates an IRE sequence. Rather than provide a verbal functional definition of a leaf, CB names a possible action of a leaf saying that a leaf ‘falls down’. In line 7, A gives CB positive feedback, first agreeing with him (‘yeah they do fall down’), and then prompting him to expand on this answer (‘can you tell me a bit more’). CB adds further information saying, ‘the wind blows them’ (line 8) and also provides a physical demonstration of a tree blowing in the wind (lines 9-10). The adult emphatically responds to this by providing a positive assessment token, ‘good’, as an evaluation closing off the IRE sequence. This token is produced with a lengthened vowel and three inter-lexeme laughter syllables. Without pause CB produces a turn in line 12 which is difficult to understand within this play context and the instances of misspeaking are discussed in more detail in section 6.3.1.3.

Even without understanding the middle of the turn in line 12, the first four words, ‘I just saw a’ and the mention of a ‘clown’ suggest that it is a change in topic which is produced quickly after the prior turn without markers to signify a change of topic. With both participants in a windowless laboratory, it is difficult to understand what CB might be referring to and examining the visual information within this segment of the video-recording did not assist. However, we can see that this turn was unexpected from A’s perspective as it occurred after completion of an IRE sequence which runs from lines 3-11. While the closing off of an IRE potentially leaves the next speaker to self-select, the overall structure of the WPPSI-III, vocabulary subtest, typically sees the adult elicit a new IRE sequence after closing off the last. A similar scenario is found in the following excerpt.

Excerpt (10) was also discussed at the beginning of the chapter at excerpt (1) to describe the phenomenon and at (7) as an example of overlap in the turn preceding a PMY. It occurs in the WPPSI-III, information subtest and, similarly to excerpt (9), the turn preceding the PMY is not aligned to the testing requirements which are pursued by the adult.

(10) ID 608: 37-HS. 12:20 (TD: 5;0) – abridged
WPPSI-III – information subtest. Participants are sitting at table, facing one another.
17 HS: um there’s October November December January February March
In this excerpt, HS is listing the months of the year in line 17, which he has offered to do after he is unable to list the seasons of the year. When he gets to March he realises that March is the month they are currently in and comments on this in line 19, which the adult responds to with positive praise in line 21. HS’s next turn, across lines 22-24, is sequentially inapposite to the prior talk on two levels. Similarly to excerpt (9), it departs from the established overall structure of the subtest which elicits IRE sequences, where the adult produces the initiation and the evaluation and the child produces the response. However, as has been shown in chapter 4, this overall structure is not always adhered to and the adult often tries to encourage talk in the children when they produce more spontaneous turns.

Perhaps more importantly, this turn is produced as if it is topically linked to the prior talk. In line 22, after a syllable from HS which occurs in overlap with the adult’s turn in line 21, which could be a bid for the floor, HS produces an agreement or acknowledgement token which is so closely produced after A’s turn, it is latched to it. He then produces a truncated version of the word ‘because’, transcribed as ‘cause’. As a conjunction ‘because’ signifies a causal relationship between what was just said and what is about to be said. This is followed by two hesitation markers which signify to the adult that HS has more talk to come. This is supported by the presence of a reasonably long gap of 2.5 seconds in line 23, where the adult abstains from self-selecting as speaker, allowing HS to produce more talk. The child then begins with an audible outbreath and two cut-off false starts before the child produces a sentence, ‘I found some old teddies’, where teddies is pronounced as ‘tiddies’. This turn constitutes a new topic and appears to be unrelated to any prior talk in the testing session, however, the turn begins by directly linking this to the prior turn with the lexeme ‘because’.

Excerpt (11) similarly demonstrates a sequentially inapposite turn prior to the production of a PMY. In chapter 5, I identified four examples of inapposite turns which were metacomments, or cases where the child produced a turn which was a comment about the experience of doing the task rather than one contributing to the process of doing the task. Excerpt (11) is an example of a similar
kind and occurs during the WPPSI-III, object assembly subtest, where the child, JW, is completing a puzzle of a cow.

(11) ID 611: 51-JW. 14:24 (TD: 4;0)
WPPSI-III – Object assembly subtest. Participants are sitting at table, facing one another. JW has his head down doing a puzzle of a cow for the most part of this.

1. A: now [there’s lots of pieces for this one we’ve just got]
2. \[([(A gets next puzzle bag from beside the table)]) \]
3. two more puzzles left ‘cause you’re doing so well.
4. \["now we need to put that there" \]
5. \[([(A begins to place puzzle pieces face down on the table)]) \]
6. tsk now [the:se (0.5) make (0.2) a co:tw, ((beep beep)) \]
7. \[([(A places puzzle pieces face down on the table)]) \]
8. (14.0)/((JW putting together puzzle of the cow))
9. JW: hey (mum) I—I’ll make this on (. ) on the TV at my home.
10. \rightarrow A: ye(hh)ah?
11. JW: °mm°
12. (2.8)
13. JW: it’s a long way away isn’t it.
14. A: it is isn’t it
15. JW: mm
16. (12.6)/((JW putting together puzzle of the cow))
17. JW: this one’s a bit tricky,

In line 8 of excerpt (11), JW is engaged in the process of completing the cow puzzle on the table in front of him. He has his head down and is consistently working silently putting the puzzle together for 14 seconds. JW then initiates a turn at talk in line 9, which does not follow on from the previous talk in lines 1-6 or earlier talk in this session. He begins by issuing the attention-getting device ‘hey’ but he follows this by what appears to be an incorrect term of address, ‘(mum)’. His mother is not present in the room. The adult researcher is the only person in the room and it appears visually that she is the one he is addressing with this turn. The rest of line 9 is also somewhat problematic as it is difficult to know what the child is referring to when he says ‘I’ll make this on the TV at my home’.

The possible meanings of this turn are further explored at section 6.3.1.2.2 on unclear referring expressions. However, it broadly appears that, as with the previous example, this turn is an unusual contribution within this interactional context which does not topically follow prior talk in the session. However, JW does orient to this turn as a new topic by prefacing the turn with an attention getting device.

These excerpts have been identified as containing sequentially inapposite turns preceding the adult’s production of a PMY. However, the sequentially inapposite turns in excerpts (9), (10) and (11) each occur at TRPs where either speaker can self-select as next speaker, even if the institutional context favours the adult doing so.
A unifying feature of the three excerpts examined so far in this section is that they all have turns preceding the PMY which are difficult to understand due to misspeaking. This adds to the difficulty of the adult understanding what is being said. Excerpt (11) in particular demonstrates an example where the turn is marked as being new, however the meaning of the talk which follows is very difficult to understand. This is quite different to the majority of excerpts in chapter 5 which contained turns which were often well formed but the difficulty from the adult’s perspective stemmed from understanding the contribution they were making to the activity she was pursuing. Excerpts which demonstrate misspeaking in the turn preceding the PMY appear to be the most prevalent factor which could lead to problems with intersubjectivity in interactions involving TD children and are discussed further in section 6.3.1.3.

The following three excerpts contain well-spoken and well-constructed turns produced by the child prior to the PMY. However, they each appear to be unrelated to the adult’s prior turn. Excerpt (12) occurs during the WPPSI-III, vocabulary subtest, where the child, JW, is providing an answer to the question ‘what is a castle’ in line 2-15. In line 16, A asks the next test question, ‘what does glow mean’.

(12) ID 613:51-JW. 22:06 (TD: 4;0)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. A is completely off-camera.
1  A:  tsk what is a ca:stle.
2  (2.7)/{(JW puts his arms above his head in a tent shape))
3  A:  [ye:ah]
4  JW:  [that ] hm
5  A:  a bit like that aren’t they so what is it, what is a castle.
6  JW:  a castle fo:r (.) (everyone’s got ma:ried) and tHat um
tsk .hh hhh (dargee).
7  A:  ye:ah very good.
8  JW:  whether they’re pretty.
9  A:  that’s right.
10 JW:  and they get married.
11 A:  yeah that’s ri(h)ght isn’t it;
12 JW:  yeah but my mum and dad are alre:ady married.
13 A:  oh ok.
14 JW:  °mm°=
15 A:  =.hh what does glo:w mean.
16 JW:  aw:: th:at’s for Shre:k. (0.2) Shrek is a ogre.
17 A:  ye(h)ah?
18 JW:  °mm.°
19 A:  (.7)
20 JW:  a light¿
21 A:  pah-lite. it’s a bit, sounds a bit like light but pah-lite.

JW replies to the definitional question about ‘glow’ with confidence, saying without delay, ‘aw that’s for Shrek’. The word Shrek refers either to a popular computer-animated Dreamworks movie
franchise\textsuperscript{19}, or to the main character in these movies; an ogre called Shrek. JW’s decision to evoke the topic of ‘Shrek’ after a question about the word ‘glow’ is likely unclear from A’s perspective. She is expecting either a formulaic functional definition, as JW has demonstrated understanding of this response type prior to this excerpt, or perhaps a response explaining his inability to answer this question, such as ‘I don’t know’. The word ‘glow’ is difficult for a four year old to define and most children in these sessions are struggling to provide adequate answers by this stage of the vocabulary subtest.

While JW’s answer seems unusual, there may exist an association for the child. In the Shrek films characters do ‘glow’ when transforming from their human/animal forms into their ogre/Shrek-world forms. Alternatively, JW may have misheard the word ‘glow’ and may be drawing on a different association altogether. After a 0.2 second pause, JW goes on to provide more information about the character ‘Shrek’, however this still does not add the kind of contextualising information which may help the adult to understand the association between ‘glow’ and ‘Shrek’, if there is one. A’s next turn is a PMY, which JW responds to with the weak affirmative response token ‘mm’. JW treats the PMY as a request for confirmation and, on responding to it affirmatively, he demonstrates that the topic is finalised. From A’s perspective, it remains unclear whether this answer to the test question, asking for definition of the word ‘glow’, makes sense to her. It is clear that it is not an expected answer, nor is it an acceptable answer in the context of testing. However, A makes no attempt to elicit a correct answer so does not orient to this as being problematic and instead moves on to the next test question.

Similarly to excerpt (12), excerpt (13) also demonstrates a response to a question in the WPPSI-III, vocabulary subtest which is related to a cultural reference from the child’s perspective, while from the adult’s perspective it is an unusual response and difficult to interpret. In this excerpt the child, CJ, has been having increasing difficulty answering the questions in the WPPSI-III, vocabulary subtest which is demonstrated in lines 2-4 where he confirms with A that he does not know the meaning of the word ‘double’. A moves on to the next test question in line 5-7 where she asks CJ what the word ‘courage’ means.

\textbf{(13)} ID 602: 4-CJ. 1:43:49 (TD: 5;7)
WPPSI-III – vocabulary subtest. Participants are sitting at table, facing one another.
1 A:    double.
2 CJ: I don't know what that means.
3 A:    not sure¿
4 CJ: nah not sure.
5 A: how 'bout COurage.

\textsuperscript{19} \textit{Shrek} (2001), \textit{Shrek 2} (2004) and \textit{Shrek the Third} (2007) had been released at the time of testing.
When asked if he knows what ‘courage’ means, CJ initially gives a non-verbal negative response by shaking his head three times. This leads the adult to produce an empathetic response in line 9 providing a reason for CJ not knowing the answer, that it is a ‘tricky’ question. After this CJ initiates a clarification check by repeating the word, ‘courage’ with rising intonation and looking towards A. The adult confirms this is the correct target word in line 12. CJ gives a definition of the word which is sequentially well formed as a definition, as the turn begins with ‘that means’, however the definition itself is atypical. CJ’s definition of ‘courage’ as ‘Courage the (couraging) dog’ is likely referring to the children’s television show Courage the cowardly dog, even though CJ gets the title incorrect. The adult appears to display understanding in line 9 of this definition with a lengthened acknowledgement token with a rise-fall intonation. However after this, CJ self-selects as speaker to add additional information, which begins with a false start and proceeds to explain that he ‘watches’ Courage the (couraging) dog. This turn refers back to the definition in line 14 as a thing that you can ‘watch’. Without the knowledge that CJ is referring to a television program, this might be an unusual piece of information. It is this turn which A responds to by producing a PMY.

The adult does not contribute much content to the topic of ‘Courage the couraging dog’. Between lines 14 to 26, CJ progresses the topic in his turns at talk and the contributions by A in lines 15, 17 and 21 are all ‘yeah’ tokens interspersed with CJ’s turns at progressing the topic. Even the laughter produced by A in line 25, which demonstrates a more affective contribution to the talk, is a direct response to a dramatic climax of the story which CJ emphasises intonationally by the use of a raised voice and physically by standing up and throwing his arms up in the air. This conversational
asymmetry appears to demonstrate A’s lack of knowledge regarding the television program which forms the topic of conversation. This makes CJ’s response to the test question problematic from A’s perspective. This is potentially the same difficulty A has with understanding JW’s response in excerpt (12) where he begins to talk about Shrek in response to the question ‘what does glow mean’. Both of these excerpts demonstrate that while the asymmetry in these interactions is often slanted in the adult’s favour, at times the children have a higher epistemic status on the direction of the conversation.

Excerpt (14) is another example of the child building on the task topic but doing so in a way that does not further the task activity. This excerpt takes place towards the end of the WPPSI-III, vocabulary subtest, and the child, KD, has just provided a definition of a leaf as, ‘it falls off trees and onto the ground’, then starts talking about dinosaur bones at a museum he has visited. A’s turn in lines 1-3 is an attempt to get him back on task.

(14) ID 616: 57-KD. 19:30 (TD: 4:4) WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. A is writing the answers in the test booklet.

1 A: .hh now you said leaves they fall off trees and onto the ground and that’s right. (. ) tsk what else do you know about a lea:f. 
2 KD:  erm (1.0) I dunno (. ) tsk we pick them up someti:mes and take them to num or DAds¿ 
3 A:  good, (. ) what is a he:ro 
4 (0.5) 
5 KD: a hero, (. ) well HE saves people. 
6 A:  good he does. 
7 (1.5) 
8 KD: [(now/no) I’m (. ) a superhero as well¿] 
9 [(puts both hands in jumper pockets and looks down at the picture on his jumper front)] 
10 (0.9) 
11 -> A: ye(h)ah? 
12 (1.1) 
13 A:  what is a ca:stle 
14 (0.2) 
15 KD: ca:stle (0.4) mm: (1.2) that’s what you jump on.

In response to the question ‘what is a hero’, KD provides the fairly standard definition in line 8, ‘he saves people’. A responds to this with positive feedback in line 9 which is followed by a 1.5 second pause. In the next turn, KD self-selects as next speaker and adds a turn which is still related to the topic of ‘heroes’, however is unrelated to the task goal of providing a definition. As KD produces this turn he puts his hands in the pockets of his jumper and looks at the picture on his jumper front which appears to be unrelated to superheroes. It appears that KD is attempting to say this ‘in play’, however he doesn’t mark this as a play turn by use of vocal quality or by expanding this play scenario any further. After a 0.9 second pause, A produces a PMY which is not responded to and she moves on to the next test question.
While KD’s turn in line 11 is topically aligned with the prior talk, it is not aligned with the activity A is pursuing. In terms of overall structure, KD initiates line 11 at a time when A would usually initiate the next test questions. Further, KD’s turn in line 11 does not adhere to the test requirements to be a generic and impersonal response to the question, as discussed in chapter 4. From the adult’s perspective, this turn likely comes across as unexpected as it is not furthering the goal of the task to provide additional information to the generic definition of a hero.

There were six excerpts discussed in this section demonstrating activity disalignment. However, none of these excerpts demonstrated non-compliance with the task the adult was pursing. The first three exhibited new topics initiated by the children, both unmarked ((9) and (10)) and marked (11), which occurred in TRP’s but were difficult for the adult to understand as they contained underspecified content. The final three all demonstrated unusual responses to task questions which were also difficult to understand due to a lack of information provided by the children on the contributions. These findings suggest that providing enough contextualising information for the hearer to make sense of the contribution could be a more common factor preceding a PMY. This is further explored in section 6.3.1.3.

6.3.1.3 PMY produced after misspeaking

In chapter 5, twelve of all excerpts involving OCRI in interactions with TD children and children with ASD, featured misspeaking by the child in the trouble source turn which potentially contributed to a need to repair. Types of misspeaking found were instances involving problems with articulation and instances of atypical pronunciation, problematic grammatical constructions, paralinguistic features, such as low speech volume, and underspecified referring expressions. In the 16 TD excerpts containing PMY, instances of misspeaking were common, with all containing misspeaking in the turns prior to PMY. The next section begins by discussing excerpts which contain untranscribable talk in the turn preceding the adult’s production of a PMY. Section 6.3.1.3.2 discusses excerpts which are instances of misspeaking which contain unclear referring expressions in the turn preceding a PMY.

6.3.1.3.1 PMY after untranscribable talk

This section discusses excerpts which contain untranscribable talk in the turn preceding the adult’s production of a PMY. These excerpts provide persuasive evidence that a lack of understanding could have occurred from the adult’s perspective, however, there are limitations in how much analysis can be undertaken with so few known words. Many of the excerpts which were presented in abridged format in section 6.3.1.1.1 on the presence of overlap, are discussed in more detail here.
Excerpt (15), which also occurred at (5) in abridged format, contains multiple instances of misspeaking. This excerpt occurs during the generation of object substitutions task, where the child, JW, is required to list as many pretend things a stimulus object could represent as possible within a set timeframe. When this excerpt begins it is the fourth time JW has done this task, each time with a different stimulus object, and he has demonstrated understanding of the task requirements by this stage of testing. However, JW appears to be becoming disengaged from the testing process as the session has now taken over an hour to complete and this is the last task for the day. As with each of the new stimulus items used in the generation of object substitutions task, A begins with a model answer, suggesting they could pretend the pencil is ‘a magic wand’ in line 1.

(15) ID 614: 51-JW. 1:06:32 (TD: 4:0)
Generation of object substitutions task, with pencil as stimulus object. Participants are sitting on the mat facing one another, but A is off camera.

1 A: [now this could be: (. a magic wand¿ what else could it be.]
2 [((pulls out pencil, waves it around, then hands it to JW)) ]
3 ((beep))
4 (1.6)/ ((JW waves the pencil around))
5 A: yea:h? what else, °>what else could you pretend< that
6 [could be¿”]
7 ((JW taps pencil against the floor three times))
8 JW: °X°
9 (1.5)
10 A: what could it be.
11 (0.6)
12 JW: a pencil.
13 A: [yea:h],
14 JW: [it- ] it is a pencil anyway.=
15 A: =it is a pencil what could you pretend it could be.
16 (1.0)
17 JW: [Chair like this ((singsong voice)) XXXX]=
18 [((JW gets up, walks to the back of room and sits on a chair))]
19 A: =yea:h,
20 JW: ((singsong voice)) XX=
21 A: =could go on the chai:r.
22 (0.6)
23 JW: gn:::[: ]
24 A: [Why else could you [pretend that could] be.
25 JW: [ X X X. ]
26 XX XX(ring) the doctor.
27 (0.5)
28 -> A: ye(hh)ah?
29 JW: °mm°
30 A: what else could you pretend that could be.
31 JW: could be a cupboard;
32 A: yeah it could be a cupboard,

The adult prompts JW to come up with a pretend item for the pencil in lines 1, 5-6 and 10. JW’s first response to the task is to suggest the object that the stimulus item is in reality; ‘a pencil’, in line 12. A treats this response as insufficient by prompting another answer, this time emphasising the word ‘pretend’ (line 15). This is followed by a 1 second pause before JW gets up from the mat and walks to
a chair at the back of the room while saying ‘chair like this’. He then sits on the chair while singing syllables which sound like nonsense words in lines 17 and 20. A acknowledges the response of chair in line 21, however includes some of her own interpretation of this suggestion, perhaps to align with JW’s action of sitting on the chair, when she says ‘could go on the chair’. JW replies to this with a lengthened ‘gn’ sound, which is not a recognisable word. A overlaps this turn with another repetition of the stimulus question in an attempt to get JW to engage with the task and the child responds to this with 12 syllables in lines 25-26. It is very difficult to understand what he says, with only the last three syllables, ‘the doctor’ being clearly audible to two separate transcribers. Adding to the difficulty in transcribing this, JW is now sitting on a chair which means his head is not visible on camera, as the camera is directed towards the mat. JW is sitting with his hands in his lap, still holding the pencil and his body movements do not help clarify his verbal contribution. Thus, this is an example where misspeaking on the part of the child in the turn preceding the adult’s PMY is likely to be the main factor contributing to a breakdown in intersubjectivity.

Excerpt (16) also involves misspeaking on the part of the child during the generation of object substitutions task. This excerpt was also discussed at (6) in abridged format as it contains overlap.

Similarly to excerpt (15), the child is well acquainted with the task requirements as this is the third time they have done the task using different stimulus objects.

(16) ID 603: 13-JM. 1:22:50 (TD: 5;2)
Generation of object substitutions task, with cardboard tube as stimulus object. Participants are sitting on the mat, facing one another.
1 JM: a knife;
2 A: it could be a knife. good idea. what else.
3 (0.5)
4 JM: u::m
5 (3.2)
6 JM: [a sword;
7 [((JM swishes the tube through the air))]
8 A: it could be a sword. good idea. keep going. what else;
9 JM: [a (lock flicker;)
10 [((JM puts the tube vertically on his finger and flicks it))]
11 A: oh GOOD ONE I like that one. good (.). what else
12 (1.9)/((playing with the tube still vertically on his finger))
13 JM: [round in circles;]
14 [((JM moves the tube around in a circular motion))]
15 A: ye(h)ah it could go round in circles, what could it be (.).
16 °°what could you [pret]end it could be°.=
17 JM: [u:m ]纽带 = (a) XX XX?
18 -> A: ye(hh)ah?
19 (1.0)
20 JM: a (powER ess ewe bee),
21 A: oh a- yea:h good one.
22 (3.7)
23 JM: °°°°what could it be::°° (.). a- a::h
24 (3.4)
JM begins the task by suggesting the cardboard tube can be ‘a knife’ (line 1), ‘a sword’ (line 6), and ‘a (lock flicker)’ (line 9). Each of these responses are oriented to as acceptable answers by A.

In line 13, he then suggests an action which the object could do ([go] ‘round in circles’), which is not in line with the task demands of trying to think of other objects the stimulus objects could be in pretence. A responds to this by first acknowledging the answer in a positive way in line 15, and then emphasising the need of an object or thing answer by emphasising ‘be’ in the utterance ‘what could it be’. She then repeats the stimulus question, ‘what could you pretend it could be’ in line 16. In line 17, JM produces the hesitation marker ‘um’ before he gives a response to A’s question. As discussed in section 6.3.1.1.1, this hesitation marker occurs in overlap with the word ‘pretend’ produced by the adult, however, it is the rest of this response which was very difficult for two independent transcribers to represent. As with the previous example, the fact that after many listens I am unable to understand this turn suggests this is likely to be problematic for A to understand as well. The adult responds to this turn with a PMY.

It is difficult to draw too many conclusions from the turn preceding the PMY in excerpt (16), as it is difficult to understand. However, this turn does begin with an ‘a’ which suggests that the answer is a nominal expression providing a relevant response to the stimulus question, noting that the English language makes it difficult to distinguish between the indefinite article ‘a’ and the hesitation marker ‘ah’ in speech. If the child begins this turn with an indefinite article, this would be in line with the task requirements which JM had already demonstrated knowledge of prior to this utterance by giving suggestions which are noun phrases, such as ‘a sword’ and ‘a knife’. A nominal expression also appears to occur after the trouble source turn with the next suggestion also being difficult to transcribe but clearly beginning with ‘a’ (line 20 ; ‘a (powER ess ewe bee)’, and the final answer included in this excerpt being ‘a hammer’. Thus, JM appears to be adhering to the task demands of suggesting objects for the stimulus object to be in lines 17 and 20. Therefore there is some evidence to suggest that the child’s suggestions are aligned with the task and thus the adult’s pursued activity, however, they are difficult to understand and thus transcribe.

Excerpt (17) demonstrates misspeaking produced by the child in the turn preceding the PMY. It also occurred in abridged format at (4). In this excerpt the child, JW, is completing the object assembly subtest where he is required to put together puzzles.

(17) ID 610: 51-JW. 9:06 (TD: 4:0)
WPPSI-III – object assembly subtest. Participants are sitting at table, facing one another.
In excerpt (17), JW completes the puzzle of a clock in lines 2-3 and A provides a positive evaluation for this in line 4. JW takes this as a cue to move the puzzle aside and A begins to introduce the next puzzle in line 7. Before she reaches the end of this TRP, JW begins with a turn in line 8 which is difficult to transcribe. It is this turn to which A responds with a PMY in line 11. My best guess of line 8 is that it begins with the word, ‘let’s’ which suggests it takes the form of a solicitation which may or may not be aligned with the task demands. It is very difficult to comment further on this with the majority of the turn untranscribable.

These three examples can be seen as illustrating problems with speaking on the part of the child in the turn prior to a PMY produced by the adult. Each sequence contains talk produced by the child which is so difficult to understand these have been deemed untranscribable by at least two separate transcribers. The following excerpts also display instances of misspeaking, however, these excerpts involve difficulty with recipient design rather than articulation, particularly difficulty with producing clear referring expressions.

### 6.3.1.3.2 PMY after unclear referring expressions

Excerpts discussed in the previous section featured turns which displayed difficulty with production or articulation of speech preceding a PMY. This talk was deemed untranscribable as two separate transcribers were unable to produce accurate representations of it. The excerpts discussed in this section still demonstrate misspeaking in the turn preceding a PMY produced by the adult, however, the difficulty is rooted in problems with recipient design rather than production. Excerpts discussed here all include referring expressions which are unclear or ambiguous which makes them difficult to contextualise within the broader talk.

Egbert, Golato & Robinson (2009) showed that languages have resources for dealing with unclear referring expressions. Their analysis of English ‘what.’ and German ‘was./‘was den.’, produced with
falling intonation, showed these terms can be used as a specific category of repair initiation designed
to request specification of ‘thing’-referring expressions. The excerpts examined in this section
contain potentially problematic referring expressions for a person, animal, thing or abstract concept,
which Schegloff (1987) states is frequently a source of misunderstanding in talk.

The following excerpt, (18), demonstrates a problem with clear referring expressions during the
WPPSI-III, information subtest. It was also discussed at (1), (7) and (10).

(18) ID 608: 37-HS. 12:20 (TD: 5;0) – abridged
WPPSI-III - information subtest. Participants are sitting at table, facing
one another.
17  HS:  um there’s October November December January February March
18  A:  oh [very-]
19  HS:  [it’s mar-] [it’s MA:rch.]
20  [(((HS throws both arms in the air)))]
21  A:  yeah it is March [very] good=
22  HS:  [ X ] =yeah ’cause um ah
23  (2.5)
24  -> A:  .hh I’ve got- I’ve got- I found some old tiddies.
25  HS:  yeah some old teddies um (.)(its)- um there’s Snow Teddy and
26  A:  =ah[h:]
27  HS:  Mo:rris=  
28  A:  [he ] [he’s my n- he’s my (one).  ]
29  HS:  (((HS folds arms across his chest)))
30  A:  wow. (. ) what’s the opposite of south.
31  HS:  west.

After listing the months of the year, the child, HS, begins a topic change in line 22, which appears to
be unrelated to anything he has said prior to this within this interaction (or at least in the interaction
recorded). This turn in lines 22-24 is potentially problematic for a number of reasons including the
presence of overlap, a number of hesitation markers and false starts, a long pause mid-turn and
difficulties with sequentiality, especially as the turn introduces a new topic but through the use of
‘(be)cause’, is syntactically constructed as if the turn is related to prior talk. Additionally, he
produces the word ‘teddies’, as ‘tiddies’ in the referring expression ‘some old tiddies’ in line 24
which is potentially the most problematic aspect of this turn for the adult’s understanding.

The word ‘teddies’ is key to understanding the turn as it is the noun in the referring expression
‘some old teddies’, in the new topic introduced by the child. Not understanding this word would
potentially make the whole turn problematic for the adult. Further, HS orients towards this noun
phrase as being a source of trouble when he repeats this after the adult’s PMY, correcting his
atypical pronunciation of the word ‘teddies’ in line 26.

The next excerpt, (19), is produced by the same child, HS, and occurs three minutes prior to the last
excerpt during the WPPSI-III, information subtest.
During this excerpt HS is asked to list ‘some animals’ (line 1), and he suggests a lion (line 4) and a tiger (line 7), and then the remainder of this excerpt consists of his searching for a third. In line 8, A prompts HS to name one more animal. The gap of 2.5 seconds which follows this indicates that HS is having difficulty coming up with a third animal, however during this pause he has a look of concentration on his face which seems to indicate he is still attempting the task. Following this, he makes a metacomment (‘something else eats meat um’) about the task which suggests he is not just trying to work out another animal but more specifically he is searching for another carnivore. In line 16, he provides a response to A’s prompt for another animal, ‘a cub eats meat’. This response is satisfying his own more specific goal of listing a carnivorous animal, as well as potentially satisfying A’s goal of listing another animal. However, this turn appears to be problematic for A and she does not orient to his response as an appropriate answer to her question, demonstrated by her two repair
initiations in the following turn (lines 18 and 20). In this turn, A first produces a lengthened article ‘a’ produced with a rising intonation, then she further clarifies by specifying ‘another animal’, again with questioning intonation, before repeating the task question in line 22. HS attempts a repair of his previous turn by stating ‘a: Xs eats meat’ in line 24. The undecipherable syllable here is very brief and presents like a glottal stop which ends with an alveolar fricative [s], however the final two syllables, ‘eats meat’, are a repetition of HS’s attempt to answer this question in line 16.

The adult’s response to this in lines 25-27 demonstrates that she has not understood or accepted this as an appropriate answer to her question as she pursues a third animal type. She first acknowledges that HS has given an attempt at the question (‘oh yeah’), she then acknowledges the relevance of his turn to the topic (‘an animal does eat meat’), provides him with positive reinforcement (‘you’re right’), before issuing the original question again (‘can you think of the name of another animal’) produced with emphasis on the word ‘name’. Most of this turn is produced very quickly with A performing rush throughs (Schegloff, 1982) at the TRPs after ‘eat meat’, ‘you’re right’ and ‘another animal’ which suggests that she is trying to hold the conversational floor. Without giving HS a chance to respond, she immediately summarises his progress on this question, stating that he has already provided ‘a lion’ and ‘a tiger’ as examples of animals, and again reissuing this request for ‘another animal’. Again, her repetition of the word ‘animal’, produced four times in this turn, is emphasising what she wants from the child. In line 29, HS again attempts to give the answer of ‘cub’ which he originally produced in line 16, however this time he produces it with a nasal quality. A’s response to this is a PMY followed by a ‘very good’ in line 31. However, there is evidence that understanding was not gained in line 31, as a turn demonstrating emphasised understanding is produced by A later in line 35.

Excerpt (19) is an extended repair sequence, with the child making multiple attempts at repair in lines 12, 16, 24 and 29 before it is successful in line 32. It is also the only instance included where the PMY is spoken in the same intonation contour as additional talk (‘very good’). The difficulties with this excerpt are potentially based on pronunciation, as the turn which elicits the PMY (line 29) is produced atypically and the production of ‘a cub’ as ‘a cumb’ could potentially have affected the adult’s ability to understand this turn. However, the mispronounced turn in line 29 is the only instance in this sequence where HS provides an answer which is sequentially appropriate to the adult’s request, that is, it is the only attempt at the question where HS only provides an animal
name, and not a sentence containing the name of an animal\textsuperscript{20}. The phrase ‘a cub eats meat’ is a sequentially inapposite response to the adult’s request to ‘name another animal’. The nasal quality of the pronunciation of cub in line 29 is rectified in the repair HS produces after the PMY occurs. Thus, by repairing the atypical production, HS is arguably orienting to it as being problematic for A to understand.

Similarly to excerpt (18), the turn immediately preceding the adult’s production of a PMY in excerpt (19) not only exhibits atypically produced pronunciation, it is also an example of an unclear referring expression. In the excerpts which follow, the referring expressions may be produced with atypical pronunciation or a lack of contextualising information which makes them difficult to understand.

The following excerpt, (20), is an example of a turn preceding a PMY demonstrating an unclear real world referent. This occurs during the generation of object substitutions task where the child, TV, has been given a pencil and asked to pretend it can be multiple objects. This is the fourth time this task has been performed by TV; each time using a different stimulus object.

\begin{quote}
\textbf{(20) ID 615: 55-TV. 1:09:14 (TD: 4:4)}
\end{quote}

\begin{quote}
Generation of object substitutions task, with pencil as stimulus object. Participants are on the mat, TV is lying on his back and A is sitting up.
\end{quote}

1 A: *what else could you pretend it could be*.
2 (0.4)
3 TV: a pistol?
4 A: could be a pistol good.
5 (1.2)
6 TV: um
7 (3.1)
8 could it- (. ) could be something that you can (. ) like be a bow
9 and arrow set?
10 A: [yeah could be a bow and arrow set, ]= [((TV throws pencil across the room))]
11 A: =go:od. [what else? ]
12 [(A slides pencil back towards TV)]
13 TV: it could be [a: pe:ncil. ]
14 [(TV picks up the pencil and drops it)]
15 A: yea:h. good.
16 (2.0)
17 TV: that was being a (woom).
18 (0.4)
19 A: ye(h)ah?
20 TV: yep, that was being a- (0.7) a bison.
21 A: [a :bison. ]
22 [(TV picks up the pencil and drops it)]
23 (0.6)
24 wo:w.
25 (0.8)
26 what else could it be.
27 (0.6)
28 TV: I don’t kno:w. (. ) nothing else.

\textsuperscript{20}This excerpt does not appear in section 6.3.1.2.2 as an excerpt demonstrating activity disalignment as the disaligned turn is not the turn which the adult’s PMY is in response to.
TV suggests that the pencil could be ‘a pistol’ (line 3), ‘a bow and arrow set’ (lines 8-9) and then ‘a pencil’ (line 14), and receives positive evaluations for each of these responses. TV suggests in line 18 that the pencil could be a ‘woom’. This is a syllable which does not seem to represent an English lexeme. Interpreting this response is complicated by the nature of the task which requires the child to ‘pretend’, and thus he is encouraged to be referring to things which are not in the physical space surrounding the participants. Therefore, A cannot draw on context to aid her understanding of the neologism. Further, this task requires the child to list as many things as possible, thus success of this task is judged on quantity of output, rather than building understanding. There is also evidence that TV is losing tolerance for this task as the ‘I don’t know. nothing else’ produced by the child in line 28 potentially acts to close down the topic of discussion and invite a transition to a new task (see Beach & Metzger (1997) for this usage of ‘I don’t know’).

The pronunciation of the referring expression, ‘a woom’ is not problematic. It was fairly straightforward for me to transcribe, however the real world referent remains unclear and this is the aspect of the turn which makes it problematic for A to understand. As discussed in chapters 4 and 5, the use of pretence in this task makes the maintenance of intersubjectivity particularly complex.

A similar problem with an unclear referent is seen below in excerpt (21). In this excerpt the child, CB, is completing the WPPSI-III, block design subtest. This excerpt occurs approximately 10 minutes into the testing session, when A has just demonstrated to CB that she wants him to make the blocks show the same design as a stimulus picture.

(21) ID 604: 28-CB. 9:42 (TD: 5;0)
WPPSI-III - block design subtest. Participants are sitting at table, facing one another. A is not visible on camera. A has just finished showing CB a demonstration of what she wants him to do with the blocks.
1 A: now you have a go, make the tops of the blocks look the same as that picture.
2 (0.7)
3 CB: looks like the pointer.
4 (1.4)
5 A: this looks like the pointer. = yeah it does look like the pointer, you’re right.
6 (0.5)
7 [tell me when you think] they’re the same.
8 (2.8)/{(CB working with blocks)}
9 CB: [ X X X X X ]
10 (31.1)/{(CB working with blocks)}
11 CB: XXX (doing) (0.4) .hh (ds:) (1.3) looks like (robots).
12 -> A: ye(hh)ah?
13 (1.8)
14 keep going you’re doing well.
15 (19.2)/{(CB working with blocks)}
In line 4, CB comments on the blocks randomly placed on the table saying they look like ‘the pointer’. When this gets no response from A, CB re-says the turn in line 6 which elicits an encouraging response from A in lines 7-8. After a pause (line 9), A and CB begin talking at the same time which makes transcription of CB’s talk in line 11 difficult. A’s turn in line 10 is an attempt to re-orient CB’s attention back to the task at hand and it appears to be successful with CB working through the problem in lines 12-14. After CB has been quietly working for over 30 seconds he initiates some disfluent talk in line 15. This turn contains syllables which are difficult to decipher, an audible in-breath and two pauses, and ends with the utterance ‘looks like (robots)’. The last two syllables of this turn are difficult to understand. I have transcribed it with a best guess of ‘robots’, however I am unsure of the real world referent this term is targeting. Presumably he is making a comparison between the patterns on the blocks and something else (‘robots’), as he appeared to be doing this in lines 4 and 6, and also he continues to make similar analogies between the block patterns and objects in the following interaction (as demonstrated in ID 510, analysed in chapter 5). The camera angle does not provide a view of the blocks on the table, so it is not known what this pattern could represent. Additionally, the child keeps his head down with eyes focused on the blocks during line 15. Similarly to excerpt (20), excerpt (21) demonstrates the child using an unclear referring expression to refer to a ‘thing’. Both children are referring to something which is outside the immediate play space which makes it particularly difficult to contextualise or understand the contribution.

The following excerpt, (22), is another example of an unclear referring expression. This excerpt was also discussed at (9), and comes from the same child, CB, but occurs later in the testing session during the WPPSI-III, vocabulary subtest.

(22) ID 606: 28-CB. 32:55 (TD: 5;0)

WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. Prior to this CB has been asking A about the functions of the cameras and microphone in the room.
1   A: .hh now we've just got a- a couple more things left to do, just
2   a few more, and then we'll go see how your mum's getting on.
3   tsk .hh but could you tell me, what is (. ) a-leave-f.
4  (1.6)
5  CB: ['falls downº.]
6  [((CB moves his right arm downwards))]
7  A: YE:ah they do fall down, can you tell me a bit mo:re;
8  CB: eh the wind blows them .h >it goes< [((whistling noise))]
9  [((CB puts both arms in the
10  air and sways them))]
11  A: GOo:(hhh)d.
12  CB: I just saw a (ba: with the) cl:own.
13  (.)

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In line 3 of this excerpt, the adult asks CB the test question, ‘what is a leaf’ and also produces a prompt for expansion of this question in line 7 (‘can you tell me a bit more’). CB attempts to respond to the question in lines 5-6 and 8-10 by saying ‘falls down’ and ‘the wind blows them’, while providing a physical demonstration. The adult orients to this response as sufficient with the positive and emphatic evaluation ‘GOo:(hhh)d’ in line 11. Without pause, CB then produces a turn which is difficult to understand in line 12. The turn begins with ‘I just saw a’ and ends with ‘clown’ with a lengthened ‘L’, however it was difficult for me to transcribe the three syllables in the middle of the turn, where my best guess was ‘ba’ with a lengthened vowel, followed by ‘with the’. As with the previous two excerpts this contribution to the talk represents an underspecified referring expression which is potentially difficult for A to understand. This is both because she cannot use the local context to assist her to understand the referring expression and because this turn is unrelated to the prior talk, as demonstrated by its inclusion in section 6.3.1.2.2 on turn disalignment.

The previous excerpts in this section have demonstrated potentially underspecified or unclear referring expressions in the turn preceding a PMY. The following excerpt, (23), includes a referring expression which is potentially ambiguous as there are two possible real world referents in the local interactional context to which the expression could refer. The excerpt takes place about half an hour into the testing session, during the WPPSI-III, vocabulary subtest.

(23) ID 605: 28-CB. 30:45 (TD: 5;0)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another.

1 A: what is (. ) a dog.
2 CB: eh: they go like ruf ruf ruf
3 A: they do,=
4 CB: =ruf (0.5) ruf
5 (1.1)
6 A: what else can you tell me a bit mo:re.
7 (0.4)
8 CB: eh:::
9 (5.3)/{(CB looks around the room)}
10 CB: m:aybe a starfi:sh.
11 A: how ’bout a dog can you tell me a bit more about a dog,
12 you said they go woof woof what else can you tell me a bit [more about-]
13 [more about-]
14 CB: [[they have ] s:ix legs like this. ]
15 [{{(CB gets onto the floor on all fours}}]
16 (1.3)/{(CB gets up again, sits on his chair)}
18 CB: [there’s one, two, three, four. ]
19 [{{(CB points to each hand then each foot as he counts}}]
In this excerpt the child, CB, is asked the question ‘what is a dog’ in line 1 and gives a reply which demonstrates the noise a dog makes (lines 2 and 4). This answer is oriented to as insufficient by A who prompts him to give more details with the stacked requests ‘what else’ and ‘can you tell me a bit more’. These turns request expansion but are deliberately vague in specifying the topic on which the adult wants more information. CB appears to find producing an answer to this difficult as demonstrated by the hesitation marker ‘eh’, and the 5.3 second pause in which he is scanning the room (line 9). He then comes up with a suggestion, ‘maybe a starfish’ in line 10 which disaligns with the adults request for more information about a dog\(^\text{21}\). However, this turn is possibly tangentially semantically related as an example of another animal.

In lines 11-13, the adult directs the child’s attention back to the animal under investigation, now repeating the word ‘dog’ twice in the following turn using two utterances to elicit more information about a dog. She follows this with a summary of the information CB has already provided (‘you said they go woof woof’) and a prompt to build on this answer (‘what else’), followed by a third re-saying of the original test question (‘what else can you tell me a bit more about’). This turn is overlapped by CB, and A abandons her turn as CB says ‘they have six legs, like this’ and gives a physical demonstration of an animal standing on four legs (lines 14-15). The use of the referring expression ‘they’ in this turn is potentially confusing as it would most likely refer to ‘a dog’ as it follows on from A’s turn in which she specifies the word dog twice, and the action the child does while saying this is reminiscent of a four-legged mammal, such as a dog. However, the content of the turn, expressing that ‘they’ have six legs, appears to exclude the semantic category of ‘dog’, but could potentially refer to the animal he introduced in line 10; a starfish. Thus there appears to be a mismatch between his words and his actions. However, the adult does not orient to this turn as being problematic, she responds to it with the change-of-state token ‘oh’ and ‘wow’, signalling that she has taken on board new information. The child then begins his turn as if it is repeating the information from line 14, beginning with ‘they have’ and then counting aloud as he points to, or numbers, his limbs from one to four.

\(^{21}\) This excerpt does not appear in section 6.3.1.2.2 as an excerpt demonstrating activity disalignment as the disaligned turn is not the turn which the adult’s PMY is in response to.
It is only after this turn that the adult produces a PMY. This may reflect the mismatch between CB’s assertion in line 14 that ‘they’ have six legs, and the implied assessment that ‘they’ have four legs (in line 18). This new information may confuse the adult’s understanding of who ‘they’ denotes. However, the real problem here appears to be CB’s knowledge of numbers or, at least, his use of the word ‘six’. CB appears to retrospectively orient to the word six as problematic when he says in line 24 ‘I didn’t know they have they have four legs’. By prefacing this turn with ‘I didn’t know’, CB attempts to provide an account of the previous incorrect information, thereby orienting to the use of ‘six’ as problematic and worthy of explanation. It is very difficult to ascertain when the adult becomes aware of this source of the trouble. She demonstrates no problem with the assertion that ‘they’ have six legs in line 17 when she utters the prosodically convincing ‘oh wow’. It is not until line 23 that she demonstrates an altered understanding with the use of the change-of-state token ‘ah’ before repeating the child’s prior turn ‘they’ve got four legs’ in agreement or confirmation. This turn elicits a re-saying of the previous turn by the child (‘they have four legs’). This excerpt illustrates the use of an incorrect lexeme choice which makes it problematic for the participants to maintain intersubjectivity.

Excerpt 24 also includes a sequence where the use of an underspecified referring expression can potentially refer to two different things. This excerpt was also discussed at (8) as an example of a sequentially inapposite turn due to trying to understand the task demands, so will not be discussed in detail here.

(24) ID 612: 51-JW. 18:11 (TD: 4;0) – abridged
Transition from WPPSI-III - object assembly subtest to WPPSI-III - vocabulary subtest. Participants are at the table, facing one another, but JW is standing up leaning forwards over the table looking at A’s sheet.
2 A: .h well we don’t have any more puzzles, but we have got a
couple more things to do, tsk .hh now (0.4) could you tell me
(0.2) what is (.). a shoe.
5
6 JW: [on the:re.]
7 (((JW lifts up his right leg so that A can see his shoe,
then puts it down again)))
9 A: ye:ah. that is one isn’t it. so what is it, what is a shoe?
10 JW: [it’s Spi:derman (1.3) I [got Sp-]]
11 (((JW sits and lifts up his right leg onto the table)))
12 -> A: [ye(hh)a]h?
13 JW: I got Spi:derman on mine.

After the child, JW, responds to the test question, ‘what is a shoe’ by showing A his shoe (lines 7-8), she prompts him for a verbal definition of the shoe in line 9. His response to this in line 10, ‘it’s Spiderman’, includes the ambiguous referring expression, ‘it’. The use of this word after A’s contribution ‘what is it, what is a shoe’ would imply that JW is referring to ‘a shoe’ with the term ‘it’.
Certainly this is the thing that A is referring to when she uses the term ‘it’ in line 9. However, JW uses ‘it’ to refer to the illustration on his shoe. In this context, he is making use of non-verbal actions to demonstrate the link between ‘it’ and the illustration on his shoe by physically showing the adult his shoe.

The following excerpt, (25), occurs towards the start of the free play session, an hour and 20 minutes into the whole testing session. During the free play session, the child, CJ, has so far only been playing with the toy digger truck. In line 1, CJ introduces a protagonist as an imaginary person in the truck, saying ‘there’s a man in there’. This seems to imply CJ envisages that they are playing with a person inside the truck, as opposed to the main protagonist of this play sequence being the truck itself.

(25) ID 601: 4-CJ. 1:22:26 (TD: 5;7)
Free play session. Participants are sitting on the mat. CJ has been playing with the toy truck for about 2 minutes prior to this excerpt.
1 CJ: the- there's a man in there. it can control the digger.
2 A: ah: great
3 (16.2)/(CJ makes the truck drive around the play space)
4 CJ: going to dig somewhere else now.
5 (2.6)
6 CJ: vroom
7 (25.8)/(CJ plays with the truck in the play space)
8 CJ: look at THAT. then it digs up high.
9 A: yeah it is*isn't it.
10 (14.7)
11 CJ: they have to dig everywhere just one-. hh they have to dig one hole everywhere.
12 A: ah: so it has to dig one hole everywhere.
13 CJ: vroom- vroo::m
14 (15.2)/(CJ drives the truck around the play space)
15 CJ: °that’s all, X (go)°
16 (7.3)
17 CJ: he’s gonna make a big [(0.5) thing around.]
18 -clockwise circles with his index finger pointed))
19 CJ: like a big GAtE.
20 A: o:h ok.
21 (1.7)/(CJ makes truck drive around)
22 CJ: vroom::m
23 (4.3)/(CJ plays with truck)
24 CJ: [he's gonna buy a new car.]
25 [((CJ stops touching the truck and picks up a toy car))]
26 CJ: 
27 -> A: ye(h)ah?
28 (0.6)
29 CJ: [>he's gonna buy a new car.<]=
30 [((CJ continues to play with the car))]
31 A: =buying a new ca:ri
32 CJ: bomb brum brum this isn’t a- this is his old car, the workman’s old car.
33 A: O:h ok.=
34 CJ: =it- he's buying this car.
35 A: Oh he’s gonna (buy that new car. )
36 [((CJ puts down car))]
37 (2.0)/(CJ turns his attention back to the truck and makes it
In excerpt (25), the protagonist in CJ’s story is described as a ‘workman’ in line 35, however, he may not have envisaged him as such at the beginning of this play sequence. CJ has, however, consistently referred to the protagonist in this play scenario as a ‘man’ (line 1) or a ‘he’ (lines 19, 27, 31 and 37).

In the first part of this play, the protagonist has been digging multiple holes. CJ then extends, or alters the storyline to building a ‘gate’ in a circle, which he expresses verbally and non-verbally in lines 19-22. In line 23, A demonstrates her understanding of this new play scenario with the change-of-state token ‘oh’, demonstrating that the adult’s understanding of the play has altered (Heritage, 1984a), and accepts it with the receipt token ‘ok’ (Beach, 1993), spoken with falling intonation. With these contributions, A displays alignment with the direction of the play. Over the next six seconds CJ plays with the truck (lines 24-26), then appears to lose interest in it. This is evidenced by his physical orientation away from the truck and towards the toy car, while he produces the turn ‘he’s gonna buy a new car’. The adult responds to this turn with a PMY. While CJ’s turn appears to be clearly spoken and related to the play, the shift between the physical orientation from the truck to the car could make the referring expression ‘he’ confusing in this context. This leads to a sequence where CJ eventually expands on the scenario clarifying that the truck is the protagonist’s old car and the toy car is the new car the ‘workman’ is going to buy, indicating that he felt the topic required further expansion.

So far I have considered examples which contain potentially problematic expressions referring to a person, animal or thing that is unclear or underspecified. The following three examples include problematic referring expressions but more specifically relate to problems with the underspecified use of the demonstrative articles that and this. In all three excerpts the terms are used in situations where there are multiple possible referents within the given context. Excerpt (26) occurs during the WPPSI-III, vocabulary subtest, and was also discussed at excerpt (12), as a demonstration of activity disalignment. The child, JW, has just finished providing an answer to the question ‘what is a castle’, when A asks the test question, ‘what does glow mean?’ in line 16.

(26) ID 613: 51-JW.22:06 (TD: 4:0) – abridged
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. A is completely off-camera.
16 A: =.hh what does glo:w mean.
17 JW: aw:: that’s for Shrek: (0.2) Shrek is a ogre.
18 -> A: ye(h)ah?
19 JW: °mm.°
20 (0.7)
21 A: .hh what does polite mean.
22 (0.3)
23 JW: a light¿
As discussed previously, JW’s response, ‘aw that’s for Shrek’, to the test question asking to define ‘glow’ is sequentially disaligned from the adult’s perspective. The confidence with which the child quickly produces this response suggests that there is a link for the child, either because the word ‘glow’ is semantically linked to the movie or character Shrek in some way, or because he has a misheard the word ‘glow’ to be another word which is semantically linked with the movie or character Shrek in some way. However, adding to A’s likely inability to understand this turn is JW’s use of a vague referring expression ‘that’. The demonstrative ‘that’ appears to refer back to the word ‘glow’ in A’s question in line 16. However, whether this is intended to refer to the word ‘glow’ from JW’s perspective is unclear.

The following excerpt, (27), was also discussed as an example of activity disalignment at excerpt (13). Similarly to excerpt (26), excerpt (27) also occurs in the WPPSI-III, vocabulary subtest, and demonstrates asymmetrical epistemic status between the participants with regards to a cultural reference the child, CJ, is attempting to make.

(27) ID 602: 4-CJ. 1:43:49 (TD: 5;7) – abridged
WPPSI-III – vocabulary subtest. Participants are sitting at table, facing one another.
7  A:  do [you know what courage means?  (0.4) ]
8  [(CJ shakes his head multiple times)]
9  no that's a tricky one.
10  CJ: [courage? ]
11  [[[CJ looks towards A]]]
12  A:  yeah.
13  (1.7)
14  CJ:  that means courage >the (courage)< dog.
15  A:  ye::ah.
16  CJ:  (there–) ‘cause I watch that
17  ->  A:  ye(hh)ah?
18  (0.4)
19  CJ:  tsk and when there’s (.). monsters,
20  (0.5)
21  A:  [ye:ah, ]
22  CJ:  [courage] goes [AR:::GH]
23  [[[CJ stands up and throws his arms up in
24  the air]]]

As previously discussed, this excerpt shows the child, CJ, sharing his knowledge about the children’s television program Courage the cowardly dog. However, during this exchange A gives no overt indication that she understands what CJ is referencing. In the turn preceding A’s production of a PMY (line 16), CJ uses the term ‘that’ in the turn “’cause I watch that’ to refer to the television program, which he has previously called by the incorrect name ‘Courage the (courage) dog’. With A’s demonstrated lack of knowledge about the television program in the following lines (15–24), this referring expression is likely to be insufficient for A to make sense of CJ’s contribution and in the
absence of another reference she may consider ‘that’ in line 16 to be referring to the word ‘courage’, which is the target word for which she is attempting to elicit a definition. If this was the case, she would find CJ’s expansion on the topic in line 16 especially confusing as the verb ‘to watch’ is a word not easily associated with an abstract noun such as ‘courage’.

The following excerpt, (28), shows another underspecified contribution from the same child, JW, which was also discussed at (11) as demonstrating activity disalignment. This takes place during the WPPSI-III, object assembly subtest, and JW is completing a puzzle of a cow. He has his head down and is consistently working on completing the puzzle in line 8.

(28) ID 611: 51-JW. 14:24 (TD: 4;0) – abridged
WPPSI-III – object assembly subtest. Participants are sitting at table, facing one another. JW has his head down doing a puzzle of a cow for the most part of this.
6   tsk now [the:se (0.5) make (0.2) a co:w, ((beep beep))  ]
7   [((A places puzzle pieces face down on the table))]
8   (14.0)/((JW putting together puzzle of the cow))
9   JW: hey (mum) I’ll make this on (.) on the TV at my home.
10  -> A: ye(hh)ah?
11  JW: *mm*
12  (2.8)
13  JW: it’s a long way away isn’t it.
14  A: it is isn’t it

As discussed previously, the turn preceding the PMY in line 9, appears to be disaligned with the task activity taking place. In addition to this, JW’s use of the word ‘this’ is an unclear referring expression. While JW does look up at A when he produces the word ‘this’, and only looks at A at this time, the demonstrative is not accompanied by any deictic gestures to help disambiguate the term.

Contextually it appears that JW is referring to the puzzle, however, this interpretation renders the turn semantically nonsensical. Making a puzzle on the television at home does not make sense and suggests that the problem with this turn may be the word ‘this’, which JW could be using to refer to something else. For example, he could be referring to the fact that he is being filmed which may later be played on his television at home, like a home video, in which case ‘this’ could refer to the activity that the participants are performing. Alternatively the confusion could also be due to an incorrect lexeme where the word ‘TV’ has been chosen in error instead of a more relevant lexeme, such as ‘table’, or he could be trying to convey that he will take the puzzle home and put the puzzle on top of the TV to complete it.

With so many options for the potential source of confusion in this turn, it is difficult to categorise this definitively as one source of trouble rather than another, based just on the evidence within this excerpt. However, what is clear is that it contains difficulties related to recipient design of turns and
clearly specifying a contribution to the talk. From A’s perspective, the turn is unclear within the interactional context, and she responds to it by producing a PMY.

The lack of specification in excerpts (27) and (28) is similar to that demonstrated in excerpts (24), (25) and (26). In (24) JW used ‘it’ to refer to an illustration on his shoe, after the adult used ‘it’ to refer to a generic shoe, in (25) CJ used ‘he’ which could potentially refer back to two different protagonists and in (26) JW used ‘that’ to refer back to ‘glow’ when it is unclear what this refers to from the child’s perspective. It seems that these excerpts demonstrate the layers of complexity in these interactions where the child produces a sequentially inapposite turn which additionally contains a vague, ambiguous or unclear referring expression. These factors add to the adult’s inability to contextualise and make sense of the response. There is again evidence here that the more factors which potentially contribute to a breakdown of intersubjectivity there are present in any turn, the more likely it is that there will be a threat to intersubjectivity and a response will be produced by the other participant to attempt to address this.

Many of the excerpts examined in this section were also discussed in section 6.3.1.2 as instances of sequentially inapposite turns. While Drew (1997) characterises an unmarked topic shift as leading to a sequentially inapposite turn from the other’s perspective, unclear referring expressions within the turn may also contribute to the speaker’s inability to understand the relevance of the prior turn. These are both issues related to recipient design on the part of the speaker. Thus this may be more frequent in speakers with lower language competency, such as child speakers or those with communicative impairments, such as ASD.

In the following section the turns preceding the adult’s production of a PMY in interactions involving children with ASD are examined. I use the same categories used in section 5.3.1 to organise the discussion.

6.3.2 Analysing the turns prior to PMY in interactions involving children with ASD

As previously outlined, the interactions involving children with ASD include 12 instances where the adult produces a PMY. This is fewer than for the interactions involving TD children. In this section, I examine the same factors which can potentially lead to misunderstandings in interaction. These are:

1. Mishearing which are further categorised as excerpts which show evidence of a lack of orientation and those that have a presence of overlap;
2. Inapposite turns which are further categorised as those which were due to the child trying to ‘feel out’ the task demands, and those where there was evidence of disalignment between pursued actions between participants; and

3. Misspeaking on the part of the child which are further categorised as those exhibiting untranscribable talk and those containing unclear referring expressions.

As with interactions involving TD children, the interactions involving children with ASD also contain cases where multiple factors which could potentially contribute to a breakdown in intersubjectivity occurred in the turn preceding the adult’s production of a PMY. Thus, some excerpts are discussed in more than one section and this is mentioned when it occurs.

6.3.2.1 PMY produced after mishearing

In chapter 5 examining OCRI in interactions involving children with ASD I found four examples of mishearing in the turn preceding an OCRI. These included two excerpts where mishearing was due to a lack of orientation and two which included the presence of overlap in the trouble source turn. However, evidence of mishearing was rare in the turn preceding a PMY in the interactions involving TD children. No excerpts were identified demonstrating a lack of orientation and while there were excerpts with overlap in the turn preceding a PMY, in these instances, overlap was brief and each turn additionally included other features which appeared to represent a greater threat to the maintenance of intersubjectivity. Turning to instances of PMY in interactions involving children with ASD, I found four excerpts showing evidence of a lack of orientation and only one excerpt containing overlap.

6.3.2.1.1 A lack of orientation

In interactions involving children with ASD, excerpts demonstrating a lack of orientation by the adult in the turn preceding a PMY were especially evident when the PMY was produced during a transition period. This included transitioning between tasks, which could involve a move from the table to the floor or vice versa, or transition in or out of the room due to the beginning or end of a break. No excerpts demonstrating a lack of orientation in the turn preceding a PMY were identified in interactions with TD children. However, there were four identified in interactions involving children with ASD.

The following excerpt, (29), occurs early in the testing session at a transition point where the participants have just completed the WPPSI-III, object assembly subtest. Both participants are seated
at the table and only the adult’s back is visible on the video recording. She is writing down notes in her notebook when the child, FM, suggests that he get a new toy in line 8.

(29) ID 624: 26-FM. 23:20 (ASD: 6;10)

Transition from the WPPSI-III - object assembly subtest to the block design subtest. FM is sitting at the table to begin with but leaves in line 11. A is on camera with her back to the view and she is writing things in her notebook. She doesn’t appear to be paying attention to FM until line 20.

1  ((beep))
2  A:  ve(h)ry good. you did- that was the last one and you did it really really well=
3  FM:  =four. twenty four seconds is the biggest number.
4  A:  yeah that was really good you should be very proud that was very very good working [well done]
5  FM:  [ X X X ] that but that (wasn’t very much) X (. I wanna go get a new toy:.
6  A:  yeah you can go and choose another toy fr’m outside if you’d like;
7  (3.3)/((FM walks off-camera, sound of door opening))
8  FM:  ((emphatic))and this is going to be the hardest (. one you’re never going (to do)).
9  -> A:  ye(hh)ah?
10  FM:  ((emphatic))can we (make) a ↑cubby house.
11  A:  huh huh
12  FM:  you need to help me carry it.
13  (0.9)
14  (beep))
15  A:  ye- oh- ah you [want me to help you carry it] (((A stops writing and gets up and walks towards FM, so is now also off-camera))]
16  (.)
17  FM:  yeah the cubby house. I think I’ll put this somewhere else.
18  (1.8)
19  A:  we could take that back out ↑here if you like.
20  (1.7)
21  FM:  hey (. why are there other tables then on the (. white mat.
22  A:  because we’re gonna just do some playing ((trails off))

After FM suggests he gets a new toy, A agrees to this in lines 9-10, suggesting that the child choose a toy ‘from outside’. It is unclear to me whether the adult is referring to the hallway or another room in the laboratory when she uses the term ‘outside’. FM appears to accept A’s offer when he walks off camera in line 11 and the heavy laboratory door is heard opening. FM appears to leave the testing room and as a result of this his turns in lines 12-13 and 15 sound far away from the microphone, however the talk is still easy to hear and transcribe. In lines 12-13 and 15, FM uses an emphatic speaking voice which sounds something like a circus ringmaster or an announcement. This marks these turns as ‘in play’. After the first ‘in play’ turn where FM announces, ‘and this is going to be the hardest one you’re never going (to do)’, A produces a PMY.

This excerpt is categorised as an instance of lack of orientation due to the child not being in the room when the turn preceding the PMY is produced. However, the unusual phrasing in lines 12-13 and the unusual use of the word ‘never’ are likely to contribute to the adult’s production of a PMY in
line 14. This turn appears to be a pre-announcement to introducing a play concept, however, the use of the word ‘and’ would usually link the phrase to preceding turns at talk which does not seem to be the case in this turn.

Excerpt (30) is from the same testing session and takes place approximately three minutes after excerpt (29). In this excerpt, FM and A are returning to the testing room after they have spent time outside the room on a break. During this excerpt, the camera is filming the play table where the next task is due to take place and where the adult positions herself on re-entering the room. FM remains completely off place until line 25 when he joins the adult at the table.

(30) ID 625: 26-FM. 26:07 (ASD: 6;10)

Transition back to the room. The camera angle is pointed at the table where the next task is planned to take place, however both participants are off camera when this excerpt begins. When the excerpt begins FM is distracted by some food left in the room and A is encouraging him to throw it in the rubbish bin. A comes on camera in line 10 and FM comes on camera in line 25.

1   A:   might be a good idea if we pop those in the bin cos I think
2   they're a little bit old and a little bit dirty. (.) there's a
3   bin behind here.
4   FM:   when (0.4) .h who was- (. ) who had- (. ) who bringed this
5   container when- when- when you k- who bring this container.
6   (1.0)
7   FM:   how many days was it.
8   (0.3)
9   A:   oh I think it was- I [think that container’s been there=
10     (((A sits at the table and begins
11     preparing the next task]
12     A:   =a long ↑time.
13     FM:   I think you have- I think it’s- you’ll play- I think you-
14     you in- in the olden days you were playing with it.
15     A:   ye:ah a long time ago. now I’ve got something else to show you,
16     FM:   now will we play something on (that/mat).
17     A:   yeah we’re going to in a minute.
18     we've got some good toys to play with on the mat.
19     (1.6)
20     FM:   and I WOnder Why you have (. ) THIS under the mat.
21     --> A:   ye(hh)ah? huh huh
22     (1.5)
23     A:   have a look at these shapes that I’ve got he[re, ]
24     FM:   (((si)gh))
25     (1.7)/((FM comes over to the table and sits down))
26     A:   no::w
27     (1.2)
28     tsk .hh have a look at the shapes up at the top,

On returning to the room, FM is initially distracted by some food left in the room, then a ‘container’ which may be the rubbish bin (lines 4-7 and 13-14) and then the play mat as demonstrated in line 16 when he asks, ‘now will we play something on (that/mat)’. The adult responds to this saying they will play there ‘in a minute’ and they have ‘some good toys to play with’. After a pause of 1.6 seconds, FM produced the turn preceding the PMY, ‘and I WOnder Why you have (. ) THIS under the mat’ with
the words ‘wonder’ and ‘this’ emphasised by use of louder speech. Unfortunately FM is completely off camera when he produces this turn, so it is unclear what he is referring to. However, I suspect it is an extra blanket which is usually placed under a sheet which constitutes the mat on the floor. A is setting up the next activity on the table when FM produces this turn so her body is not orienting towards him, however her head is off camera so it is possible that she is looking at him.

Another example demonstrating a lack of orientation during a transition back into the room after a break is shown below at excerpt (31). The child, LL, enters the room first, with the adult following.

(31) ID 623: 22-LL. 1:19:15 (ASD: 5;7)
Transition back to the room after a break. A is off-camera for the duration of this excerpt, but LL is walking towards the table.
1  LL: >huh [huh<]
2  A: [ I ]’ve got some different things in here, _
3  LL: >LOOK AT [ THAT-< ]
4  [(L points to something off camera to her right)]
5  LL: IT LOOKS LIKE (.) [ FOOTBOO. ]
6  [(banging noise of door closing)]
7  LL: it’s (.) Collingwood.
8  (0.2)
9  -> A: ye(h)ah?
10 (.)/(LL points again to the right, off camera))
11  A: O(hh)H I se- the football >huh huh<=
12  LL: =we::h
13  A: [almost ]
14  LL: [when my]- when my (dad is/daddy’s) little, (. ) mah- wh- When
15  my (dad is/daddy’s) (0.7) young, he (got) to play football.
16  A: oh wow.
17  (1.8)/(A prepares next tasks))

In this excerpt, LL enters the room laughing and loudly and quickly exclaims ‘look at that’ in line 3 followed by ‘it looks like footboo’. During this turn she additionally includes a hand gesture pointing to something off-camera. While it is unclear what LL is referring to when she says this and points to something, due to it being out of the camera’s view, it is likely to be a children’s poster of a football which was in the laboratory and may have been on the wall of the testing room when this testing session took place. As they are re-entering the room, A is trailing behind LL, so A has likely missed LL’s hand gesture pointing to the poster which would clarify her contribution in lines 3-7.

The following excerpt, (32), occurs earlier in the same testing session during the WPPSI-III, vocabulary subtest. Both participants are sitting at the table and they are midway through the subtest. While this excerpt is not an example of a transition point in the session, the adult appears to be orienting to her testing notes and LL calls her out for not paying enough attention.

(32) ID 622: 22-LL. 24:48 (ASD: 5;7)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another.
1  A: now tsk could you tell me what is an umbrella.
2  LL: umbrella (0.5) um you use it for y- rain;
3   A:  good.
4   LL:  and [peep- when it’s raining you can pla:y in the rain with=
5                    [((LL leans forward over the table and begins to slowly
6                     pick up the chair by her legs))]
7   LL:  =your umbrella?
8   A:  goo:d.
9   LL:  [I’m doing tri:cks:.]
10  [((LL is leaning forward over the table and wiggles the chair
11     slightly from side to side))]
12  (0.4)
13  --> A:  ye(hh)ah?
14  (0.8)
15  LL:  you didn’t look at me.
16  (0.6)--
17  A:  **°°,s see°°
18  LL:  watch.
19  (0.8)/((LL moves the chair from side to side with its legs off
20     the ground))
21  A:  OH::::: huh huh
22  (0.9)/ (LL audibly panting))
23  A:  now could you tell me (. ) what is a bi:cyle.
24  LL:  bicycle (0.3) you ride on it.

This excerpt begins with A asking for a definition of an ‘umbrella’ and LL give a response to this in
lines 2, 4 and 7. After she completes this response, LL makes a comment, ’I’m doing tricks’ (line 9).
This is a metacomment focused on the action of swinging on her chair (lines 5-6 and 10-11) rather
than the task demands of answering the definitional question which the adult is pursuing. While the
camera angle only shows the adult’s back, the visual component of this excerpt suggests that the
adult is taking notes on her testing page rather than orienting towards LL. Further, there is strong
evidence from LL that she does not feel that A is orienting to her actions, when she directly accuses
her of not looking in line 15.

Excerpt (32) is an instance where the child says something that is unrelated to the task the adult is
administering, while the three excerpts prior to this all occur during transitions either in or out of the
testing room for a break. All of these show signs of A’s lack of orientation towards the child in the
turn preceding the PMY. This is in contrast to the analysis of the turn prior to a PMY in interactions
involving TD children where this factor was not identified. However, it is notable that all of these
excerpts also have other attributes which may make them potentially difficult to understand, and
could potentially contribute to the adult’s production of PMY.

6.3.2.1.2 The presence of overlap

In chapter 5, I found that many of the OCRI responses occurred after a turn involving overlap.
However, when analysing the environment preceding PMY in interactions involving TD children, I
found that while instances of overlap did occur, these did not appear to be extensive enough to
contribute to a breakdown of intersubjectivity. In line with this finding, in the interactions involving children with ASD, there were two excerpts with minor instances of overlap in the turn preceding a PMY. Both these instances contain the child’s speech overlapping with non-speech noises in the room. These excerpts are presented at (33) and (34) in abridged format. Excerpt (33) also appeared at (31) as an excerpt demonstrating a lack of orientation in the turn preceding a PMY.

(33) ID 623: 22-LL. 1:19:15 (ASD: 5;7) – abridged
Transition back to the room after a break. A is off-camera for the duration of this excerpt, but LL is walking towards the table.

2 A: [ I ]’ve got some different things in here,

3 LL: >LOOK AT [ THAT-< ]

4 [([L points to something off camera to her right))]

5 LL: IT LOOKS LIKE (. ) [ FOOTBOO. ]

6 [((banging noise of door closing))]

7 LL: it’s (. ) Collingwood.

8 (0.2)

9 -> A: ye(h)ah?

(34) ID 617: 14-MT. 1:16:38 (ASD: 6;9) – abridged
Generation of object substitutions task, with cardboard tube as stimulus object. Participants are sitting on the mat, facing one another.

12 MT: it can be

13 (1.1)/((MT holds the tube up to his mouth))

14 it can be

15 (. )/((bangs the tube against the floor twice))

16 can [hit heads

17 [([MT bangs the tube against his head twice)])

18 -> A: ye(hh)ah?

In excerpt (33), part of LL’s turn preceding a PMY (line 5) overlaps with the sound of the door closing and in excerpt (34), the turn preceding a PMY (line 16) overlaps with the noise of MT hitting a cardboard tube against his head. Neither of these sounds were loud compared to the speech with which the noise overlapped and I found both turns spoken in overlap easy to hear and transcribe.

The finding that overlap which can challenge intersubjectivity does not occur before a PMY from both the interactions involving TD children and children with ASD supports the assumption that there is a weak relationship between the production of a PMY and the adult not having heard the prior turn. This is a key difference between the organisation of OCRI and PMY within this data set. If the PMY regularly occurred after an overlap, we would expect that it would systematically occur after turns which the adult failed to hear. It could be the case that a turn demonstrating a problem with hearing may be more likely to elicit a repair initiation device, such as OCRI, rather than a more subtle marker of confusion, such as PMY. This is because it may be more acceptable to publically orient to a participant’s own failing to have missed a turn, rather than to publically orient to a turn which has been misunderstood due to a failing of the other, such as a misspeaking.
6.3.2.2 PMY produced after sequentially inapposite turns

In chapter 5, sequentially inapposite turns were found to occur often in turns preceding OCRI, which supported previous work on environments leading to OCRI by Drew (1997). Specifically, in the interactions involving children with ASD, nine out of 12 excerpts demonstrated sequentially inapposite turns preceding an OCRI device. However, when this feature was explored in turns preceding PMY in interactions involving TD children (section 6.3.1.2), sequentially inapposite turns were not found to be a major contributing factor. When further divided into the two categories examined in chapter 5, only one excerpt was found to demonstrate a lack of understanding regarding the task demands and three were found to show evidence of activity disalignment.

In analysing the turns preceding the adult’s production of PMY in interactions involving children with ASD, a similar finding emerges. Examination of these interactions found no evidence of the children in these excerpts demonstrating a lack of understanding of the task demands prior to the adult’s production of a PMY. However, there was evidence of the children showing activity disalignment, with six excerpts discussed in section 6.3.2.2.1.

6.3.2.2.1 Activity disalignment

There was evidence of activity disalignment in six excerpts from interactions involving children with ASD. These include turns which demonstrate disalignment between participants’ pursued activities, including those which are influenced by the task demands and those which are external to them.

Excerpt (35) occurs late in the testing session in the generation of object substitutions task and was also briefly discussed at (34) as an excerpt demonstrating overlap. In this task, the aim is to pretend an object is other things and in this instance the stimulus object is a cardboard tube. This is the fourth time the child, MT, has completed the task using different stimulus objects and he has already demonstrated correct understanding of the task demands.

(35) ID 617: 14-MT. 1:16:38 (ASD: 6;9)
Generation of object substitutions task, with cardboard tube as stimulus object. Participants are sitting on the mat, facing one another.

1  A:  now we’ve just got one more object,
2   (1.6)/{(A rummaging through bag of task resources)}
3  A:  tsk (0.8) now (1.3) what could this be, it could be::
4   [(. a s::nake. (0.4)
5   )]
6   (((A makes the tube slither along the ground)))
7   (0.2)
8  MT:  ((smilie voice)) no:::.  
9  A:  huh huh [>(why’s) that.<]
10 MT:  [ I hate ] snakes.=
11  A:  =oh huh you hate snakes then what else could it be.  
12  (1.3)
13 MT:  it can be
MT begins the task in lines 12 and 14 demonstrating his understanding of the task objective where the syntactic construction of these turns (‘it can be’) shows he is attempting to think of something the object can be. However, in line 16 he abandons this and instead states something the tube can do (‘hit heads’). This turn is followed by a PMY produced by A. While stating what an object can do appears to be a small departure from the aim of the task, the adult cannot score this as an appropriate response to the question, ‘what can this be?’ This is evidenced in lines 21 and 29, where she repeats the task question, ‘what else could it/that be’.

The following excerpt, (36), shows an instance where the child’s answer to the stimulus question in the WPPSI-III, vocabulary subtest, is disaligned with the task demands. Similarly to excerpt (35), this excerpt occurs a fair way into the task and the child has already demonstrated correct understanding of the task requirements.

(36) ID 627: 29-MV. 28:46 (ASD: 4;3)
WPPSI-III - vocabulary subtest. Participants are sitting at the table, facing one another.

1  A: what is a castle.
2  MV: di di (.) dā da da:
3   A: huh
4  MV: a XX a castle a (CRoss) XX
5     (0.7)
6  A: yeah [good.]
7  MV: [a (ch)rist] castle
8  A: goo:d.
9     (0.4)
10  MV: a (christ) X, window.
11  A: yeah there’s window,
12  MV: a house.
13     (0.2)
14  A: good .h what does glo:w mean.
15     (0.3)
16  MV: <I don’t know> (fish) mm: ((mwah mwah mw[ah ]) ) =
17  -> A: [ye (hh) ah?] =
18  MV: =((mwah mwah mwah))
19     (0.6)
In this excerpt, the child, MV, responds to the question ‘what is a castle’ in lines 2-12. The adult then asks for a definition of the word ‘glow’ in line 14. MV, first slowly responds by saying she lacks the knowledge to provide a response (‘I don’t know’). However, she then immediately produces a word which sounds like ‘fish’ and begins to make kissing or fish noises. The adult could potentially perceive this turn as a candidate response to the question or an unmarked topic change. Either way, it is not a suitable response to gain a score on the task and after this turn, the adult produces a PMY.

The following excerpt, (37), demonstrates an example of disalignment of a slightly different nature. This excerpt shows the child producing a metacomment in the turn preceding the PMY which provides an assessment of his performance on the task rather than contributing to completing the task. This excerpt occurs in the WPPSI-III, vocabulary subtest.

(37) ID 628: 38-PO. 32:21 (ASD: 4:8)
WPPSI-III - vocabulary subtest. This session is recorded in the child’s home. PO is lying on the mat on his stomach with his head in his hands. A is mostly off camera, sitting cross legged, facing PO.

In line 5, the adult produces the test question asking for a definition of the word ‘lollies’. The child, PO, provides an answer to this question, ‘it makes children and babies when they’re hungry’, produced with continuing intonation which suggests he has not yet finished his turn. The adult responds to this with a slightly rising positive evaluation, ‘very good’, in line 8 which is followed by a 3.3 second pause. The response PO provided in line 7 is insufficient as an answer to A’s question in line 5 and A’s rising intonation in her evaluation of the turn, combined with the pause which follows it provides evidence that she expects PO to expand further on this turn. However, after 3.3 seconds PO self-selects as next speaker but rather than expand on his turn in line 7 and provide more detail
to his response to the test question, he provides a metacomment on his own task performance, stating that he is very good at guessing the answers. This turn is disaligned with the task demands and there is evidence that the adult is expecting more information on the answer already provided. Additionally, PO’s intonation in line 7 also seems to suggest that there is more to come. After producing a PMY which is followed by a pause, A progresses the testing by producing the next test question.

There are three excerpts in the interactions involving children with ASD where a topic change occurs in the turn prior to the PMY. They are presented below in abridged format and all have been discussed in section 6.3.2.1 as instances demonstrating mishearing in the turn preceding a PMY.

(38) ID 624: 26-FM. 23:20 (ASD: 6;10) – abridged
Transition from the WPPSI-III object assembly subtest to the block design subtest. FM is sitting at the table to begin with but leaves in line 11. A is on camera with her back to the view and she is writing things in her notebook. She doesn’t appear to be paying attention to FM until line 20.

7 FM: [X X X] that but that (wasn’t very much) I wanna go get a new toy:.
8 A: yeah you can go and choose another toy fr’m outside if
9 you’d like;
10 ((FM walks off-camera, sound of door opening))
11 FM: ((emphatic)) and this is going to be the hardest (.) one you’re never going (to do).
12 -> A: ye(hh)ah?

(39) ID 625: 26-FM. 26:07 (ASD: 6;10) – abridged
Transition back to the room. The camera angle is pointed at the table where the next task is planned to take place, however both participants are off camera when this excerpt begins. When the excerpt begins FM is distracted by some food left in the room and A is encouraging him to throw it in the rubbish bin. A comes on camera in line 10 and FM coomes on camera in line 25.

15 A: ye:ah a long time ago. now I’ve got something else to show you,
16 FM: now will we play something on (that/mat).
17 A: yeah we’re going to in a minute.
18 we’ve got some good toys to play with on the mat.
19 ((1.6))
20 FM: and I WOnder Why you have (..) THIS under the mat.
21 -> A: ye(hh)ah? huh huh

(40) ID 623: 22-LL. 1:19:15 (ASD: 5;7) – abridged
Transition back to the room after a break. A is off-camera for the duration of this excerpt, but LL is walking towards the table.

1 A: [ I ]’ve got some different things in here,
2 LL: >LOOK AT [ THAT<]
3 (((LL points to something off camera to her right)))
4 LL: IT LOOKS LIKE (..) [ FOOTBOO. ]
5 (((banging noise of door closing)))
6 LL: it’s (..) Collingwood.
7 (0.2)
8 -> A: ye(hh)ah?
Excerpts (38), (39) and (40) occur at transition points in the sessions, so are not necessarily disaligned with the formal task demands, however they all show children introducing a new topic prior to a PMY. Excerpts (38) and (39) show the child, FM, demonstrating a turn at talk which is somewhat related to the prior talk. In excerpt (38), FM appears to introduce the next stage of play with a pre-announcement and in excerpt (39) he follows on from talk about the mat, with an observation about the mat. In both excerpts he links his turn preceding a PMY to prior talk with the use of the connecting word ‘and’ which implies these turns are more closely topically linked to the previous talk than they appear to be semantically.

Excerpt (40) does demonstrate a topic change by the child, LL, when she clearly introduces a new topic in line 3. However unlike the excerpts discussed in chapter 5, this is marked as a topic change with the turn beginning with the attention getting device, ‘look at that’ and a deictic gesture pointing to something off camera. As discussed in section 6.3.2.1.1 the demonstrated lack of orientation likely contributes to the adult’s inability to contextualise what the child is referring to.

While each of these three excerpts are not examples showing overt topic changes, each additionally demonstrates turns that are complex and ambiguous which supports findings in section 6.3.1 examining the turn prior to PMY in interactions involving TD children. While sequentially inapposite turns with unmarked topic changes may lead to a production of an OCRI, as demonstrated by Drew (1997) and in Chapter 5 of this thesis, sequentially inapposite turns which additionally include ambiguous referring expressions may lead to this adult producing a PMY, and this is further discussed in section 6.3.2.3.2.

### 6.3.2.3 PMY produced after misspeaking

In line with findings from interactions involving TD children, in the interactions involving children with ASD, I found demonstrations of misspeaking in the talk preceding the PMY to be common. More specifically, as with both OCRI and PMY excerpts in the TD interactions, there were instances of unclear articulation in the child’s preceding talk. I present instances of unclear articulation in interactions involving children with ASD in section 6.3.2.3.1.

#### 6.3.2.3.1 PMY after untranscribable talk

In the interactions involving TD children three excerpts were identified demonstrating untranscribable talk in the turn preceding the PMY. Analysis of the interactions involving children
with ASD produced a similar finding with four excerpts identified demonstrating untranscribable talk in the turn preceding the PMY.

Excerpt (41) occurs very early in the testing session during the block design subtest. The child, MV, has just completed the first task successfully where she has reproduced a design made with blocks, making her blocks look the ‘same’ as the adult’s.

(41) ID 626: 29-MV. 4:24 (ASD: 4;3)
WPPSI-III - block design subtest. Participants are sitting at the table, facing one another.

1 A: that's perfect very good. let's try another. I'm gonna pop
2 (0.7)/{(A is finding the right blocks)}
3 A: a:: [rEd one ]
4 [(A places a red block on the table in front of MV)]
5 (.)
6 A: [and a half red and half white. ]
7 [((A places a red & white block next to the red block on the table)]
8 1.2
9 A: have a go at making that one.
10 {(beep beep)}
11 (11.0)/{(MV arranges her set of blocks)}
12 MV: {same?}
13 A: YEA:H VERY good. well well done that was excellent.
14 MV: see XXX
15 -> A: ye(h)ah?
16 (1.2)
17 A: (an idea?)
18 MV: throw it
19 A: ah you throw it
20 (1.5)
21 A: now this time tsk I'm going to put the blocks together to make
22 this design,

In lines 1-10, the adult sets up the task for MV to complete. When MV finishes this task in lines 12-13 she receives emphatic positive feedback from A in line 14. Then MV responds to this by producing a turn starting with ‘see’ followed by three unintelligible syllables. Myself and at least one other transcriber could not decipher this turn. A responds to this by producing a PMY. This is followed by a 1.2 second pause and then A produces three syllables with rising intonation for which my best guess transcription is ‘an idea’. This turn appears to be a candidate repair and elicits more talk from the child who suggests they throw the blocks. It is difficult to know whether the turns by MV and A in lines 18 and 19 (‘an idea’ and ‘throw it’) are attempts at repair of line 15, or whether they change the topic.

The following excerpt, (42), is another example where speech which is difficult to transcribe occurs in the turn preceding the PMY. This excerpt occurs in the WPPSI-III, object assembly subtest, late in this child’s testing session. The child has just completed a puzzle of a bird.
WPPSI-III - object assembly subtest. Participants are sitting at table, facing one another. GM has just made a puzzle of a bird.

1 GM: twee tweet (. ) [ tweet ]
2 A: [ that was ] great,
3 GM: [ tweet ] tweet tweet [ tweet ]
4 A: [ no: w , ] [ w- make- ] make the bird fly over here, 'cause I’ve got another [ one. (. ) now these make a clo:ck. ]
5 [ (A places puzzle pieces on the table in front of GM )]
6 A: put them together as fast as you can.
7 (9.4)
8 ((beep))
9 A: wo::w. that wa:s fast GM. very very good, that’s a nice big clock well done.
10 GM: <o::n::e>
11 (1.3)
12 GM: (‘s marks nock). (marks nock)
13 -> A: ye(hh)ah?
14 GM: ma- (. ) big hand on O:N:e.
15 A: ye(hh)ah, the big hands on the one. very clever.
16 (1.0)
17 A: excellent.
18 GM: making (. ) a XXX. (. ) .hh and you XX that’s not working.
19 (0.8)
20 A: yeah, the big hand is almost on the one. well done. .hh have a [ look at this one. ]
21 [ (A places next pieces of puzzle out)]
22 A: wooo:h, [ I’ll pop these over there. ]
23[((A slides clock puzzle pieces to the side)]
24 these make a ca::r.

A introduces the next task, which is a puzzle of a clock, in lines 5-7 and produces a request that he complete this in line 8. GM completes the clock puzzle quickly in lines 9-10 which elicits positive feedback from A in lines 11-12. After this, GM introduces a new topic of sorts which appears to be related to the clock in front of him which he is orienting towards, looking pleased with the puzzle he has just completed. GM has significant articulatory difficulties and his turn in lines 13-15 is difficult to understand. He begins by saying the word ‘one’ which is lengthened, perhaps for emphasis, but it seems as if it is difficult for him to express. He then goes on to say something that sounds like ‘s marks nock’, which sounds as if it could be an attempt to refer to the clock, perhaps meaning ‘my clock’ or ‘one o clock’. This is speculation, however it does seem as if the two syllables after this in line 15 (‘(marks nock’) are phonetically and intonationally a partial repetition of the preceding talk. In other words, this appears to be a repetition by the child or a self-repair within line 15. It is after this turn that the adult produces a PMY. At this stage, it is unlikely that the talk has been understood by the adult, as my ability to understand the reference to the clock is influenced by the talk that occurs later, as well as multiple listens.
Excerpt (43) is another example where my ability to transcribe the turn preceding the PMY was assisted by later talk by the child. This excerpt occurs during the WPPSI-III, vocabulary subtest and is given here in abridged format as it has already been discussed at (36).

(43) ID 627: 29-MV. 28:46 (ASD: 4;3) – abridged
WPPSI-III - vocabulary subtest. Participants are sitting at the table, facing one another.
14   A:   good .h what does glo:w mean.
15   (0.3)
16   MV: <I don't know> (fish) mm: ((mwah mwah mw[ah ] ) )  |=
17   -> A:   ye(hh)ah?=)
18   MV:   =(mwah mwah mwah))
19   (0.6)
21   (0.2)
22   MV:   a FIsh um [((mwah mwah mwah))]
23   A:   [fish oh:: I see. ] .h goo:::d.

In line 16, MV appears to claim lack of knowledge to answer the question and then says a word for which my best guess is ‘fish’ and makes noises which could be attributed to a fish. This turn is responded to by A with a PMY in line 17. MV’s production of the word ‘fish’ in line 16 is unclear. I have included it as untranscribable talk as my ability to propose a ‘best guess’ transcription is informed by the discussion which follows it in lines 22-23, where both participants clearly articulate the word ‘fish’. Thus, from A’s perspective, at line 17 she is unlikely to have understood this response by MV as ‘fish’.

The following excerpt, (44), is the final example from the interactions involving children with ASD of inarticulate speech occurring in the turn preceding a PMY produced by the adult. This turn occurs about 40 minutes into the testing session during the WPPSI-III, vocabulary subtest. The questions asked of the child are getting progressively more challenging and she is having increasing difficulty answering them.

(44) ID 619: 19-CT. 38:01 (ASD: 4;8)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another.
1   A:   now what is (.) a he:ro.
2   (0.7)
3   CT:   [hero. hh]
4   [((CT stands up and puts her right arm out towards A with fingers pinched together))]
5   A:   °yeah°,
6   (0.7)
7   CT:   [ I can't   ]
8   [((CT attempts to pull up both her sleeves))]
9   [(that’s grey).]
10   [((CT puts her right arm out again with fingers pinched, then forms a fist))]
11   -> A:   ye:(h)ah?
12   CT:   [hh .hh]
In line 1, A asks the question, ‘what is a hero’ and after a pause CT repeats the word which requires a definition, ‘hero’ and produces an outbreath. A’s next turn is a continuer produced quietly and after a pause it sounds as if CT says ‘I can’t’ as she is pulling up her jumper sleeves. This turn could be in reference to the difficulty CT has pulling up her sleeves, as this task does appear to take some effort, however, it could equally refer to her difficulty in providing a definition for the word ‘hero’. CT then produces a turn which is difficult to hear but my best guess is ‘that’s grey’, which A then follows with a PMY.

The four excerpts examined in this section all contain untranscribable talk in the turn preceding a PMY. This makes analysis of these excerpts difficult, but also provides good evidence that the adult in these interactions likely has difficulty understanding the turn preceding her production of a PMY.

6.3.2.3.2 PMY after unclear referring expressions

In section 6.3.1.3.2, I discussed excerpts in the interactions involving TD children which contained unclear referring expressions in the turn preceding a PMY. I found that these were fairly frequent with 10 excerpts demonstrating this. In the interactions involving children with ASD, I also found this to be a common occurrence with six excerpts demonstrating some form of unclear referring expression in the turn preceding a PMY.

Excerpt (45) is an example of a problematic referring expression in a turn prior to a PMY produced by the adult. This excerpt was also discussed as a lack of orientation at (31), as it occurs following a transition back into the testing room.

(45) ID 623: 22-LL 1:19:15 (ASD: 5;7)
Transition back to the room after a break. A is off-camera for the duration of this excerpt, but LL is walking towards the table.

1 LL: >huh [huh<]
2 A: [ I ]’ve got some different things in here,
3 LL: >LOOK AT [ THAT<
4 ((LL points to something off camera to her right))
5 LL: IT LOOKS LIKE (.). [ FOOTBOO.]
6 (((banging noise of door closing)))
7 LL: it’s (.). Collingwood.
8 (0.2)
9 -> A: ye(h)ah?
10 (.)/((LL points again to the right, off camera))
11 A: O(hh)H I se- the football >huh huh<=
In this excerpt, LL, refers to what I infer is a picture of a football on the wall of the testing room in lines 3-7. In line 7 she specifically refers to it as ‘Collingwood’ in the turn preceding the adult’s production of a PMY. This is potentially a confusing reference from the adult’s perspective. Australian Football League (AFL) is a very popular sport in Melbourne, Australia, and one of the more renowned teams is Collingwood. However, Collingwood is also a suburb of Melbourne, and arguably for someone who does not follow AFL, this is the primary meaning of the word ‘Collingwood’. The use of the word ‘it’ in line 7 refers back to line 3 where the object is referred to as ‘that’, along with a pointing gesture. As the adult is not orienting towards LL at this point in the interaction, the missed non-verbal pointing gesture combined with the unclear referring expressions used in lines 3-7 (‘that’, ‘it’ and ‘it’) have the potential to make this turn problematic for A to understand.

The following excerpt, (46), is another case where the child uses the term ‘it’ in a way that has unclear reference. This occurs at the beginning of the free play session, which is the only session where the interaction is child-led, and the child, SI, is taking some time to settle into the session. With the exception of walking across the view of the camera in line 17, SI is off-camera for most of this excerpt, so for the majority of this excerpt the recording only shows A sitting on the play mat. However, A is consistently looking in SI’s direction, so understanding does not appear to be problematic due to a lack of orientation from the adult.

(46) ID 618: 15-SI. 57:42 (ASD: 4;11)
Free play session. Camera angle is pointed at the mat, however only adult is visible seated on the mat. SI is only briefly visible when she walks across the camera view in line 17.

1 SI: ((cough cough [cough]))
2 A: [just ] sit down here for a little bit.
3 SI: I’ll just um (.) look in the box.
4 (1.4)
5 A: yeah those things are- we've finished playing with those things (.) so we can put them away.
6 (0.9)
7 A: so we can pop the lid on there,
8 SI: X
9 A: yeah,
10 SI: X these are very good things
11 A: they are. now that's- ooh can't play with a plastic bag,
12 we're going to pop these things (.) just over here 'cause we're just going to play with these toys for a little bit longer,=
13 SI: ={you know um you know um .hh 'scuse me ((A’s name))¿}
14 [ (( SI walks across the room )) ]
15 17 SI: you- you know (that)¿
In line 16, SI begins her turn disfluently but goes on to produce an attention getting device (‘excuse me’) and uses the adult’s first name as a term of address. She follows this up with a turn which looks to be a pre-announcement (‘you know (that)?’), which also seems to be a repair of the beginning of her turn in line 16. The adult responds to this with a continuers in line 19, which gives SI the opportunity to provide further talk. SI follows this by saying ‘when it goes brum brum brum’, which is the turn directly preceding A’s production of a PMY in line 21. Analysis of this turn is difficult as the adult in the interaction presumably has access to visual aspects of the interactions not shown on camera which may help her to understand SI’s talk from lines 16 to 18. However, based solely on the verbal interaction, it is difficult to know whether the use of the word ‘that’ in line 18 is referring to an object or is being used in an abstract sense as a part of a pre-announcement. If the former is the case, then the ‘that’ in line 18 and the ‘it’ in line 20 presumably refer to the same object, which is likely to be a toy truck used in the free play sessions. If the latter is the case, and line 18 is a pre-announcement, ‘what’ might be a more typical word to use here rather than ‘that’.

In both excerpts (45) and (46) the children appear to be introducing a new topic. Both children begin by orienting to their talk as new by the use of attention getting devices (‘look at that’ and ‘excuse me ((A’s name))’). However, both children also use non-specific referring expressions, ‘that’ and ‘it’, which makes these difficult turns to understand.

While the use of the word ‘it’ and potentially also ‘that’ was problematic in excerpts (45) and (46), the child’s use of the word ‘this’ is problematic in the following two excerpts, (47) and (48). In both excerpts (47) and (48), the child, FM, is off-camera when he produces the turn preceding the PMY, so it is unknown whether the child used a non-verbal referring gesture to clarify what ‘this’ refers to in lines 12 and 20 respectively. It is also unclear whether A would have seen this gesture if it
occurred as both uses take place in transition periods. These excerpts are presented in abridged form.

(47) ID 624: 26-FM. 23:20 (ASD: 6;10) – abridged
Transition from the WPPSI-III – object assembly subtest to the block design subtest. FM is sitting at the table to begin with but leaves in line 11. A is on camera with her back to the view and she is writing things in her notebook. She doesn’t appear to be paying attention to FM until line 20.

7 FM: [ X X X ] that but that (wasn’t very much) X (. I wanna go get a new toy:. 9 A: yeah you can go and choose another toy fr’m from outside if you’d like;
11 FM: ((emphatic))and this is going to be the hardest (. one you’re never going (to do).
14 -> A: ye(hh)ah?
15 FM: ((emphatic))can we (make) a ↑cubby house.
16 A: huh huh

In excerpt (47), the use of the word ‘this’ in line 12 (‘and this is going to be...’) may not be referring to an object in the play space but could be used in an abstract sense to act as a part of a pre-announcement of the following play. This turn includes an unusual phrase ‘the hardest one you’re never going (to do)’ which likely adds to the turn being potentially difficult to understand.

(48) ID 625: 26-FM. 26:07 (ASD: 6;10)
Transition back to the room. The camera angle is pointed at the table where the next task is planned to take place, however both participants are off camera when this excerpt begins. When the excerpt begins FM is distracted by some food left in the room and A is encouraging him to throw it in the rubbish bin. A comes on camera in line 10 and FM comes on camera in line 25.

16 FM: now will we play something on (that/mat).
18 A: we’ve got some good toys to play with on the mat.
19 (1.6)
20 FM: and I WOnder Why you have (.) THIs under the mat.
21 -> A: ye(hh)ah? huh huh
22 (1.5)
23 have a look at these shapes that I’ve got he[re, ]
24 FM: 

When compared to excerpt (47), in excerpt (48), FM uses the word ‘this’ (line 20) in a more concrete sense, to refer to something in the play space and emphasised by the use of loud speech, adding sentential stress to the word. This is likely to refer to a blanket which was usually placed under the play mat. However, if the adult was not orienting to FM when this turn was produced this is likely a problematic referring expression from A’s perspective.

The following excerpt, (49), was also discussed at (44), as the turn preceding the PMY is difficult to transcribe.
As discussed at (44), it is evident that excerpt (49) involves problems with speaking in line 10 which potentially contribute to the production of a PMY by the adult. However, an additional difficulty is that CT’s turns are fairly minimal, which makes them difficult to contextualise. I had no difficulty transcribing ‘I can’t’ in line 8 but I have difficulty understanding whether CT is referring to her sleeves, which she is attempting to pull up, or providing a reason for a non-response to the test question, ‘what is a hero’. Again, in line 10, if I have transcribed the two syllables correctly as ‘that’s grey’, I am still unsure what she is referring to when she uses the term ‘that’. The under-specification in CT’s turns in lines 8 and 10 potentially makes her conversational contributions difficult for the adult participant to contextualise and thus understand.

Excerpt (50) is an example involving the same child where a turn which includes an unclear referring expression is additionally produced in unclear language. This occurs in the free play session where the child is leading the play.

(50) ID 620: 19-CT. 1:18:36 (ASD: 4;8)
Free play session. Participants are sitting on the mat, facing one another. CT is surrounded by objects and toys. She has a hard plastic plate in her hands when this excerpt begins.

1  CT:  (play)
2  (1.2)
3  CT:  a bar
4  ((CT bangs her hand against the plastic plate))
5  CT:  a drum
6  A:  o:h, that could be a drum. a good idea. good one.
7  (2.4)/((CT bangs it twice more then drops the plate, and picks up a plastic spoon))
8  CT:  (it’s going to use) this
9  A:  ooh.
10  CT:  um some
11  (1.6)/((CT picks up a pipecleaner))
12  CT:  s:ome (↑bark)
13  -> A:  ye(hh)ah?
14  CT:  some [turn (it ar) hh (1.7)*and* <turn around> (1.0) a::r::oun]
15  [  ((( CT twists the pipe cleaner around the spoon )) ) ]
16  (0.8) X:’s (1.4) [and I'll make an (end).]
17  (((CT holds out the spoon with pipecleaner

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In this part of the play session, there does not appear to be a coherent narrative which CT is constructing. Instead, CT has been picking up objects and saying words which are seemingly unrelated to previous turns. When A understands the play contribution in lines 4-5, where CT bangs her hand against a plastic plate and says ‘a drum’, she provides encouraging feedback. After this, CT bangs the plate a few more times before discarding it and picking up a plastic spoon and says something like, ‘(it’s going to use) this’. While the potential use of ‘it’s’ in this turn could refer back to the drum, it is unclear what the link between the drum and the spoon could be and CT’s actions in line 7 where she discards the plate, seem to progress the play onto a new phase which does not include the plate/drum. In line 10, the adult expresses interest in the child’s play with the spoon, and CT expands it by saying ‘um some’ in line 11 while looking around for another play object. She settles on a pipecleaner and appears to announce what this is in line 13. This turn is difficult to hear, however, my best guess is ‘some bark’. The adult then produces a PMY.

Similarly to excerpt (46), in excerpt (50), there are potentially a number of factors which make this difficult for the adult to understand. One of these factors is the inarticulate speech from the child, another is the unclear connections between the child’s turns and another is the very nature of the task as eliciting pretend play. As discussed in chapter 4, the presence of pretence in these sessions makes it difficult at times to understand the talk and particularly challenging to understand referring expressions which, by the very nature of pretence, may not refer to objects in the common play space. This play sequence may make sense for the child, or perhaps having a coherent narrative arc is unnecessary for the child. However, from the adult’s point of view it is difficult to understand this play and thus score it. The excerpts examined in this section often also include problems with hearing, speaking and sequencing, however, they have in common problems with recipient design. They demonstrate difficulties making turns coherent and relevant for the other participant in order to achieve intersubjectivity.

6.3.3 Summary of findings of the turns preceding PMY

In section 6.3 I have analysed the turn prior to the adult’s production of a PMY in the interactions involving both TD children and children with ASD. In contrast to the excerpts examined in chapter 5 which analysed turns prior to the adult’s production of an OCRI device, evidence of mishearing was not a major contributing factor in the environment preceding a PMY. There were no instances demonstrating a lack of orientation in the interactions involving TD children, however there were four excerpts demonstrating this in interactions involving children with ASD. Interestingly, inverse
findings were uncovered regarding the presence of overlap. There were two excerpts demonstrating overlap in the turn preceding a PMY in the interactions involving children with ASD however, five excerpts were identified with overlaps in turns preceding PMY in the interactions involving TD children. Having said this, the instances of overlap present before PMY were brief and rarely appeared to be solely responsible for difficulties in understanding. This suggests that PMY does not usually occur after mishearing on the part of the adult and supports the case that PMY does not occur as a prototypical repair initiation device.

There were instances of PMY occurring after sequentially inapposite turns, however, these were less numerous than excerpts demonstrating instances of misspeaking in the turn preceding the adult’s production of PMY. This is in contrast to chapter 5 which found that in the majority of instances, OCRI occurred after sequentially inapposite turns. In the turns preceding the PMY, excerpts demonstrating sequentially inapposite turns were still divided into those displaying a lack of understanding with the task and those displaying activity disalignment. The former was rare in turns preceding PMY, with only one excerpt identified of the child trying to work out task demands in the interactions involving TD children, and no excerpts found in interactions involving children with ASD. This finding could suggest that when a lack of understanding of the task is made public in these clinical interactions, an overt repair initiation is favoured by the adult. Sequencing prior to the PMY displaying activity disalignments was somewhat more prevalent in these interactions with six instances identified in interactions involving TD children, and five instances identified in interactions involving children with ASD. This indicates that activity disalignment could be responded to with a PMY or an overt repair initiation, such as OCRI.

Cases involving misspeaking in the turn preceding a PMY were the most frequent in both interactions involving TD children and those involving children with ASD. This was in contrast to findings from chapter 5, where fewer instances showed signs of misspeaking (seven in TD children and five in children with ASD) than those showing sequential disalignment. In chapter 5 the category of misspeaking was not further divided into subcategories as these were few in number. When examining the turn preceding PMY, I divided instances demonstrating misspeaking into those presenting untranscribable speech and those with unclear referring expressions. There were three excerpts containing untranscribable speech in the interactions involving TD children, and four in interactions involving children with ASD. Excerpts with unclear referring expressions were somewhat more prevalent with 12 in interactions involving TD children and six in interactions involving children with ASD. The prevalence of the latter category indicates that PMY most often occur after an unclear or ambiguous turn at talk. Additionally, it was found that unclear referring expressions often
occurred in turns which were also categorised as sequentially inapposite. Turns which are problematic for the adult to understand because of their inapposite sequentiality may be additionally problematic due to their lack of specification in referring expression. In addition to this, it may be that the more factors which have the potential to make a turn problematic for a participant which are present, the more likely a turn is to elicit a PMY. A similar finding was demonstrated in chapter 5 for OCRI and has been discussed by Stivers & Rossano (2010) in the context of response elicitation.

6.4 Analysing the turn following prosodically marked yeah

An important aspect of understanding the sequential function of PMY involves analysing how participants orient to its use. I have identified PMY within this data set based on ‘form’, or the features of the phenomenon, of being a minimal turn, having high onset, high rising intonation and containing laughter particles within the token. However, some have cautioned that there is not a straightforward relationship between intonational form and interactional functions (see Walker, 2014, for a persuasive argument). Although CA is concerned with finding systematic uses of interactional phenomena within conversation, it is not the case that we find deterministic one-to-one mapping between interactional practices and social actions (Sidnell, 2013). There is a layered and complex relationship between the linguistic or prosodic features of a phenomenon and its social action. In line with this, the children in this data set orient to PMY as if it is performing a number of different social actions. This chapter discusses those different orientations by children in the turn following the PMY.

In chapter 5, when analysing the turn following the OCRI I found that children, both TD and ASD, responded to the OCRI in almost all instances with a re-saying of the trouble source or a repair attempt. The exceptions to this were two excerpts (one from each group of children) where the trouble source turn could be viewed as contentious and led to one TD child (ID 512) being unresponsive to the adult’s attempt to initiate repair and his mother eventually performing the repair proper, and in the other, a child with ASD (ID 526) diplomatically changing the subject after a trouble source turn which could potentially be viewed as a complaint or criticism. For both groups of children, the findings in chapter 5 are consistent with research on how English-speaking neurotypical adults respond to OCRI, and further suggest that children with ASD usually identify OCRI and react to these in socially typical ways, including in socially sophisticated ways.

When examining the turn following a PMY, a broad perspective was required to categorise the data, as PMY’s are not always oriented to as if they are repair initiators. The categories used in chapter 5
were too restrictive for the responses identified in this chapter, as the range of responses PMY can elicit were more diverse than for OCRI devices. I have divided the responses into four categories based on how the child orients to the PMY. These categories are:

1. A repair attempt, or orienting to the PMY as if it is initiating repair.
2. An affirmative response token ('yes', 'mm'), or orienting to the PMY as if it is a request for confirmation.
3. A continuation of the child’s previous talk, or orienting to the PMY as if it is a continuer.
4. A non-response, or orienting to the PMY as if it does not require a response.

In line with my previous approach, I first examine examples from the interactions involving TD children before analysing the instances from interactions involving children with ASD. In analysing these excerpts, I also discuss the adult’s orientation to the child’s response.

6.4.1 Analysing the turns following PMY in interactions involving TD children

In the 16 excerpts which were identified in the interactions involving TD children, one excerpt (ID 603) was excluded from this analysis as the child’s turn preceding the PMY was very difficult to transcribe, which limits my ability to categorise the turn after the PMY. Although it is clear that the child’s response does not orient to the turn preceding the PMY as if it is a request for confirmation (i.e. with an affirmative response token), it is unclear whether the child’s turn in response to the adult’s PMY was a repair attempt and the child was thus orienting to the PMY as a repair initiator, or whether the turn was a continuation of the turn preceding the PMY and thus he was orienting to the PMY as a continuer or something different again. Other excerpts which contain untranscribable talk, or where my ‘best guess’ transcription has been used, have been included in this section, although limitations with the analysis will be discussed where relevant. Table 6.2 lists all excerpts from the interactions involving TD children according to their categorisation.
In six of the 16 excerpts identified in the interactions involving TD children, the children produce a repair attempt of the prior turn after a PMY. This indicates that the child is orienting to the PMY as if it is a repair initiator. This was the equal most common response to PMY identified in the interactions involving TD children, however, half of these were produced by the one child, HS.

In the 16 excerpts demonstrating PMY from the interactions involving TD children, six elicited an affirmative response token (‘yep’, ‘mm’, ‘yeah’) from the child. This demonstrates that the child has understood the adult’s PMY as a request for confirmation. Confirmation requests are not a type of repair initiation device however they do check for intersubjective understanding and they do still indicate that some degree of intersubjective understanding is in need of maintenance. As with the category of repair attempts, one child responded with an affirmative response token often with four of these six responses by the child JW.

There was only one excerpt (ID 602) in the interactions involving TD children where the child oriented to the PMY as if it were a continuer. In this excerpt the child continued with the topic by adding to its development. This was designed as a continuation of the previous turn, beginning with the linking word ‘and’ to demonstrate its association with the prior talk.

Two excerpts were identified (ID 604, and ID 616) where the children give a non-response after a pause of longer than 0.5 seconds and the adult then self-selects as the next speaker. Unlike the excerpts examined in chapter 5, where a non-response following an OCRI device was interactionally problematic and a marker of socially sensitive actions taking place, neither of these instances appeared to be oriented to as interactionally problematic. Excerpts which demonstrate non-response will be discussed in section 6.4.1.4.6.4.1.4

<table>
<thead>
<tr>
<th>Excerpt number and child ID</th>
<th>Excluded from analysis</th>
<th>Repair attempt</th>
<th>Affirmative response token</th>
<th>Topic continuation</th>
<th>Non-response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totals 1</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2 Category of responses by excerpt number from the interactions involving TD children
With only six instances of PMY eliciting a repair attempt, it is clear that the PMY is not a straightforward repair initiation device, so is not akin to the OCRI devices examined in chapter 5. However, the fact that an additional six excerpts also indicate maintenance of intersubjectivity, adds weight to the assertion that the token marks a threat to intersubjectivity. It also appears that a topic continuation or a non-response are also permissible actions following a PMY. Discussion of these excerpts begins in section 6.4.1.1 by first examining the instances where the turn following a PMY is a repair attempt.

6.4.1.1 Repair attempt

In chapter 5, I analysed repair attempts in terms of structure and categorised the types of repair attempts identified as follows:

1. Full lexicosyntactic repetition of the trouble source:
   a. with same intonation
   b. with altered intonation
2. Partial repetition of the trouble source:
   a. with additional content
   b. with reduced content
3. Other

When discussing the responses to PMY categorised as repair attempts, I will organise them in line with the distinctions used in chapter 5, outlined above. However, with only six excerpts to discuss, all excerpts will be discussed in the one section rather than across separate sections for each repair attempt. Additionally, with the small number of excerpts results are less conclusive than those from chapter 5 and generalisations need to be made with caution. The section begins with excerpts demonstrating full lexicosyntactic re-sayings in the repair turn and moves on to re-sayings which involve a change to content. When discussing the latter, as with chapter 5, I draw on work by Schegloff (2004) about the concept of dispensability in repair sequences.

Excerpt (51) demonstrates a full lexicosyntactic re-saying with altered intonation. It comes from a free play session with the child, CJ, about an hour and 20 minutes into the testing session. CJ is playing with a toy truck with a digger appendage on the back and has been making the digger dig holes.

(51) ID 601: 4-CJ. 1:22:26 (TD: 5;7)
Free play session. Participants are sitting on the mat. CJ has been playing with the toy truck for about 2 minutes prior to this excerpt.
1   CJ: the- there’s a man in there. it can control the digger.
2   A:  ah: great
CJ: going to dig somewhere else now.
CJ: vroom
CJ: look at THAT. then it digs up high.
A: yeah it is isn't it.
CJ: they have to dig everywhere just one- .hh they have to dig one hole everywhere.
A: ah:: so it has to dig one hole everywhere.
CJ: vroo: m
CJ: °that’s all, X (go)°
CJ: he’s gonna make a big [(0.5) thing around.] [((CJ moves his right arm in an -clockwise circles with his index finger pointed))]
CJ: like a big GAte.
A: o::h ok.
CJ: vroom::m
CJ: [he's gonna buy a new car. ] [((CJ stops touching the truck and picks up a toy car)])
A: ye(hh)ah?
A: =buying a new car¿
CJ: >he's gonna buy a new car.<=
CJ: bomb brum brum this isn’t a- this is his old car, the workman’s old car.
A: O::h ok.=
CJ: =it- he's buying this car.
CJ: Oh he’s gonna [buy that new car. ] [((CJ puts down car))]
CJ: [vroom ] [((CJ makes truck drive drive))]

In line 27, CJ introduces a new topic for the truck (or perhaps the truck driver, which he later refers to as ‘the workman’ in line 35), saying he will ‘buy a new car’. The adult responds to this with a PMY and after a 0.6 second pause, CJ produces a re-saying of his prior talk. Line 31 is a lexicosyntactical repeat of line 27, with slightly altered intonation. Specifically, the re-saying is faster than the original utterance and the emphasis on the word ‘buy’ only in the original. This demonstrates that CJ orients to the PMY as a repair initiator, or minimally as a request for a repetition. Whether A intended this to initiate repair is not known, however she responds to the repair in a supportive manner, by repeating the content of CJ’s turn in line 33, where she says ‘buying a new car’, latched onto CJ’s repair turn.
Another example of a direct re-saying of the turn preceding a PMY with altered intonation is produced at Excerpt (52). This excerpt shows HS trying to list three animals as part of the WPPSI. This example is complicated by the fact that the child has put an extra constraint on the task and is attempting to list only carnivorous animals, so the task is conceived of slightly differently for the two participants. It is also an extended repair sequence with multiple attempts by HS before the repair is successful in line 32.

(52) ID 607: 37-HS: 9:23 (TD: 5;0)
WPPSI-III – information subtest. Participants are sitting at table, facing one another. A is off-camera for duration of this excerpt. HS is learning forward over the table throughout this excerpt.

1 A: ts[k now could you tell me some ___ animals.
2 HS: um there’s a lion; (1.3)
3 A: yeah;
4 HS: and a tiger;
5 A: yeah can you think of one more;
6 HS: and;
7 A: a nd;
8 HS: something else eats meat
9 (0.3)
10 HS: um tsk
11 (2.0)
12 HS: a cub eats meat
13 (0.4)
14 A: ay::?
15 (0.3)
16 A: another animal?
17 (1.3)
18 "can you think of one more animal?";
19 (0.7)
20 HS: ah X eats meat
21 A: oh yeah >a d- an animal does eat meat you’re right can you
22 think of the name of another animal? you said a lion,< .h a
tiger’s an animal, (. ) can you think of another animal;
23 (0.5)
24 HS: a cub;
25 A: ye(h)ah? very good= (1.0)
26 HS: = [a Cub eats meat]
27 = [{((HS stands up at table and leans towards A looking at A’s
testing page))}]
28 A: a cub. oh:: I s:ee, I know what you mean a cub >very very
good.< (. ) tsk what animal gives milk

The eventual repair in line 32, ‘a cub eats meat’, is a lexiosyntactic repetition of the original turn which occurs in line 16. Line 16 is the first attempt by HS to give a correct response to A’s question ‘can you think of one more’ (line 8). After A initiates repair twice (lines 18 and 20) and re-produces the question again, HS offers a turn in line 24 (‘ah X eats meat’) which looks like a re-saying of line 16. In her next turn, A demonstrates understanding of the previous turn (‘oh yeah’). A’s expansion of
this (‘an animal does eat meat’) demonstrates her understanding of HS’s desire to bring the carnivorous aspect into the answer but also reveals that she has not heard or understood the aspect of the turn which is most important to answer the test question; the animal’s name. HS’s next repair attempt orients to this omission as in line 29 he only provides the animal name, ‘cub’, however, he pronounces it with a nasal quality which makes it difficult to understand. It is in response to this turn that A produces a PMY.

In response to A’s PMY in line 31, HS replies very quickly with a direct re-saying of his original attempt to answer this question in line 16, ‘a cub eats meat’. Importantly, HS’s non-verbal contributions are also very marked during this turn. While he says this he stands up, leans his body over the table towards A with his eyes fixed on her testing page. The adult’s response to this appears well matched to the emphasis HS places on this repair, she first repeats the part of the turn which is the appropriate answer to her question (‘a cub’), then using the change-of-state token ‘oh’ followed by ‘I know what you mean’ to signal her altered understanding, before again repeating the answer and giving a positive evaluation (‘very very good’). This turn demonstrates that the issue with understanding has now been resolved, showing that the fourth repair attempt has been successful.

Excerpt (53) demonstrates a re-saying of the turn preceding the PMY with additional information added. This excerpt occurs during the WPPSI-III, information subtest, where HS initiates a new topic which is unrelated to the test question.

(53) ID 608: 37-HS. 12:20 (TD: 5;0) – abridged
WPPSI-III - information subtest. Participants are sitting at table, facing one another.
22   HS: [ X ] =yeah ‘cause um ah
23    (2.5)
24   -> A: ye(hh)ah?
25   HS: yeah some old teddies um (.)(its)- um there’s Snow Teddy and
26     Mo:rris=
27   A: =ah[h:]
28   HS: [he ] [he’s my n- he’s my (one).]

In excerpt (53) HS introduces a new topic by saying, ‘I found some old teddies’, which A responds to with a PMY. HS responds to this first with an agreement or acknowledgement token, ‘yeah’, then produces a re-saying of part of the turn preceding a PMY, with altered and more adult-like pronunciation of the problematic word ‘teddies’. He then provides an expansion of the topic with additional information on the teddies by providing their names. The adult accepts this further information with the lengthened token ‘ah’.
The following excerpt, (54), is another example of a repair where the content is essentially a re-saying of the turn preceding the PMY, with additional information provided.

(54) ID 609: 37-HS. 24:45 (TD: 5:0) – abridged

WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. A is off-camera for the duration of this excerpt. HS is sitting with his arms crossed and resting on the table.

20 HS: =>yeah< (1.0) yeah 'cause there's a- (0.3) a robot who loves
21 p hh (0.7) ((gulp)) (0.9) u:m (1.1) humans. h
22 [an] alien loves a human.=
23 -> A: [oh] =ye(hh)ah?
24 HS: [th- the- the alien girl loves a human. ]
25 (((holding hand up and beats out once, rolls eyes at end)))
26 A: oh:: go::d tsk that’s silly isn’t it?

Excerpt (54) is again an extended repair sequence where the child has multiple attempts re-saying the same turn. In lines 20-21 HS produces the information, ‘there’s a robot who loves humans’, in a disfluent turn with cut offs, multiple gaps, outbreaths, a gulp and a hesitation marker. HS then repairs this to ‘an alien loves a human’. This repair attempt (line 22) is produced with greater fluency, however, there is a content change where one character gets changed from ‘a robot’ to ‘an alien’ and multiple humans gets altered to a specific human. The adult responds to the more fluent turn with a PMY. HS follows the PMY with a re-saying of line 22 or the second attempt in conveying this information to the adult. The re-saying in line 24 is very similar to that produced in line 2, however, the subject of the story is further refined. The indefinite article (‘an’) is changed to a definite article (‘the’) making it a clear referring expression and the alien is now given a gender (‘alien girl’), providing more details about the referent. This suggests that HS interpreted A’s PMY as a request for further specification in the repair.

Excerpt (55) is an instance of PMY which occurs at the beginning of the WPPSI-III vocabulary subtest.

A asks the first test question in line 4.

(55) ID 612: 51-JW. 18:11 (TD: 4:0)

Transition from WPPSI-III - object assembly subtest to WPPSI-III - vocabulary subtest. Participants are at the table, facing one another, but JW is standing up leaning forwards over the table looking at A’s sheet.

1 JW: can I (.). try another one?
2 A: .h well we don’t have any more puzzles, but we have got a
couple more things to do, tsk .hh now (0.4) could you tell me
(0.2) what is (.). a shoe:
5 (1.2)
6 JW: [on the:re.]
7 A: [((JW lifts up his right leg so that A can see his shoe,
then puts it down again))]
9 JW: ye:ah. that is one isn’t it. so what is it, what is a shoe?
10 JW: [it’s Spi:derman (1.3) I [got Sp-]]
11 [((JW sits and lifts up his right leg onto the table))]
12 -> A: [ye(hh)a]h?
13 JW: I got Spi:derman on mine. [((JW puts his leg down and sits
15 properly in the chair))]
In this excerpt JW responds to the test question ‘what is a shoe’ by first showing A his shoe (lines 7-8) and then with the answer ‘it’s Spiderman’ (line 10). After A’s PMY in line 12, JW responds with ‘I got Spiderman on mine’ (line 13) which is an expansion of the answer provided in line 10 ‘it’s Spiderman’. Thus, the repair in line 13 is a re-saying of line 10 with additional content. Specifically, there is a revision of the grammar of the turn, with Spiderman now re-specified as being on the shoe (‘on mine’) rather than the shoe being the subject in a copular construction (‘it’s’). Arguably, JW’s turn in line 13 is a repair of the turn in line 10 ‘I got sp-’ which gets interrupted by the adult’s PMY in line 12. However JW still feels that this expansion ‘I got Spiderman on mine’ is a relevant contribution after the PMY in line 10. A’s PMY does not change JW’s understanding of the situation to the extent that a repair of line 10 is necessary.

Finally, excerpt (56) demonstrates a repair with changed content. The child, CB, is completing the WPPSI-III, vocabulary subtest and is providing an answer to the question ‘what is a dog?’.

(56) ID 605: 28-CB. 30:45 (TD: 5:0)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another.
1 A: what is (.) a dog.
2 CB: eh: they go like ruf ruf ruf
3 A: they do,=
4 CB: =ruf (0.5) ruf
5 (1.1)
6 A: what else can you tell me a bit mo:re.
7 (0.4)
8 CB: eh:::
9 (5.3)/((CB looks around the room))
10 CB: maybe a starf:i:sh.
11 A: how ‘bout a do:g can you tell me a bit more about a dog,
12 you said they go woof woof what else can you tell me a bit
13 [more about-]
14 CB: [[they have ] s:ix legs like this. ]
15 [(((CB gets onto the floor on all fours))]
16 (1.3)/((CB gets up again, sits on his chair))
18 CB: [there’s one, two, three, four. ]
19 [((CB points to each hand then each foot as he counts))]
20 (1.0)
21 -> A: ye(h)ah?
22 CB: they have four legs.
23 A: ah, they’ve got four legs.
24 CB: I didn’t know- they have (1.4) they have (.) four legs.
25 (1.0)
26 A: that’s right you’re very right they do have four legs.
27 tsk now could you tell me, what is (.) a letter.
After being prompted by A in lines 11-12 to provide more information about a dog, CB says in line 14 ‘they have six legs like this’. He then gets all on all fours to mimic a four-legged animal before returning to the table and counting his limbs one by one. During this counting, he only gets to number four in line 18-19. After a pause, A produces a PMY. The turn following this PMY, line 22, can be seen as a summary turn of his limb counting in lines 18-19, but it is also a content repair of CB’s assertion in line 14 that ‘they have six legs’. In this turn he is correcting the erroneous information in his prior turn (‘six’) with information he now knows to be correct (‘four’) which is evident by his emphasis on the word ‘four’. Further, A reacts to this as if it is a repair of line 14. She begins her following turn by producing the change-of-state token ‘ah’ to demonstrate her change in understanding, before repeating the child’s prior turn.

This section discussed six excerpts where the TD children in the data set orient to the adult’s production of a PMY as if it is repair initiation. While there were four different children who oriented to a PMY as if it was initiating repair, care must be taken when generalising from this finding as half of these repairs were produced by the one child, HS.

6.4.1.2 Affirmative response token

This section examines excerpts where TD children respond to a PMY as if it is a request for confirmation. Of the 16 excerpts of the adult producing a PMY in the interactions involving TD children, six excerpts contained examples of children responding to the PMY as if it was a request for confirmation. That is, they responded with an affirmative response token, most commonly ‘mm’, but also ‘yep’ and in one instance a non-verbal affirmative response using a head nod. The semantic content related to the lexeme ‘yeah’ is potentially important in understanding this interpretation of PMY by the children in these interactions.

Excerpt, (57), shows the child, JW, taking part in the WPPSI-III, vocabulary subtest, where he is asked in line 16 what ‘glow’ means. It appears here in abridged format.

(57) ID 613: 51-JW. 22:06 (TD: 4;0) – abridged
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. A is completely off-camera.
16 A: =.hh what does glow mean.
17 JW: aw:: that’s for Shrek. (0.2) Shrek is a ogre.
18 --> A: ye(h)ah?
19 JW: °mm.°
20 (0.7)
21 A: .hh what does polite mean.

When asked for a definition of ‘glow’, JW produces the statement ‘that’s for Shrek’ (line 17). As discussed at excerpt (26), this is a contribution which is difficult for the adult to understand in the
context of the subtest as the link between ‘glow’ and ‘Shrek’ is unclear. After a 0.2 second pause, JW goes on to give more information about Shrek, however this information still does not serve to contextualise the link for A between the question asked and the answer produced. After A produces a PMY, JW produces an affirmative response token quietly with no further information. The response from JW in line 19 indicates that he has oriented to A’s PMY as if it is a request for confirmation. After a 0.7 second pause, A progresses the testing.

There were five other excerpts in the interactions involving TD children where the child responds to the PMY as if it is a request for confirmation rather than initiating a repair or eliciting further information. These are presented at excerpts (58)-(62) in abridged format.

(58) ID 614: 51-JW. 1:06:32 (TD: 4:0) – abridged
Generation of object substitutions task, with pencil as stimulus object. Participants are sitting on the mat facing one another, but A is off camera.

24 A: [What else could you [pretend that could] be.
25 JW: [XX XX (ring) the doctor.
26 (0.5)
28 -> A: ye(hh)ah?
29 JW: °mm°
30 A: what else could you pretend that could be.
31 JW: could be a cupboard;

(59) ID 610: 51-JW. 9:06 (TD: 4:0) – abridged
WPPSI-III – object assembly subtest. Participants are sitting at table, facing one another.

7 A: no:w let’s see what we’ve got he[re. ]
8 JW: [“let’]s XXXX°).
9 [((A puts out puzzle pieces face down on table in front of JW))
10 -> A: ye(hh)ah?
12 JW: mm:
13 A: have a go at making (. the ca:r. ((beep beep)) ((beep))

(60) ID 606: 28-CB. 32:55 (TD: 5:0) – abridged
WPPSI-III – vocabulary subtest. Participants are sitting at table, facing one another. Prior to this CB has been asking A about the functions of the cameras and microphone in the room.

11 A: G0o:(hhh)d.
12 CB: I just saw a (ba: with the) cl:own.
13 (.)
14 -> A: [ye(h)ah? ]
15 [((A looks towards CB))]
16 (1.1)/((CB nods three times quickly))
17 A: now could you tell me what is (. a he:ro.

(61) ID 611: 51-JW. 14:24 (TD: 4:0) – abridged
WPPSI-III – object assembly subtest. Participants are sitting at table, facing one another. JW has his head down doing a puzzle of a cow for the most part of this.

8 (14.0)/((JW putting together puzzle of the cow))
9 JW: hey (mum) I—I’ll make this on (. on the TV at my home.
10 -> A: ye(hh)ah?
11 JW: °mm°
12 (2.8)
13 JW: it’s a long way away isn’t it.

(62) ID 615: 55-TV. 1:09:14 (TD: 4:4) – abridged
Generation of object substitutions task, with pencil as stimulus object. Participants are on the mat, TV is lying on his back and A is sitting up.
18 TV: that was being a (woom).
19 (0.4)
20 -> A: ye(h)ah?
21 TV: yep, that was being a- (0.7) a bison.
22 A: [a ↑ bison.]
23 [((TV picks up the pencil and drops it))]

In excerpts (57) through to (60), the adult self-selects as next speaker after the child has produced an affirmative response token and uses the turn as an opportunity to progress the testing. In (58), (59) and (60), this occurs without a pause or gap which indicates that A does not orient to the affirmative response as problematic. However, this response from A may not necessarily indicate intersubjectivity has been maintained. As outlined in chapter 4, the institutional nature of this interaction including the pressure on the adult to complete testing requirements within the designated timeframe may influence the adult’s responses in these excerpts.

In excerpt (61), there is a long pause after the child, JW, produces an affirmative response token and he then self-selects as speaker with a turn which may or may not be related to his turn in line 9. In excerpt (62), after TV produces an affirmative response token in line 21, he either repairs his turn in line 18 or has another attempt at the task. As the task requires the child to produce as many things they can pretend an object can be in a short time frame, it is likely that his turn in line 21, ‘that was being a- a bison’ is another attempt at the task rather than a repair attempt of line 18. In this case, the child is the one progressing the testing, rather than the adult.

The most common affirmative response token to occur after a PMY in the TD interactions is the weak response token ‘mm’. However, all four cases of this token come from the same child, JW. There was also one instance of ‘yep’ and one instance of a non-verbal confirmation. While there were six instances of affirmative response tokens after a PMY, four of these excerpts are produced by JW, who is also one of the younger children in the study. However, three children oriented to a PMY as requesting confirmation and even accounting for low numbers, it is evident that this is a possible understanding of this token among the TD children in these interactions.

6.4.1.3 Topic Continuation
This section considers instances where, after a PMY, the child has continued with the same broad topic or expanded the same topic in some way without first repeating content from the turn
preceding the PMY. There was only one excerpt identified where a TD child demonstrated this response. In this excerpt, the PMY does not appear to alter the course of the child’s talk.

In excerpt (63), the child, CJ, talks about the television program *Courage the Cowardly Dog*, during the WPPSI-III vocabulary subtest. I have argued at excerpt (13), that this excerpt demonstrates asymmetrical epistemic status between the participants and the adult is potentially limited by what she can contribute to the topic due to her lack of knowledge of the television program.

(63) ID 602: 4-CJ. 1:43:49 (TD: 5;7) – abridged

WPPSI-III – vocabulary subtest. Participants are sitting at table, facing one another.

7 A: do [‘y’know what courage means? (0.4)]
8 [((CJ shakes his head multiple times))]
9 no that’s a tricky one.
10 CJ: [courage?]
11 [((CJ looks towards A))]
12 A: yeah.
13 (1.7)
14 CJ: that means courage >the (couraging)< dog.
15 A: ye::ah.
16 CJ: (there-) ‘cause I watch that
17 --> A: ye(hh)ah?
18 (0.4)
19 CJ: tsk and when the:re’s (. ) monsters,
20 (0.5)
21 A: [ye:ah, ]
22 CJ: [courage] goes [AR:::GH]
23 [((CJ stands up and throws his arms up in the air))]
24 A: ah huh huh huh huh
25 CJ: ((smilie voice)) ‘t’s so funny.
26 (1.2)
27 A: what does (. ) _ancient mean.

In response to the test question seeking a definition of the word ‘courage’, CJ brings up the children television program *Courage the Cowardly Dog* which he calls ‘Courage the (couraging) dog’ in line 14. He expands on this in line 16 with the potentially confusing turn ‘because I watch that’ which the adult follows with a PMY. The child begins his next turn with a tongue click (‘tsk’), then uses the conjunction ‘and’ before introducing a common scenario in the television program ‘when there’s monsters’. The ‘and’ in line 19 links the following talk to the child’s prior turn, before continuing with a contribution which is still related to the topic of ‘Courage the Cowardly Dog’. Thus CJ has designed line 19 to be understood as a continuation, or further expansion of the current topic, which also fits semantically with the narrative of the television program which features monsters who regularly frighten Courage the dog. Excerpt (63) demonstrates the ambiguous nature of PMY and how children will draw on the available contextual and interactional resources to establish the best way to respond to such a token.
6.4.1.4 Non-response

I additionally identified two excerpts from the interactions involving TD children in which the PMY elicited no response from the child. Interactionally a non-response in this environment was not oriented to as problematic which suggests that PMY does not necessarily require a response to follow it. This is in contrast to the excerpts analysed in chapter 5, where a non-response from the child was oriented to as interactionally problematic by all participants. This was demonstrated by the case where the adult pursued a response multiple times until the child’s mother provided a repair proper (ID 512).

Excerpts categorised as a non-response from the child were identified by notable pauses after the adult produced the PMY. In both instances, the adult then self-selects as the next speaker and uses her turn to orient back to the task and facilitate the progression of the session, rather than pursue a response.

Excerpt (64) demonstrates a non-response to a PMY produced by the adult. The child, CB, is completing the WPPSI-III, block design subtest.

(64) ID 604: 28-CB. 9:42 (TD: 5;0) – abridged
WPPSI-III – block design subtest. Participants are sitting at table, facing one another. A is not visible on camera. A has just finished showing CB a demonstration of what she wants him to do with the blocks.
10  [tell me when you think] they’re the same.
11  CB: [ X X X X X ]
12  (2.8)/(CB working with blocks))
13  CB: er:::
14  (31.1)/(CB working with blocks))
15  CB: XXX (doing) (0.4) .hh (ds:) (1.3) looks like (robots).
16  -> A: ye(hh)ah?
17  (1.8)
18  keep going you’re doing well.
19  (19.2)/(CB working with blocks))
20  CB: I wanna make it to the same.

In line 15, CB is presumably commenting on the pictures the blocks make when he produces a disfluent turn, finishing with the words ‘looks like (robots)’. The adult responds to this by producing a PMY which is followed by a pause of 1.8 seconds. A then self-selects as next speaker, in line 18, produces a turn which encourages CB to persevere with the task and provides positive feedback on his progress. This turn is supportive of CB’s non-verbal actions and aligns with the broader goal of progressing the testing session. The following excerpt, (65), occurs in the WPPSI-III, vocabulary subtest with child, KD, and demonstrates another example of a non-response to a PMY.

(65) ID 616: 57-KD. 19:30 (TD: 4;4) – abridged
WPPSI-III – vocabulary subtest. Participants are sitting at table, facing one another. A is writing the answers in the test booklet.
8  KD: a hero, (.) well HE saves people.
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This excerpt shows an unusual response by KD to the test question ‘what is a hero’ in line 11. Following this, A produces a PMY. After a 1.1 second pause, A then self-selects as next speaker. As in excerpt (64), A does not orient to this pause as if it is problematic. Instead she uses the lack of uptake from KD as an opportunity to move the session along by asking the next test question.

The two excerpts discussed in this section, (64) and (65), present cases where the children do not respond to the adult’s production of a PMY. However, this is not oriented to as interactionally problematic by the adult, as it may have been if she had produced a repair initiation device and received a non-response. Rather than pursue a response to the PMY, in these excerpts A orients to her broader goal of progressing the testing session. Thus, the clinical nature of these interactions may influence what is deemed an appropriate response at a given point in time. If these results are compared with those in chapter 5, within the same clinical interactions, a non-response to a PMY appears to be more acceptable than a non-response to an OCRI. In chapter 5 the sole instance where a child exhibited a non-response to the adult’s OCRI was as a result of a potentially delicate situation where the child likely avoided repairing for socially sophisticated reasons (ID 512). This supports the proposition that PMY is a more ambiguous and multifunctional response token, when compared to OCRI devices.

6.4.2 Analysing the turns following PMY in interactions involving children with ASD

In the previous section, I examined the turn following a PMY spoken by the adult in interactions involving TD children. I found that in six of these excerpts, the TD children responded with a repair attempt; in six excerpts they responded with an affirmative response token; in one excerpt the child responded with a topic continuation; and in two they gave no response to a PMY. An additional excerpt was excluded from analysis.

This section examines the turn following a PMY in interactions involving children with ASD. Table 6.3 outlines the excerpts identified in each category, which are the same as the categories identified in interactions involving TD children in section 6.4.1.
<table>
<thead>
<tr>
<th>Excerpt number and child ID</th>
<th>Excluded from analysis</th>
<th>Repair attempt</th>
<th>Affirmative response token</th>
<th>Topic continuation</th>
<th>Non-response</th>
</tr>
</thead>
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<td></td>
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<td></td>
<td>ID 627: 29-MV. 28:46</td>
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<td>5</td>
<td>4</td>
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</tbody>
</table>

Table 6.3 Category of responses by excerpt number from the interactions involving children with ASD

The responses to PMY in the interactions involving children with ASD exhibit a different pattern of distribution across categories, when compared to the TD children. There were no additional categories required to discuss the excerpts from interactions involving children with ASD, however some of the categories identified in interactions involving TD children are not required when discussing the findings from this cohort. For instance, no responses to the PMY were identified as providing affirmative response tokens.

In the 12 excerpts collected from interactions involving children with ASD, there were just three instances where the child followed a PMY with a repair attempt indicating that the children with ASD also oriented to PMY as a repair initiator in some circumstances. In interactions involving TD children over a third of responses demonstrated children orientating to PMY as if they were initiating repair, while a quarter of the responses in the interactions involving children with ASD demonstrated this response.

The greatest difference between the two groups involved responses to the PMY with an affirmative response token, such as ‘mm’, ‘yep’ or a head nod, as if it were performing a request for confirmation. In interactions involving TD children over a third of responses demonstrated children responding to PMY with an affirmative response token, however the children with ASD produced no cases of this. Thus children with ASD did not orient to the PMY as if it was a request for confirmation.

Another notable difference between groups is found in the category demonstrating topic continuation. Responding with a topic continuation was the most common response to PMY for children with ASD with five excerpts, or almost half of identified excerpts, showing this response.
This compares with only one excerpt from the interactions involving TD children categorised as this response type.

Four excerpts displayed a non-response from the child in the interactions involving children with ASD. This response is more prevalent in the interactions involving children with ASD than in the interactions involving TD children where two excerpts were identified.

The categories of a repair attempt and an affirmative response token both orient to the previous turn as a response mobilising turn. They are backwards looking and relate directly to the adult’s prior turn. Further, they can both be seen as responses related to the maintenance of intersubjectivity, as repair attempts respond to a need to restore intersubjectivity and affirmative response tokens respond to a need to confirm that understanding has been successful. Conversely, the categories of topic continuation and non-response do not orient to the prior turn as requiring a response, or orient to the prior turn as if intersubjectivity is being threatened. Arguably, these responses happen irrespective of whether the adult had produced a PMY in the prior turn. When the categories are grouped in this way, results show that in 12 out of 15 analysed excerpts, or 80 per cent of cases, TD children orient to PMY as if it requires a response related to maintaining intersubjectivity (six as a repair attempt and six as an affirmative response token). In the remaining three cases, or 20 per cent of analysed excerpts, TD children orient to PMY as if it is unrelated to the intersubjectivity (one as a topic continuation and two non-responses). In the interactions involving children with ASD, the inverse result is found. Only three excerpts out of 12, or 25 per cent, demonstrate orientation to PMY as if it is mobilising a response related to maintaining intersubjectivity (all repair attempts), while nine out of 12, or 75 per cent, orient to PMY as if it is unrelated to the intersubjectivity (five as a topic continuation and four non-responses).

The three categories of responses to PMY in the interactions involving children with ASD are discussed below. No excerpts were excluded from analysis.

6.4.2.1 Repair attempt

This section discusses the three excerpts which show a repair attempt after a PMY in the interactions involving children with ASD. In line with the analysis of repairs in TD children in section 6.4.1.1, I use the categories discussed in chapter 5.

In interactions involving TD children, I identified only one excerpt where the repair after a PMY was a full lexicosyntactic re-saying (ID 601). This is in contrast to the excerpts examined in chapter 5 where turns following the adult’s production of an OCRI device were often full lexicosyntactic re-sayings. In
the interactions involving children with ASD, no excerpts were identified as a full lexicosyntactic re-saying after a PMY, with or without changed intonation. However, re-sayings with both additional and reduced content were found.

Excerpt (66) shows a re-saying with additional content in the turn following a PMY. The child, SI, is off camera for most of this excerpt, but A appears to be looking in her direction for its duration.

(66) ID 618: 15-SI. 57:42 (ASD: 4;11) – abridged
Free play session. Camera angle is pointed at the mat, however only adult is visible seated on the mat. SI is only briefly visible when she walks across the camera view in line 17.

13 we’re going to pop these things (.) just over here ‘cause
14 we’re just going to play with these toys for a little bit
15 longer, =
16 SI: ={you know um you know um .hh ‘scuse me ((A’s name))¿}
17 [ ( ) SI walks across the room ]
18 SI: you- you know (that)¿
19 A: yeah¿
20 SI: when it goes brum brum brum,
21 A: ye(hh)ah?
22 SI: you c- you can do this when it (go) brum brum brum
23 A: oh, it's going >brum brum brum<. good one.

The turn preceding the PMY occurs in line 20 when SI says ‘when it goes brum brum brum’. Without seeing SI and her non-verbal cues, it is unclear what the pronoun ‘it’ refers to in this turn. However, it seems likely that this refers to the toy truck which is typically present in the free play session. A responds to this turn with a PMY in line 21. The turn following this (line 22), is an expanded re-saying of line 20. Line 22 begins with a false start which is repaired and then the repair proper which makes up the rest of the turn. The additional content in the repair, ‘you can do this’, expands the turn to add what looks like an invitation and/or a conditional element, however it remains unclear what ‘this’ refers to and SI does not further clarify what ‘it’ refers to in the recycled part of the turn. Alternatively the turn in line 22 could be directed to the truck driver in the play or could be reported speech from the truck driver, however, the vocal quality in SI’s turn does not mark it as being ‘in play’ and the use of A’s name as a term of address in line 16 makes this unlikely. A’s response to this acknowledges part of the turn which has been recycled over two turns by SI ‘it’s going brum brum brum’ (line 23), but does not appear to acknowledge the new information in line 22, ‘you can do this’, neither orienting to it as if it were an invitation nor a conditional.

Excerpt (67) demonstrates another instance of a re-saying, this time with reduced content in the turn following the PMY. This excerpt occurs towards the end of a session with MT with the participants taking part in the generation of object substitutions task.
Generation of object substitutions task, with cardboard tube as stimulus object. Participants are sitting on the mat, facing one another.

1 A: now we've just got one more object,
2 (1.6) ((A rummaging through bag of task resources))
3 A: tsk (0.8) now (1.3) what could this be, it could be::
4 [] (a snake. (0.4))
5 [(A makes the tube slither along the ground)]
6 (0.2)
7 MT: ((smile voice)) no:::
8 A: huh huh [>(why's) that.<]  
9 MT: [ I hate ] snakes.=
10 A: =oh huh you hate snakes then what else could it be.
11 (1.3)
12 MT: it can be
13 (1.1) ((MT holds the tube up to his mouth))
14 it can be
15 (.) ((bangs the tube against the floor twice))
16 can [hit heads ]
17 [((MT bangs the tube against his head twice))]
18 -> A: ye(hh)ah?
19 MT: [ hit ]
20 [((MT hits the tube lightly against A’s head))]
21 A: what [ else ] could it be?
22 MT: [heads.]
23 (.).
24 MT: [it can hit (there hard) the head.]=
25 [((MT hits himself on the head with the tube multiple times))]
26 A: =ooh don't hurt yourself;
27 MT: ye(hh)ah. [I'll hit somebody's head.]
28 [ (( MT rubs his head )) ]
29 A: huh what [else] could that be.

The adult introduces the new stimulus object, with an example of the goal of the task, in lines 3-5. After some discussion about snakes, A redirects MT’s attention to completing the task by saying in line 10 ‘then what else could it be’. MT responds to this with two false starts then by suggesting an action for the tube rather than a thing it can be, with the utterance (it) ‘can hit heads’, with a demonstration where MT hits the tube against his head twice. This initiates the PMY from A and MT responds to this by repeating ‘hit heads’ (over lines 19 and 22) while he hits A on the head with the tube. Focusing solely on the spoken component of this repair, the turn in line 16 is an elliptic version of the sentence ‘(the tube) can hit heads’. Then on repair this is further reduced to also exclude the auxiliary verb ‘can’ to simply say ‘hit heads’. At the same time that MT says ‘hit’ in line 19, he also provides a demonstration of his suggestion by gently hitting A on the head with the cardboard tube. This repair in lines 19, 20 and 22 is produced in overlap with A’s further prompting of an answer appropriate for the task demands (line 21), which suggests that A has not accepted ‘can hit heads’ or ‘hit heads’ as a sufficient response. However, MT’s response to this is to further expand his suggestion from lines 16 and 19-22 in line 24 (‘it can hit (there hard) the heads’), which suggests differing interactional goals between the two participants.
The following excerpt, (68), demonstrates an attempt at repair using non-verbal means. This excerpt occurs towards the end of the session when the child, LL, and the adult are returning to the testing room from a break.

(68) ID 623: 22-LL. 1:19:15 (ASD: 5;7)
Transition back to the room after a break. A is off-camera for the duration of this excerpt, but LL is walking towards the table.

1  LL:  >huh [huh<]
2  A:  [ I ]’ve got some different things in here,
3  LL:  >LOOK AT [ THAT-<
4        [((L points to something off camera to her right))]
5  LL:  IT LOOKS LIKE (. ) [ FOOTBOO.]
       [((banging noise of door closing))]
6  LL:  it’s ( .) Collingwood.
7  (0.2)
8  --> A:  ye(h)ah?
9  LL:  (.)/((LL points again to the right, off camera))
10  A:  O(hh)H I se- the football >huh huh<=
11  LL:  =we::h
12  A:  [almost ]
13  LL:  [when my]- when my (dad is/daddy’s) little, (. ) mah- wh- When
14  my (dad is/daddy’s) (0.7) young, he (got) to play football.
15  A:  oh wow.
16  (1.8)/((A prepares next tasks))

In line 7 of excerpt (68), LL draws a connection between something in the laboratory and the Australian Football League team Collingwood, which was discussed at excerpt (45). A follows this turn with a PMY. LL responds to this as if it demonstrates a lack of understanding by non-verbally offering clarification by pointing to something off-camera, which I assume is a poster of a football. This assumption is confirmed by A’s response to this in line 11 when she demonstrates understanding by saying ‘the football’, as opposed to a football, which refers to a specific football likely to be in their shared space rather than a general one. It looks as if the non-verbal repair is successful in restoring intersubjectivity as the adult responds to this with the newsmarker token ‘oh’, followed by a truncated confirmation of her understanding ‘I se-’, and repeating the problematic referent ‘the football’.

6.4.2.2 Topic Continuation

In the interactions involving TD children where a PMY was produced by the adult, I identified only one excerpt where the child oriented to the PMY as if it was a continuer. In contrast to this, topic continuation was the most common response type in the interactions involving children with ASD, with five excerpts identified demonstrating topic continuation. This section examines excerpts where there is evidence that the child’s talk or play continues on after a PMY is produced by the adult. The PMY has appeared to have very little impact or influence on the trajectory of the child’s
turn, however its presence could act in a supportive role to encourage the child to continue their topic.

The following excerpt, (69), occurs in a transition between tasks just over 20 minutes into the session. In this session the child, FM, is using an exaggerated vocal quality in the lines 12-13 and 15, transcribed as ‘((emphatic))’, which sounds like a circus ringmaster making an announcement.

(69) ID 624: 26-FM. 23:20 (ASD: 6;10)
Transition from the WPPSI-III – object assembly subtest to the block design subtest. FM is sitting at the table to begin with but leaves in line 11. A is on camera with her back to the view and she is writing things in her notebook. She doesn’t appear to be paying attention to FM until line 20.

1 ((beep))
2 A: ve(h)r(y) good. you did- that was the last one and you did it
3 really really well=
4 FM: =four. twenty four seconds is the biggest number.
5 A: yeah that was really good you should be very proud that was
6 very very good working [well done]
7 FM: [ X X X ] that but that (wasn't very
8 much) X (. ) I wanna go get a new toy:
9 A: yeah you can go and choose another toy fr’m from outside if
10 you’d like;
11 (3.3)/{(FM walks off-camera, sound of door opening)}
12 FM: ((emphatic))and this is going to be the hardest (. ) one you’re
13 never going (to do).
14 -> A: ye(h)ah?
15 FM: ((emphatic))can we (make) a "cubby house.
16 A: huh huh
17 FM: you need to help me carry it.
18 (0.9)
19 ((beep))
20 A: ye- oh- ah you [want me to help you carry it]
21 [((A stops writing and gets up and walks towards
22 FM, so is now also off-camera))]
23 (.)
24 FM: yeah the cubby house. I think I’ll put this somewhere else.
25 (1.8)
26 A: we could take that back out ;here if you like.
27 (1.7)
28 FM: hey (. ) why are there other tables then on the (. ) white mat.
29 A: because we’re gonna just do some playing ((trails off))

In excerpt (69), FM leaves the room to get another toy (line 11) and announces that this will be the ‘hardest one you’re never going (to do)’ (line 12-13). This turn appears to be designed by FM as a pre-announcement for the upcoming play. A responds to this turn with a PMY. While still using a play-emphatic, announcement voice FM poses the question in line 15, ‘can we (make) a cubby house.’ The vocal quality and intonation of this turn makes it sound like a rhetorical question, rather than a genuine question seeking permission from the adult to build a cubby house. In support of this understanding, A responds to this turn by demonstrating enjoyment of the performance, by her response of laughter in line 16, rather than providing a yes/no response to the interrogative question posed. This response can be contrasted with the next turn where FM switches from the
emphatic voice to his normal speaking voice (line 17) to ask for assistance carrying the cubby house ('you need to help me carry it'). This effectively communicates to A that this turn is spoken outside the play scenario and requires a genuine response. In lines 20-23 she clarifies what FM is asking while she stops what she is doing and moves to assist him.

Thus the turn following the PMY is a fairly straightforward continuation of the child’s turn prior to the PMY. Both the turns prior to and following the PMY are said in the same emphatic play-oriented voice which communicates to A that it is produced ‘in fun’ or ‘in pretence’. Further, lines 12-13 and 15 appear to be designed as a pair which operate together, with lines 12-13 serving as a pre-announcement to line 15, and both turns produced within the play scenario to build suspense.

Excerpt (70) demonstrates a topic continuation which takes place towards the end of the session during the free play session. The free play session is the only part of the interaction where the activity is led by the child. As discussed at excerpt (50), CT does not appear to be producing a clear narrative in this play sequence, so it is unclear where topics, and play sequences, begin and end. However, there is some evidence for this being a topic continuation when considering the objects which the child uses during the ongoing interaction.

(70) ID 620: 19-CT. 1:18:36 (ASD: 4;8)
Free play session. Participants are sitting on the mat, facing one another. CT is surrounded by objects and toys. She has a hard plastic plate in her hands when this excerpt begins.

CT: (play)
1 CT: a bar,
2 (1.2)
3 CT: a drum
4 ((CT bangs her hand against the plastic plate))
5 A: oh, that could be a drum. a good idea. good one.
6 (2.4)/((CT bangs it twice more then drops the plate, and picks up a plastic spoon))
7 CT: (it’s going to use) this
8 A: ooh.
9 CT: um some
10 (1.6)/((CT picks up a pipecleaner))
11 CT: s:ome (bark)
12 A: ye(hh)ah?
13 CT: some [turn (it ar) hh (1.7)*and* <turn around> (1.0) a::r::oun]
14 [ . (( CT twists the pipe cleaner around the spoon )) ]
15 (0.8) X:‘s (1.4) [and I’ll make an (end).]
16 [((CT holds out the spoon with pipecleaner twisted around it towards A))]
17 A: oh, an egg. good one.

CT is surrounded by play objects in excerpt (70) and in lines 4-5, she is holding a plastic plate in one hand and hitting it with her other hand while she says the words ‘a drum’. The actions match the verbal description well and A responds with a lot of encouraging feedback in line 6. CT plays with the plate a bit longer then drops it which appears to close down ‘the drum’ as a topic of conversation.
lines 7-8, she picks up a plastic spoon and says ‘(it’s going to use) this’ (line 9). It is unclear what ‘it’ refers to in this turn, however, ‘this’ likely refers to the spoon. A’s response to this in line 10, ‘ooh’, displays interest and understanding, or at least does not display a lack of understanding. The following turns appear to build on this same play scenario with CT keeping the spoon in her hand as she additionally picks up a pipe cleaner, and she then says ‘some bark’ in line 13. This is followed by A’s PMY which CT follows by repeating the word ‘some’ followed by ‘turn (it ar) hh and turn around, arou’ which again match her actions nicely as she twists the pipe cleaner around the plastic spoon (line 16). The grammatical design of the turn does not offer much evidence that the turns prior to and following the PMY in line 14 are a topic continuation, and thus that CT is orienting to the PMY as if it is a continuer. However there is evidence of this in CT’s non-verbal actions, as she can be seen developing a play scenario with the spoon and the pipe cleaner in lines 8, 9, 12 and 13 and after the PMY in lines 15-19.

The next excerpt, (71), takes place in the WPPSI-III, object assembly subtest, and the child, GM, has just finished a puzzle of a bird. His gaze is then primarily focused on the clock puzzle in front of him.

(71) ID 621: 20-GM. 1:13:38 (ASD: 4:9)
WPPSI-III - object assembly subtest. Participants are sitting at table, facing one another. GM has just made a puzzle of a bird.

1  GM:  twee tweet (. ) [ tweet ]
2   A:     [ that was ] great,
3  GM:  [ tweet ] tweet tweet [ tweet ]
4   A:  [ no:w, ]  [ w- make- ] make the bird fly over here, 
5   ‘cause I’ve got another [ one. (. ) now these make a clo:ck. ]
6   {((A places puzzle pieces on the table
7       in front of GM))}
8   A:  put them together as fast as you can.
9   (9.4)
10  ((beep))
11  A:  wo:w. that was fast GM. very very good, that’s a nice big
12     clock well done.
13  GM:  <o::n::e>
14  (1.3)
15  GM:  (’s marks nock). (marks nock)
16  -> A:  ye(hh)ah?
17  GM:  ma- (. ) big hand on O:N:e.
18  A:  ye(hh)ah, the big hands on the one. very clever.
19  (1.0)
20  A:  excellent.
21  GM:  making (. ) a XXX. (. ) .hh and you XX that’s not working.
22  (0.8)
23  A:  yeah, the big hand is almost on the one. well done.
24  .hh have a [look at this one. ]
25  {(( A places next pieces of puzzle out))]
26  A:  wooo:h, [I’ll pop these over there. ]
27  {((A slides clock puzzle pieces to the side))]
28  these make a ca::r.

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The clock on the puzzle is set to the time of 5 past 10, so the ‘big hand’ is on the one on the clock face. In the line preceding the PMY, GM says a very lengthened ‘one’ in line 13, then after a pause says something which sounds like ‘marks nock’ twice over. This turn is followed by a PMY. GM then begins a turn with a truncated ‘ma’ and repairs this with ‘big hand on one’ which is produced with more clarity than the preceding talk. The word ‘one’ in line 17 appears to be a re-saying of the word ‘one’ in line 13 with both spoken in a slow, drawn-out manner when compared to the surrounding speech by GM. While it is tempting to view the turn ‘big hand on one’ as an expansion, and therefore a repair with additional content of the word ‘one’ in line 13, due to the articulatory difficulties present in lines 13-15 and my inability to understand this talk, there is insufficient evidence to categorise this as a repair. However, there is evidence that no major topic shift has occurred as GM is still referring to the word ‘one’ and appears to be physically orienting to the clock puzzle before and after the PMY, in lines 13-15 and 17. As with the previous example, this is supported by the non-verbal information in the interaction, with GM’s eye gaze consistently on the puzzle during the lines 6-17 of the excerpt. For this reason I have categorised this as a continuation of the prior topic more generally.

The following excerpt, (72), occurs almost half an hour into the testing session during the WPPSI-III, vocabulary subtest. MV answers the question ‘what does glow mean’, with a reason for her inability to answer the question (‘I don’t know’), and then seems to offer a candidate answer (‘fish’), followed by kissing/fish noises (‘((mwah mwah mwah))’).

(72) ID 627: 29-MV. 28:46 (ASD: 4;3) – abridged
WPPSI-III – vocabulary subtest. Participants are sitting at the table, facing one another.
14 A: good .h what does glo:w mean.
15 (0.3)
16 MV: <I don’t know> (fish) mm: ((mwah mwah mw[ah ]) ) |=
17 -> A: [ye(hh)ah?]=
18 MV: =((mwah mwah mwah))
19 (0.6)
21 (0.2)
22 MV: a FIsh um [((mwah mwah mwah))] 
23 A: [fish oh:: I see. ] .h goo:::d.
24 (0.2)
25 MV: (a dolphin and) (0.3) X:=
26 A: =ye(hh)ah what does <Polite> mean.

On MV’s final fish noise in line 16, A produces a PMY in overlap, and MV keeps producing the fish noises into line 18. While the transcript makes this look as if line 18 could be a repair of the three fish noises in line 16, this is a product of the representation of the interaction. In the audio-visual recording of the interaction the three fish noises are not grouped together, intonationally or otherwise, rather the six instances across lines 16 and 18 occur as one stream of fish noises. In line
with this, it sounds as if MV continues to produce the fish sound irrespective of A’s PMY in line 17, or is perhaps encouraged to continue making this noise by the adult’s PMY in line 17. A treats this response to the question, ‘what does glow mean’, as insufficient by re-asking the question in line 20. The child orients to this as if it is a repair initiator, or at least a request for repetition, by re-saying the same answer she supplied in line 16, which is a ‘fish’, followed by fish noises.

The final excerpt, (73), is from the WPPSI-III, vocabulary subtest, with the child LL. She is providing a definition of an umbrella while she is also swinging on her chair.

(73) ID 622: 22-LL, 24:48 (ASD: 5;7)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another.

1 A: now tsk could you tell me what is an umbrella.
2 LL: umbrella (0.5) um you use it for y- rain;
3 A: good.
4 LL: and [peep- when it’s raining you can pla:y in the rain with= pick up the chair by her legs)]
5 LL: =your umbrella?
6 A: goo:d.
7 LL: [I’m doing tri:cks:]
8 (0.4) )))
9 LL: you didn’t look at me.
10 (0.8) ))
11 A: ""s see"
12 LL: watch.
13 (0.8)/((LL moves the chair from side to side with its legs off the ground))
14 A: OH:::: huh huh
15 (0.9)/ ((LL audibly panting))
16 LL: bicycle (0.3) you ride on it.

In excerpt (73), while providing a definition of ‘an umbrella’, LL shifts her bodyweight forward on the table and picks up all four chair legs so they are in the air in lines 5-6. The chair stays in the air until lines 19-20 and in line 9 she refers to as ‘doing tricks’. After a 0.5 second pause, A produces a PMY and after another pause, LL says ‘you didn’t look at me’ in line 15. The turn following the PMY, line 15, appears to be a comment directed towards A’s actions (or lack of orientation) rather than a response to the PMY. After further requesting A to watch (line 18) and moving the chair in the air again (lines 19-20), LL receives some suitably impressed sounding feedback from A in line 21 which appears to close the topic and allows A to move onto the next test question. LL’s verbal and non-verbal actions before and after the PMY appear to be a continuation of her tricks with the chair and A’s PMY in line 13 seem quite unrelated to its progression.

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6.4.2.3 Non-response

As with the excerpts from interactions involving TD children, a non-response appeared to be an acceptable response to a PMY in the interactions involving children with ASD. While there were only two excerpts identified demonstrating a non-response following a PMY in interactions involving TD children, there were four identified from the 12 excerpts from interactions involving children with ASD. Non-responses following a PMY produced by TD children were not oriented to as if they were problematic by either participant. For the most part, this finding was consistent with the interactions involving children with ASD. However, there was one excerpt (ID 626) where the adult pursued a response after the child did not provide one. This is discussed at (77).

The following excerpt, (74), demonstrates an unproblematic non-response following the adult’s production of a PMY. In this excerpt, the adult and child, FM, are transitioning back into the room after a break. A is sitting at the table, setting up the next task and attempting to get FM to come to the table for the task, while he is more interested in the play mat.

(74) ID 625: 26-FM. 26:07 (ASD: 6;10) – abridged
Transition back to the room. The camera angle is pointed at the table where the next task is planned to take place, however both participants are off camera when this excerpt begins. When the excerpt begins FM is distracted by some food left in the room and A is encouraging him to throw it in the rubbish bin. A comes on camera in line 10 and FM comes on camera in line 25.

15   A:    yeah a long time ago. now I’ve got something else to show you,  
16   FM:    now will we play something on (that/mat).  
17   A:    yeah we’re going to in a minute.  
18   we’ve got some good toys to play with on the mat.  
19   (1.6)  
20   FM:    and I WOnder Why you have (.) THIS under the mat.  
21   -> A:    ye(hh)ah? huh huh  
22   (1.5)  
23   A:    have a look at these shapes that I’ve got he[re, ]  
24   FM:    (((si)gh)  
25   (1.7)‘/((FM comes over to the table and sits down))  
26   A:    no::w  
27   (1.2)  
28   tsk .hh have a look at the shapes up at the top,  

It is unclear what ‘this’ refers to in line 20, as FM is off-camera when he produces it. Following this turn, A produces a PMY which additionally has two laughter syllables after it, although these are produced within a different intonation contour. Neither participant responds to the PMY verbally and there is a 1.5 second pause. While A is sitting at the table and FM is off-camera it is unclear what is happening in the room. A’s head is off-camera at this point and it is unknown whether she is looking towards FM during this pause. After 1.5 seconds of silence, A self-selects as next speaker in line 23 with a turn designed to encourage FM to move to the table and participate in the next task by inviting him to ‘have a look’ at the stimulus objects she has on the table. FM joins her, albeit
somewhat reluctantly, beginning his movement toward her with a sigh (line 24). There is no evidence in lines 23-28 that either participant orients to the pause in line 22 as interactionally problematic.

The following excerpt, (75), demonstrates another unproblematic non-response to a PMY. This excerpt occurs during the WPPSI-III, vocabulary subtest, with the child PO.

(75) ID 628: 38-PO. 32:21 (ASD: 4;8) – abridged
WPPSI-III – vocabulary subtest. This session is recorded in the child’s home. PO is lying on the mat on his stomach with his head in his hands. A is mostly off camera, sitting cross legged, facing PO.
7 PO:  [I can't make children .h and babies when they're hungry,]
8 A: [very good;]
9  (3.3)
10 PO:  [un I'm very good at guessing.]
11 -> A:  [ye(hh)ah;]
12  (0.9)
13 A:  [what’s a dog.]
14 PO:  [a dog is h .h different kind of (.) pets.]
15 A:  [yeah very good perfect.]

After PO produces a metacomment about his performance on the task in line 10, A produces a PMY. This is followed by a 0.9 second gap in line 12, before A continues on with the next testing question, ‘what is a dog’.

Excerpt (76) also occurs in the WPPSI-III, vocabulary subtest, and also has a notable pause after the PMY in line 13. In this excerpt the child, CT, performs non-verbal actions after the PMY, however these do not seem to have a communicative function.

(76) ID 619: 19-CT. 38:01 (ASD: 4;8) – abridged
WPPSI-III – vocabulary subtest. Participants are sitting at table, facing one another.
8 CT:  [I can't]
9  (((CT attempts to pull up both her sleeves)))
10  [(that’s grey).]
11  (((CT puts her right arm out again with fingers pinched, then forms a fist))]
12 -> A:  [ye(hh)ah;]
13  (0.9)
14 A:  [what is (.) a castle (.)]
15 CT:  [hh .hh]
16  (((CT looks down straight after A’s yeah, then sits down, with eyes fixed on A’s worksheet))]
17  (2.3)
18 A:  [what is (.).] a castle. (.).
19 CT:  [a cars::]
20  (1.2)
21 CT:  [uh a princess.]
22 A:  [go:::od,]

In lines 8-12, CT produces a turn which is both difficult to transcribe and understand. A follows this with a PMY in line 13. After the PMY, CT audibly breaths out and then in, while she looks down at the adult’s testing page and sits down without shifting her gaze. Following this is a pause of 2.3 seconds.
A then progresses the testing session by asking the next test question, ‘what is a castle?’ (line 18). Rather than pursing a response to her prior question of ‘what is a hero’, which she does not appear to have received a satisfactory answer to, A ‘lets this pass’ in the interests of progressing the test session.

A similar reaction by the adult to the non-response from the child is seen in excerpts (74), (75) and (76), as well as both excerpts (64) and (65) from section 6.4.1.4 examining non-responses to PMY in interactions involving TD children. In all of these excerpts, there is a notable pause after the adult produces the PMY, and she then self-selects as speaker and uses the turn to progress the testing activity, either by providing encouragement for the child to continue or by asking the next test question. The occurrence of these sequences make public the tension that exists for the adult between being a good interactant and being a good test administrator. The latter seems to result in a low investment on the part of the adult to maintain mutual understanding on things that do not adhere closely to the testing schedule.

Excerpt (77) is another example of a non-response after a PMY, although this one is the only case where the adult attempts to pursue a response, rather than accept a non-response. This excerpt occurs very early in the testing session where the child, MV, is completing the WPPSI-III, block design subtest.

(77) ID 626: 29-MV. 4:24 (ASD: 4;3) – abridged
WPPSI-III - block design subtest. Participants are sitting at the table, facing one another.
10 A: have a go at making that one.
11 (beep beep)
12 (11.0)/((MV arranges her set of blocks))
13 MV: (same?)
14 A: YEAH VERY good. well well done that was excellent.
15 MV: see XXX
16 -> A: ye(h)ah?
17 (1.2)
18 A: (an idea?)
19 MV: throw it
20 A: ah you throw it
21 (1.5)
22 A: now this time tsk I'm going to put the blocks together to make
23 this design,

In this task, MV completes the task requirements in lines 12-13 by making a design out of blocks to match the design A has made out of her own set of blocks. In line 15, MV produces untranscribable talk and A responds to this with a PMY. After the PMY, 1.2 seconds pass before A speaks again with something that sounds like ‘an idea?’. With lines 15 and 18 difficult to transcribe, it is hard to know whether the talk by A in line 18 is a ‘candidate guess’ of line 15, and therefore a repair initiator, or questioning whether MV has an idea to contribute, if my best guess is correct. However, it is clear
from the high rising intonation that it minimally seems designed to mobilise a response. If A’s response is further designed to produce a clarification or repair from MV then this is potentially indicative that the silence in line 17 is problematic to some degree. Additionally, MV follows A’s high rising turn in line 18 with the suggestion, ‘throw it’, and A’s response to this indicates that she is satisfied with the suggestion, first orienting to it as new information with the news-marker token ‘ah’ and then producing an expanded repetition of line 19 which demonstrates understanding of the turn. This appears to finalise the topic and after a pause, A then moves onto the next task.

The adult’s reason for pursing a response following a PMY in this instance while not doing so in the five other excerpts which demonstrate a non-response to a PMY, is not clear. As discussed in chapter 4, the block design subtest is an assessment of non-verbal performance and thus little verbal interaction is required to successfully complete the task. Thus it is unusual that it is during this task that A does try to pursue a verbal response when it is unconnected to the goals of the task underway. MV’s turn in line 15 which the adult aims to understand is unimportant for the scoring of the task. However, the fact that this occurs only four and a half minutes into testing is likely important. Building rapport in the early stages of the testing is likely to be beneficial for compliance and performance throughout the rest of the testing session. The fact that A does pursue a response here provides some evidence that she has produced the PMY in line 16 as an attempt to initiate repair.

6.4.3 Summary of findings in the turn following PMY

The findings from analysis of the turn following a PMY in both interactions involving TD children and children with ASD reveal much about the nature of this token within interaction. Chapter 5 demonstrates that the turns following the adult’s production of an OCRI device were almost always repair attempts, and in the two instances where a repair was not attempted, this was oriented to as being interactionally significant. In contrast, the findings from analysis of the turn following a PMY demonstrate a more diverse range of appropriate responses by the child. This includes responding with an affirmative response token, a continuation of the topic or a non-response. In most excerpts it was found that PMY still mobilises a response of some kind, whether it is a repair or a continuation or a confirmation, however, there is also evidence that a response is optional.

Both groups of children oriented to PMY as if it was repair initiator, however this response was more common in the interactions involving TD children where six out of 15 excerpts analysed demonstrated this response, compared with three out of 12 excerpts from the interactions involving children with ASD.
The most striking difference between the groups concerns the use of affirmative response tokens to respond to PMY. Orienting to a PMY as if it is performing a request for confirmation was fairly common in the interactions involving TD children, with six out of 15 analysed excerpts demonstrating this response type. However, this response was not found in the excerpts from interactions involving children with ASD.

Orienting to the PMY as if it is a continuer was also a source of difference between the groups. This response was rare in the interactions involving TD children where only one excerpt demonstrated a topic continuation. In contrast, this was the most frequent response type from interactions involving children with ASD, with five excerpts demonstrating this response type.

A non-response was also an acceptable response to PMY. Two excerpts demonstrating non-response were identified in the interactions involving TD children, while four were found in the 12 excerpts from interactions involving children with ASD. In the majority of these cases (five excerpts), a non-response was not interactionally problematic, however in one occurring very early on in a testing session, a response was pursued by the adult.

Further analysis of the turn following a PMY reveals TD children orient differently to PMY when compared to children with ASD. This is most apparent when the findings from the response categories of repair attempt and affirmative response tokens are grouped together and compared with the findings from the combined categories of topic continuation and non-response. There is a sound basis for dividing the response types in this way. Both repair initiation and requests for confirmation are concerned with performing establishment and maintenance of intersubjectivity, the former by appealing to a participant for a re-saying of something not understood and the latter by checking understanding of a previous turn. While continuers can also perform this function by providing space for participants to expand on their turn, they do not overtly appeal to participants to maintain or re-establish intersubjectivity in the same way. Orienting to the PMY as if it is a continuer does not signify that the child is mobilised to respond specifically to the PMY. Thus, the combined categories of topic continuation and non-responses can form a broader category of response which does not demonstrate orientation to the PMY as if it is related to the establishment or maintenance of intersubjectivity.

In 12 out of the 15 analysed excerpts, or 80 per cent of excerpts, TD children oriented to PMY as if it was a repair initiator or performing a request for confirmation. This shows that TD children often orient to PMY as a response mobilising device concerned with the establishment and maintenance
of intersubjectivity. In only three cases, or 20 per cent of analysed excerpts, TD children orient to PMY as being unrelated to intersubjectivity. Interestingly, this pattern is reversed when examining findings from the children with ASD. Only three out of 12 excerpts from the interactions involving children with ASD, or 25 per cent, oriented to PMY as if it was related to establishment or maintenance of intersubjectivity. The majority of responses from children with ASD (nine out of 12, or 75 per cent) orient to PMY as being unrelated to intersubjectivity.

6.5 Conclusion

This chapter has described a phenomenon which has not been described previously which I have named prosodically marked yeah (abbreviated to PMY). I began this chapter by providing a description of the phenomenon in terms of its linguistic form, as a version of the response token ‘yeah’ which is a minimal response to previous talk, has a high onset and high rising pitch contour and contains tremulous laughter participles within the response token, which also lengthen the token.

By examining this data set in an ‘unmotivated’ way, I found that such a token was fairly common from the adult speaker in these interactions and often elicited a response from the child which seemed to orient towards the token as if it was seeking to maintain intersubjectivity. I initially approached PMY as if it was a repair initiator in the same way that OCRI examined in chapter 5 initiates repair. However, it became clear that PMY is not always oriented to as if it was initiating repair. This token has more flexibility in the way it is used and understood and rather than demonstrate that a prior turn requires re-saying, PMY appears to be a more subtle marker of a breakdown of intersubjectivity, when compared to a prototypical repair initiation device such as OCRI examined in chapter 5.

In section 6.3, I analysed the turn prior to the PMY to better understand the environment which precedes a PMY produced by the adult. There were instances of mishearing in the turn preceding the adult’s productions of a PMY, particularly due to a lack of orientation in the interactions involving children with ASD, however, the presence of overlap did not seem to play a major role in environments leading to PMY. Findings indicate that problems with hearing the turn were not a major factor contributing to the elicitation of PMY and in such situations it may be more common for speakers to produce a prototypical repair initiator, such as an OCRI device. There were also instances of sequentially disaligned turns in the environment preceding a PMY and these were especially prevalent where activities pursued by participants appeared to be disaligned. However, the most common factor in the turns preceding the PMY in interactions with both groups of children, seemed
to be related to recipient design. In particular, turns preceded PMY when they exhibited unclear referring expressions which made the turn difficult for the adult to contextualise and understand.

In section 6.4, I analysed the turn following the PMY to understand how children in these interactions oriented to the PMY. Children responded to it by producing a repair (‘he’s gonna buy a new car’ ‘ye(hh)ah?’ ‘he’s gonna buy a new car’), by issuing a confirmation token (‘that was being a (woom).’ ‘ye (hh)ah?’ ‘yep’), by continuing with the topic (‘courage the (courageing) dog... ‘cause I watch that’ ‘ye(hh)ah?’ ‘and when there’s monsters... Courage goes AR:::GH’) or even with a mixture of all three of these responses (‘some old tiddies’ ‘ye(hh)ah?’ ‘yeah, some old teddies, there’s Snow Teddy and Morris’). Further, when a child did not respond to the PMY, it was not usually treated as interactionally problematic by either participant.

There was a key difference between the ways in which TD children oriented to the PMY when compared to the children with ASD. TD children were much more likely to respond to the PMY with either a repair attempt or an affirmative response token than the children with ASD (80 per cent of excerpts compared with 25 per cent). In the interactions involving children with ASD, 75 per cent of turns following PMY either continued with their previous topic or did not respond to the PMY, while only 20 per cent of excerpts from interaction involving TD children demonstrated these response types. This finding demonstrates that TD children usually orient to PMY as if it was an appeal to repair or maintain intersubjectivity, while children with ASD usually orient to the PMY as if it is unrelated to functions of establishing or maintaining intersubjectivity.

When I examined OCRI in chapter 5, I found few differences between the two groups of children involved in these interactions. In some ways, this finding was to be expected as the group of children with ASD were high functioning and few statistically significant findings were found on cognitive test results between the groups in the original study for which this data was collected. However, analysis of a more ambiguous marker of a breakdown in intersubjectivity has provided scope to explore the differences in the ways that children with ASD interpret and respond to interaction around them. This chapter has analysed the talk around one response token to find very subtle ways in which the children with ASD in this data orient to interactional devices in different ways to their TD peers.
7 Discussion and Conclusion

7.1 Introduction

Research into many areas of ASD has expanded over the last few decades. Over this time there have been major advances in our knowledge of the genetic aspects of ASD, neurological differences in people with ASD, the symptomology of ASD, early identification and diagnosis of ASD and effective interventions for children with ASD which lead to improved life outcomes. However, research into language use by people with ASD has not made such gains, with research findings typically generating results which are contradictory, inconclusive and somewhat dissatisfying (Tager-Flusberg, 2017).

Interactions with people with ASD are often characterised as being atypical, unusual or unsatisfactory, however traditional language research has struggled to find common patterns of language use across people with ASD, or isolate a common underlying reason for differences found. A cognitive skill which has long been associated with the language difficulties in people with ASD is that of Theory of Mind, or ‘the ability to conceive of mental states or, to attribute thoughts and emotions to others’ (Premack and Woodruff, 1978; 515). While it is well established that children with ASD as a group take longer to pass standard false belief tasks, some children with ASD do not exhibit this delay and the link between Theory of Mind abilities and language abilities has been difficult to define. Further, interactional research using naturalistic spontaneous data suggests that results from false belief tasks may not accurately reflect the abilities of children with ASD to understand other’s perspectives in their everyday life, where there are more contextual cues to draw on (Kremer-Sadlik, 2004).

Traditional approaches to language research in ASD are generally carried out using experimental, quantitative research designs to both elicit and analyse data. They generally have a focus on isolating deficits rather than abilities, and are designed to identify common trends across the whole group of people with ASD, rather than identifying individual variation. In a disorder defined by its heterogeneity (APA, 2013), it is unsurprising that finding robust trends has been elusive. Prominent researchers in the field have been suggesting that more innovative approaches to studying language in ASD are required, which pay more attention to individual difference and begin to ask different questions (Tager-Flusberg, 2017; Brock, 2014).
CA presents itself as a useful methodological candidate for such a pursuit for three reasons. Firstly, the importance this methodology places on all aspects of interaction, rather than just language, is in line with current thinking conceptualising ASD as a social disorder which then affects language use.

Secondly, CA is an emic approach which uses evidence within an interaction on which to base claims. Thus, it focuses on what participants within an interaction view as being relevant, important or unusual (Sacks, Schegloff & Jefferson, 1974), rather than relying on what an independent coder may view as relevant, important or unusual. This approach provides the flexibility to explore aspects of talk that the participants demonstrate as being worthy of analysis, rather than being constrained by hypotheses and research designs developed before data was collected or analysed. Thus, CA provides a framework to view interaction from an other’s perspective. This is necessary when the analyst is researching a group in which they do not have membership, such as children or people with communication disorders (Danby, 2002).

Finally, as discussed in section 3.3.3.1, CA has the ability to examine both individual variation and trends across a group. As a finely grained form of analysis, CA provides a framework to understand the complexity of human behaviour on a case-by-case basis. However, broader hypotheses are developed from aggregates of cases. Increasingly, and as our knowledge of interactional phenomenon becomes more detailed, CA is being used to find commonalities and differences within groups (for discussion see Stivers, 2015, and for an example see Solomon et al., 2016). The flexibility to examine both variation and trends has great potential in a research area such as language in ASD, where individual variation between people with ASD can be especially striking and attempts to find trends have been inconclusive.

In this thesis, I analysed a corpus of approximately 60 hours of interaction in a clinical testing environment to provide an exploration of some behaviours related to intersubjectivity involving children with and without ASD. Unlike traditional approaches to language research in ASD, I build on research which uses finely grained interactional analysis to demonstrate the competency of all participants in the local context of the interactions, alongside their differences. Additionally, I explore participants’ ability to understand another’s perspective by analysing the moment-by-moment demonstration of intersubjectivity between participants, rather than viewing such ability as an absolute cognitive milestone which can be assessed at a point in time, independent of context. Additionally, in chapters 5 and 6, I analysed excerpts individually to ensure all instances were accounted for and I then compared findings from interactions involving TD children and children with ASD.
In the remainder of this chapter, I provide a summary of the thesis which highlights the main findings, discusses limitations of this research and highlights three main contributions this work makes to existing research. These include furthering CA research on communication disorders, contributing to the growing body of work in CA by describing a new phenomenon and furthering our knowledge of interaction in ASD. Within each of the areas of contributions relevant options for future research are discussed.

7.2 Summary

In chapter 1, I provided an overview of the study and described the structure of the thesis. The chapter introduces CA as the methodological approach used in this study and provides an argument as to why it is well suited to study pragmatic aspects of language in ASD.

In chapter 2, I reviewed the literature relevant to this thesis. The chapter began by giving an overview of ASD, including a brief history of the disorder as separate and distinct, and the evolution of our understanding today of ASD as a spectrum disorder. I also outlined the current diagnostic criteria and tools for diagnosis, which continue to develop alongside our understanding of ASD. I discussed the prevalence of ASD and its causes, noting that for the majority of cases no known cause has been identified.

I then provided an overview of current understandings of language abilities and impairments in ASD. While language impairments are not currently considered a core component of ASD, the DSM-5 identifies deficits with social communication as required for a diagnosis of ASD to be made. Reflected in this, pragmatic aspects of language, or the use of language in context, are understood to be the most impaired aspect of language in ASD. Structural aspects of language appear to be relatively intact. However, each structural aspect of language has areas of specific difficulty for children and adults with ASD, including:

- constructive morphology, particularly use of past tense markers;
- difficulties with prosody, particularly stress; and
- difficulties acquiring some semantic categories, particularly mental state terms and socio-emotional terms.

Many children with ASD experience significant language delays and many adults with ASD experience pervasive difficulties with communication throughout their lifetime.
I then provided a more detailed overview of CA, and examined the literature relevant to research on communication disorders and intersubjectivity which has been undertaken using interactional approaches. I began with a brief history of the development of CA and discussed some of the core foundations or assumptions of the tradition. These include:

- an emphasis on the use of naturally occurring, recorded data to ensure the authenticity of findings and to enable robust analysis;
- a focus on action formation within interaction rather than analysis of content or topic;
- a focus on sequential organisation or how turns are related to one another; and
- the conceptualisation of context as being locally created within an interaction rather than dependent on attributes outside the interaction.

I then discussed CA’s application to institutional data sets. Interaction can be perceived as institutional when at least one participant’s professional identity is made relevant to the goals they attempt to achieve in talk. Following this was discussion as to how CA has been applied to interactions involving people with communication disorders. I first discussed some foundational work on aphasic language and then focused on the small but growing body of work focused on interaction involving people with ASD. On reviewing this body of literature, I concluded that research shows that:

- Participants with ASD can exhibit sophisticated coordination of turns and actions with their interactional partners and use coordinated non-verbal contributions to great effect.
- Some symptoms of ASD, or behaviours associated with ASD, may be better understood as strategies to serve local communicative needs.
- The role that interactional partners play in interaction is important both for how interactive behaviours manifest, and for the extent of participation by, and inclusion of, individuals with ASD.

I then discussed how CA conceptualises a primary focus of this thesis; intersubjectivity. For conversation analysts, intersubjectivity is locally-created through the collaborative exchange of social actions. Thus, interaction is viewed as the site for the establishment, maintenance and restoration of intersubjectivity, rather than as a reflection of underlying cognitive skills relating to intersubjectivity. A central way of monitoring intersubjectivity in interaction is through the mechanism of repair, or ‘the practices for dealing with problems or troubles in speaking, hearing and understanding the talk in conversation’ (Schegloff, 2000: 207). In line with this, the rest of this chapter focused on repair, first providing an overview of the general CA literature, then examining how this has been applied to TD children and people with ASD, both using developmental research
approaches and using interactional approaches. Research indicates that children demonstrate understanding of the need to repair and can use basic repair strategies before they can talk. As they develop more sophisticated language, the repair strategies they use also become more sophisticated. Findings relating to children with ASD demonstrate that they are highly motivated to produce repairs, however, they are more likely to produce inappropriate responses to repair initiations, including ambiguous or idiosyncratic language or challenging behaviours.

In chapter 3 I provided a description of the data, method and approach to analysis undertaken in this thesis. The chapter began by providing background information on the corpus used for this study which consisted of 60 hours of interactional data of children, with and without ASD, taking part in a battery of tests in a clinical laboratory environment. Data collection took place in 2005 and 2006 under the direction of developmental psychologists Dr Rachel Kelly and Prof Cheryl Dissanayake at the Olga Tennison Autism Research Centre (OTARC; formerly the Child Development Unit) at La Trobe University, Melbourne, Australia, as part of a quantitative research study focused on executive functioning and pretend play abilities. The participants consisted of 40 children; 20 TD and 20 with a diagnosis of either autistic disorder or autism spectrum disorder, based on the DSM-IV or DSM-IV TR criteria (APA, 1994; 2000). The data had not been previously transcribed, and for the purposes of the current study, I transcribed the interactions using CA conventions and isolated excerpts of interest for closer analysis. Excerpts of interest included any instances demonstrating behaviours which exhibited intersubjective breakdown, maintenance and restoration, particularly repair sequences. Analysis presented in this study deviates from a pure CA analysis in two ways; I use basic quantification and I compare two groups of children based on diagnostic information external to the recorded interactions.

In chapter 4, I began to explore the data by describing it in terms of participation and sequence organisation. This chapter was designed as a backdrop for the reader to understand the nature of the interactions analysed over chapters 5 and 6. In this chapter, I described aspects of the data which make it institutional in nature. Here, the most important factors were found to be the goal oriented focus of the interaction and the constraints on participation due to interactants’ prescribed roles as test administrator and test taker. The tasks the children undertook varied with respect to the precise nature of the constraints, however, most typically elicited an initiation-evaluation-response (IRE) sequence or a variant on this sequencing. I described each task in reference to the IRE variant it usually produces including standard IRE sequences as well as those with nonverbal initiations, lists in the response slot, and actions in the response slot. Additionally, the child-led free
play session was found not to typically feature IRE sequences, but does still include constraints on participation, particularly for the adult participant.

In the second half of chapter 4, I focused on aspects of sequence organisation which demonstrate problems with intersubjectivity. Repair sequences provide insights into the establishment, maintenance and restoration of intersubjectivity within interaction. This chapter provided an overview of repair sequences related to intersubjectivity found in the data set. These sequences include same turn repair, next turn repair, third turn repair and third position repair. The chapter ended by discussing two other practices which impact on the maintenance of intersubjectivity in the data set. These are negotiations over pretend items or actions which can make the establishment of intersubjectivity challenging, as references in the talk need not be found within their shared play space and a practice known as ‘letting it pass’ which occurs when misunderstanding takes place, but neither party orients to it as problematic.

In chapter 5, I looked in more depth at one type of repair sequence which was commonly found in the data set; open class repair initiation (OCRI; Drew, 1997). This is when repair is initiated in the next turn by the ‘other’ using a weak token claiming only that something has not been heard (‘sorry?’, ‘huh?’ or ‘What?’). I identified 27 instances of the adult producing an OCRI device in the data set. There were 16 instances identified in interactions involving TD children and 11 in interactions involving children with ASD. I found the adult participant in these interactions most commonly used the token ‘sorry?’ as an OCRI device. The first half of this chapter examined the environment which leads to the use of an OCRI device. In support of Drew (1997), I found that OCRI produced by the adult often occurred following a sequentially inapposite turn, or turns where a hearer ‘understood’ what was said in the literal sense, but may not have understood its coherence, sequential or ‘activity’ connectedness to the prior talk. In the interactions involving TD children, I found that many sequentially inapposite turns resulted from the child trying to feel out the demands of the clinical testing environment. However, in the interactions involving children with ASD, I found only one instance of this same phenomenon. Additionally, sequentially inapposite turns due to activity disalignment between participants was found in the interactions involving TD children, while there was only one clear example demonstrating disalignment of the pursued activities in the interactions involving children with ASD. Another difference between the two groups occurred when the trouble source was due to overlapped speech. In the interactions involving TD children, overlaps overwhelmingly occurred as ‘interruptions’, which took place during the adult’s unfinished TCU, while only one of these occurred during a TCU in the interactions involving children with ASD.
The second half of chapter 5 examined the turn/s following the adult’s production of the OCRI device. Here I found that responses to OCRI devices initiated by the adult overwhelmingly resulted in a repair by both groups of children, usually taking the form of a re-saying. However, the way in which repair was carried out varied between the groups. The TD children commonly responded to an OCRI device with a full lexicosyntactic repetition of the trouble source turn, with the same or altered intonation. However, the children with ASD never used this strategy to repair a trouble source turn. The alterations children with ASD made to the trouble source in the repair turn were often minor and sometimes demonstrated sensitivity to a change in the local environment in which the turn occurs. For example, 14-MT changed his reference to a book from ‘that’ in a trouble source turn to ‘this’ in its repair, which was coordinated with his hands touching the book and sliding it closer towards himself. However, there was less evidence of children with ASD altering their repair turn specifically to aid the adult’s understanding of the trouble source turn, which was evidenced in the interactions involving TD children. For example, when the adult responded to TD child, NC’s question ‘can I be baby?’ with an OCRI device, NC added contextualising information to his original turn by explaining he ‘wants to play goldilocks’. This difference between the groups may suggest children with ASD are less able to identify the aspect of the trouble source which their conversational partner found problematic, or that they are less knowledgeable as to how to repair this. Such conclusions are tentative given the small number of excerpts examined, however, they do raise interesting possibilities in line with established literature demonstrating that people with ASD have difficulties taking other’s perspectives (Leslie, 1991). In line with previous findings from CA literature about the interactional behaviour of people with ASD (Garcia, 2012), findings should not be interpreted as evidence of a lack of desire to interact with others.

In chapter 6, I examined a phenomenon which I have termed prosodically marked yeah (PMY), where the adult responds to a potentially problematic turn with a marked form of the response token ‘yeah’. This is produced with high pitch onset and high rising terminal pitch and is typically interspersed with laughter tokens. I identified 28 instances of the adult producing an OCRI device in the data set. There were 16 instances in interactions involving TD children and 12 in interactions involving children with ASD. I first examined the environment preceding the adult’s production of a PMY and found that evidence of mishearing, due to a lack of orientation by the adult or the presence of overlapped speech, was not a major contributor to the production of a PMY in either group of children. The presence of sequentially inapposite turns occurred preceding a PMY, however, misspeakings on the part of the children were the more numerous category. I further divided the category of misspeaking into excerpts which demonstrated the presence of untranscribable speech
and those that demonstrated the presence of unclear referring expressions. I concluded that PMY is a more ambiguous and subtle marker of trouble than an overt repair initiation device.

The second half of chapter 6 focused on the turn/s following the adult’s production of a PMY. Examining how the children orient to the PMY demonstrated four possible responses; a repair attempt, an affirmative response token, a continuation or a non-response. TD children often oriented to the PMY as if it were a request for confirmation, by producing an affirmative response token, or as if it were initiating a repair, by producing a repair attempt. Both of these responses can be seen as related to the maintenance of intersubjectivity; the former by confirming to a participant that intersubjectivity has been maintained and the latter as an established method to attempt to restore intersubjectivity. However, children with ASD were less likely to produce these two response types; most notably, none responded to a PMY with an affirmative response token. In three quarters of their responses to PMY, children with ASD either continued with their previous topic or did not respond to the PMY. Thus, unlike the TD children, children with ASD in this study rarely demonstrate orientation to PMY as if it is related to the establishment, maintenance or restoration of intersubjectivity. As with analysis from chapter 5, the numbers of excerpts isolated and examined in chapter 6 are so small that conclusions are necessarily tentative. However, main findings from both chapters show that sequences demonstrating difficulties in maintaining intersubjectivity were reasonably common in interactions involving TD children, but rare in interactions involving children with ASD, in similar interactional and environmental contexts. Further these findings align with existing research that establishes perspective taking to be problematic for people with ASD. They suggest that further research is required into repair by people with ASD which is related to intersubjectivity and demonstrates rectifying difficulties with recipient design. Such research could offer increased insight into ASD as a disorder.

### 7.3 Limitations

The current study has a number of limitations. Firstly, relatively small numbers of cases were identified of each of the phenomena of interest in each group of children. While this is permissible for qualitative analysis, comparisons made between groups need to be done with caution. I make no claims that generalisations about TD children or children with ASD can be made from this analysis. As interactional research is only just being applied to interaction involving people with ASD as a discreet area of study, such claims about what children with autism do are likely a long way in the future. Rather, I hope to have shown, through relating findings back to CA literature and research on ASD more broadly, that there are certain differences between the groups considered here that could be worth further investigation.
A second feature of the study is that the data was not originally recorded for interactional analysis. While this is a methodological advantage in ensuring the interaction is not influenced by the pursued research aims, it also meant that recordings were not always well suited to capture all the non-verbal detail. This information could have been of importance to the co-construction of intersubjectivity within this data. In particular, only one camera angle was used for each task and this was typically directed towards the child participant. This meant that the adult’s non-verbal contributions, including eye gaze and facial expressions, were not always well captured in the recordings. Thus they could not be used in the analysis presented in this study.

7.4 Contributions and suggestions for future research

7.4.1 CA work on communication disorders

This study contributes to the small but growing body of work applying the techniques of CA to interactions involving people with a range of disorders which affect communication (see Antaki & Wilkinson, 2013; and Garcia, 2012 for recent overviews). Much of the CA work on ASD has focused on echolalia, demonstrating that echoing behaviours are used by individuals with ASD as functional interactional devices, including to achieve sophisticated interpersonal goals (Barrows & Tarplee, 1999; Wootton, 1999; Striberg et al., 2007; Muskett et al., 2010). However, research has also focused on structural aspects of interaction involving people with ASD to demonstrate more nuanced understandings of ASD (Dobbinson et al., 1998; Rendle-Short, 2003, 2014).

The ways in which CA can be applied to further knowledge of communication disorders are still being explored. Of note, there has been promising work in aphasia by Wilkinson and colleagues (see Lock et al., 2001; and Wilkinson, 2011) where CA methods are used as an intervention to assist the quality of interaction between people with aphasia and those who are close to them. More controversially, CA has been used by Reuber and colleagues to differentiate the diagnosis of epileptic and non-epileptic seizures (Schwabe et al., 2007; Plug et al., 2009; and Ekberg & Reuber, 2015).

While extending the boundaries of CA, these studies all grapple with the problem of using CA to compare groups based on diagnostic attributes which are exogenous to the interactions, as I did in this study. CA has yet to find a good solution to this problem, and the ways current studies account for this are varied. However, persevering with this pursuit could result in improvements in the lives of people with communication disorders. Future research should be progressed with reference to
cross-cultural comparative CA studies for a variety of ways to approach this problem (for example, see Sidnell, 2009), as work in this domain is further developed.

7.4.2 Describing a new phenomenon

To the body of work in CA on intersubjectivity, and to the literature on interaction more generally, this thesis contributes an account of a new interactional phenomenon which I have termed prosodically marked yeah. I found this to be a more subtle marker of problems with intersubjectivity than overt repair initiators, such as OCRI. I have demonstrated that it operates as a repair initiator in at least some of its occurrences, and as a response mobilising device which is related to the maintenance of intersubjectivity, more often. This analysis was limited to the production of PMY by one English-speaking adult, however, the responses by the children involved in the interactions revealed patterns of orientation to the token’s use.

In the corpus, I found that other minimal tokens, such as ‘oh’, produced with similar prosodic and paralinguistic features could elicit a similar response. Detailed analysis of these excerpts was beyond the scope of this study, however, analysis of the social action associated with these tokens warrants further research. Such studies could contribute to our understanding of the role of prosody in indicating a breakdown in intersubjectivity in interaction. Similarly, to extend the current study further, more detailed prosodic analysis of the instances of PMY compared with the different response types they elicit could be revealing in identifying prosodic features of minimal turns and their association with the elicitation of specific responses. There are only small numbers of CA studies focused on prosody and there is potential for future research to demonstrate more nuance in the interplay between prosody and social action.

7.4.3 Our knowledge of interaction in ASD

Our knowledge of communication disorders, including ASD, has been enriched by the application of CA to interaction involving people with communication disorders. Interactional analysis of communication disorders has the ability to highlight aspects of interactions which are difficult to gauge using more traditional approaches to examining language use, such as standard language measures. In line with previous research in CA focused on interactions involving people with ASD, my findings demonstrate strengths in the ways that children with ASD manage intersubjectivity in interaction. In response to an OCRI device, children with ASD overwhelmingly produced a repair attempt, at a rate comparable to the TD children. Additionally, my analysis of OCRI demonstrated the sophisticated ways that children with ASD are able to use language to reflect changes in their
local interactional context by changing the production of their trouble source turn, in subtle and important ways, in the repair proper.

The sensitivity of CA as an analytical tool also displays subtle differences in the two groups which warrants further research. In responding to PMY, children with ASD did not orient to these as if they were mobilising a response related to the maintenance of intersubjectivity as often as the TD children in this study. Most noticeably, TD children oriented to the PMY as if it was requesting confirmation, but children with ASD did not produce this response. PMY is a subtle marker of a problem with intersubjectivity, and much of its contextual meaning appears to be encoded in its prosodic patterning. Thus, difficulties with relating PMY to intersubjectivity could reflect difficulties with perceiving prosody, which has been identified as challenging for some children with ASD (Diehl et al., 2008). Further research is required to better understand the relationship between prosodic features within naturalistic interaction and difficulties in understanding a range of social actions by people with ASD.
List of references


Appendix A: Glossary of transcription conventions and key to understanding excerpt headings

Transcription conventions

Transcription conventions used in this thesis are adapted from Jefferson (2004) and Gardner (2001).

- [ ] point of overlap onset
- ) point at which an overlap terminates
= one at end of line and at the beginning of the next line indicates no time gap between the utterances or latched utterances
(0.0) elapsed time in silence by tenths of a second, eg (1.3) means one and three-tenths of a second has lapsed without speech present
( . ) elapsed time of less than 0.2 seconds
: short lengthening of the immediately prior sound
:: long lengthening of the immediately prior sound
. a full stop indicates a falling terminal contour
_ an underscore indicates a flat terminal contour
, a comma indicates a continuing (incomplete) terminal contour
? an inverted question mark indicates slightly rising terminal contour or slightly questioning intonation
? a question mark indicates strongly rising terminal contour or questioning intonation
! an exclamation mark indicates an emphatic or animated termination
↑↓ up or down arrows indicate jump or sudden fall in pitch
CAPS upper case indicates loud talk
°word° talk enclosed in degree signs is comparatively quieter than surrounding utterances. Additional degree signs indicate increased quietness
_ word underlining a syllable indicates sentential stress.
(( )) descriptions of non-linguistic sounds in the recording
(word) unsure of utterance. Used when the transcriber is unsure if this word was heard correctly
X unintelligible syllable. Used when a transcriber cannot hear what has being said.
- a sound cut-off
huh one syllable of laughter
(h) laughter occurring within a word eg, wo(h)rd
<word> talk enclosed in these carats are spoken faster than surrounding utterances
>word< talk enclosed in these carats are spoken slower than surrounding talk
.hhh represents an audible inward breath. The more ‘h’s, the longer the breath
represents an audible outward breath. The more ‘h’s, the longer the breath

an arrow indicates feature of interest

Key to understanding excerpt headings

When excerpts occur in the body of this thesis they occur with the following heading:

(1) ID 501: 8-LS. 9:44 (TD: 6;6) [- abridged]

All excerpts are numbered beginning from one as they appear in each chapter. This number is the bracketed number on the left and will be referred to in the text as the ‘excerpt number’ (for the example above, it’s the first excerpt to occur in the chapter). The ‘ID number’ is the unique ID number allocated to each excerpt for analysis purposes. The first number in the sequence shows in which chapter this excerpt occurs (for this example, chapter 5). The heading then shows the child’s individual ID number (for this example, 8-LS), followed by the time signature where the excerpt occurred in the testing session (for this example, at 9min and 44 seconds). In brackets at the end is the child’s group status (TD or ASD), followed by the child’s age at the time of testing (for this example, 6 yrs and 6 mths of age). If the excerpt is in a shorter format than the version in the appendix the word ‘– abridged’ appears at the end of the excerpt heading. This is often used when the excerpt has previously appeared in the chapter, or will be discussed in more detail later in the chapter.
Appendix B: Excerpts containing open class repair initiation

Excerpts containing OCRI in interactions involving TD children

ID 501: 8-LS. 9:44 (TD: 6;6)
WPSSI-III - information subtest. Participants are sitting at table, facing one another. A is completely off-camera.
1 A: what day comes after Saturday.
2 (7.9)
3 LS: Sunday?
4 A: yeah, perfect, that was right.
5 (2.3)
6 A: what are shoes made of.
7 (1.6)
8 LS: this one's hard¿
9 (2.2)
10 -> A: what was that sorry?
11 LS: this one's hard¿
12 A: =that one's hard isn't it. (. ) shall we try the next one¿
13 LS: yeah.
14 A: how many days make a week?

ID 502: 8-LS. 12:08 (TD: 6;6)
WPSSI-III - transition between the information subtest and the object assembly subtest. Participants are sitting at table, facing one another, but A is mostly off-camera, with eyes cast down at her testing notes.
1 ((stop watch beeps twice))
2 (3.0)/((A flips through her testing notes))
3 LS: > (I got) timer< on my watch
4 -> A: sorry?
5 LS: I've got a timer on my watch
6 A: you've got a timer on your watch?
7 (1.0)/((LS shows A his watch))
8 A: oh::=
9 LS: =see=
10 A: =is that a- is that a pokemon watch?
11 LS: yep.
12 A: [wow ]
13 LS: [that’s] the timer.
14 A: oh that’s pretty cool.

ID 503: 8-LS. 40:44 (TD: 6;6)
Test of pretend play – stimulus objects are Doll, and a white plastic cup and then Doll, a black plastic box and white plastic counter. Participants are sitting on mat facing one another.
1 A: now I've got something else to show you.
2 (1.0)/((A moves Doll and a white cup into the play mat))
3 LS: (cough)=
4 A: now let's see, ( . ) what could Doll do with this.
5 (1.1)
6 LS: eh
7 (1.6)
8 LS: >ah<
9 (1.5)/((LS puts the cup upside down and stands Doll near the cup))
10 LS: (there)
11 (0.6)
12 A: now what's she doing.
LS: making a DRum.
A: ah it's a drum. good [idea,]
LS: [drum ] drum drum=
A: =ah that was a super idea, well ;done.
(0.7)
LS: <now I> put them [over there?]
A: [((LS picks up Doll and the cup and moves
to the side of the play space))]
LS: yep (.) well we'll keep Doll here because we've got something
else.
(0.5)/((LS moves Doll back to play space and A turns to get
more objects from a bag beside her))
A: what could she do (. ) [with these? ]
((A places a black plastic box and white
plastic counter in the place space with Doll))
(2.2)
LS: XX [this (could) go he::re] XXXXXXX
((LS is moving the box around then places it open side up
in the middle of the play space))
LS: (and)
(0.2)
LS: .hhh hh
(1.8)
LS: oh:::::
(1.8)/((LS places the counter on the edge of the black box but
it falls down))
LS: eh
(4.6)/((LS carefully balances the counter on the edge of the
black box near Doll’s hand))
LS: eh
A: ah: good one so what’s [this. ]
((A points to the box))]
LS: standing up in something.
A: yeah? (.) and what’s she got in her hand?
LS: a frisbee,
((LS pushes the counter in the box with Doll))
A: oh frisbee [good one.]
LS: [ to ge- ] get it out,
A: oh[: ]
LS: [be]cause it fell in there
A: [ye-oh:
((LS removes the counter from the box))]
A: well done.
LS: she gets out too.
((LS removes Doll from the box))
A: oh, good o[ne].
LS: [th]ere she goes:::
A: that was [really good],
LS: [ keep D]Oll ( .) out?
A: -> hey?
LS: keep [Doll] put;
((LS points to Doll)))
A: yeah, we’ll keep- could you show me how Doll puts a plate on a
table?
(0.4)/((LS turns box upside down and makes Doll put counter on
the top of it))
ID 504: 8-LS. 1:15:26 (TD: 6;6)
Transition from sun-moon stroop task to the generation of object substitutions task, which is a transition from the table to the mat. The camera is recording the table and they have already left the table when this excerpt begins so both participants are off-camera.

1   A:  so I'll just straighten this up,
2     I'll just be >back in a moment<,
3       (0.6)
4   LS:  I'll straighten it up.
5   A:  ye-Oh thank you. >that’d be good<.
6       ((A leaves room))
7   LS:  *(see if we can)* place that over there<° X
8       (2.1)/{(camera angle changes to mat where LS is visible on
9       the mat})
10  LS:  XX
11  (0.6)
12  LS:  ah::<
13  ((A opens the testing room door))
14  LS:  did you ;see the TV in there.
15       (1.4)
16   ->  A:  sorry?
17       (0.3)
18   LS:  did you see the TV in there.
19   A:  the TV. yeah there's a TV in [there. ]
20   LS:  [I heard it]
21   A:  did you hear it?
22   LS:  and it goes sss
23   A:  [huh huh huh now- oh, thanks for straightening the mat
24       [((A moves into camera view)]

ID 505: 13-JM. 29:38 (TD: 5;2)
WPFSI-III – vocabulary subtest. Participants are sitting at table facing one another.

1   A:  what is a bicycle.
2       (1.9)
3   JM:  °°bicyc°°
4       (5.3)
5   JM:  a bike;
6   A:  yeah, good one. it is a bike. (. ) can you tell me a little
7       bit more?
8       (22.0)
9   A:  can you tell me a bit more about a bicycle.
10  JM:  nuh.
11  A:  you’re not sure, that’s alright. what are lollies.
12       (0.8)
13  JM:  .hh um, (dove/numb).
14       (0.9)
15   ->  A:  what was that?
16       (0.3)
17  JM:  (dove).
18  A:  °°mm° good, can you tell me a bit more.
19       (1.0)
20  A:  what are lollies:
21       (5.1)
22  JM:  for eat.
23  A:  yeah good one. they're for eating. good one.
24       (2.3)
25  A:  that’s right they are they’re for eating. tsk. what is a dog.
**ID 506: 27-IY. 12:52 (TD: 4:5)**
WPPSI-III - vocabulary subtest. Participants are sitting at table facing one another.

1. A: tell me what is a shoe.
2. (4.2)
3. IY: [I've got a *(silver)* one]
4. [((IY lifts her foot up to show A and is looking at it just above the table)]
5. IY: *it’s got (flowers) on it.*
6. A: ah you have haven't you, yeah, those *very* pretty shoe.
7. could you tell me, what- what is a shoe.
8. IY: um
9. (7.8)/((IY is restless and moving about in her chair))
10. A: *a shoe is something you put on your foot. yeah?*
11. IY: *°°*(XXX)*°°
12. -> A: sorry?
13. IY: °°*(XXX)*°°
14. A: yeah, a shoe is something you put on your foot. that's right.
15. now
16. (bang)
17. IY: I heard- I heard that noise
18. A: did you, the XX (the bang)

**ID 507: 27-IY. 59:30 (TD: 4:5)**
Test of pretend play - stimulus object is Ted. All other toys are off the mat to the right of A. Participants are sitting on mat facing one another.

1. A: can you think of another story for Ted?
2. (0.9)
3. A: huh
4. (4.2)
5. A: [how about- could you show me?]
6. [((A puts Ted in a seated position, then he falls backwards))]
7. IY: oops huh huh it fell.
8. A: can you make Teddy get ready for bed.
9. IY: no:;, I know how to (..) (do it. wanna be a sleep-over) (..) friend.
10. -> A: [wh- what was that sorry? ]
11. [((A leans in towards IY))]
12. IY: *sleep-over friend*
13. A: a sleep-over friend, yeah? can you sh- can you show me.
14. (1.0)
15. IY: we need X the doll.
16. A: [oh well we're just going to leave Doll over here]=
17. [((A looks towards the doll to her right and places her hand on it when she says here))]
18. A: *=‘cause she's sleeping over there but could you make up another story for Ted.
19. (4.8)
20. A: *°oh he's XX°*
21. (2.7)
22. what’s happening now,

**ID 508: 27-IY. 1:17:53 (TD: 4:5)**
Free play session - stimulus items include the white plastic bowl, the black plastic stick, the white plastic counter and a cardboard tray like a takeaway tray from a bakery. There are also other toys and objects in reach. Participants are sitting on the mat facing one another.

1. IY: oh you know wh- you know what I'm making? a cake.
2. A: ohh, yum yum!
IY: making a birthday cake.
A: oh bi:rtday cake!
IY: yeah, I'm making a Barbie one.
A: oh, wow, >(making the) Barbie<
IY: oops
(0.6)
IY: now what (we) have to do is <get some wait->
(0.5)
IY: get some water
(1.2)/{((IY drops counter in the plastic bowl)}
IY: [got it]
{((IY makes a stirring motion with a stick in a plastic bowl))}
A: *ah (mix) some water*
IY: and now I need some milk
A: ah: a bit of milk
(3.1)/{((IY still stirring the stick around the bowl)}
IY: now let it cook.
A: ah now it cooks.
(10.4)/{((IY picks up the cardboard tray and is trying to push the stick through the middle of it))}
IY: they can't eat it X til I make a hole.
(10.4)-> A: sorry?
IY: I cA:n't make a hole.
A: can't make a hole? oh that's okay.
IY: what happens if it- what- if you- would you- when I make a hole are you gonna get a (shock).
A: it might break. it might be a good idea not to break-
make a hole in there.

ID 509: 28-CB. 0:17 (TD: 5;0)
WPPSI-III – block design subtest. CB is sitting at the table.
A: [ yeah huh huh .hh no::w ]
(3.8)/{((A sits down on the table ))}
A: the first thing we’re going to do today is we’re gonna play with some blo:cks.
CB: (yeah,)
A: no[:w]
CB: [wh]ere are the blocks.
A: sorry? the blocks are down [{here.}]
((A turns to left side to get 
blocks from under the table))
CB: yeah.
A: now, I’m going to put, I’m going to make a little picture.
CB: ok.

ID 510: 28-CB. 6:41 (TD: 5;0)
WPPSI-III – block design subtest. Participants are sitting at the table facing one another. There are two red blocks side by side on the table in front of CB.
A: huh huh now see if you can make (.) these match.
(3.8)/{((CB completes block design))}
A: oh, we(h)ll done! that was excellent.
CB: is there a nose [there]. (.}
((CB is pointing to the join between the two blocks))
A: sorry?
((A looks at CB and leans forward looking at CB’s blocks))
CB: [there’s no n:ose there.]
((CB taps finger against the blocks))
A: yeah, like a nose. it is like a nose. it’s like a face, isn’t
it. hh now, very good. tsk, now this time I’ve got some
different blocks to show you.

ID 511: 33-JR. 10:47 (TD: 4:5)
WPPSI-III – object assembly subtest. Participants are sitting at the table
facing one another.
1 A: [these make a bi:rd. put them together] as fast as you can.
2 (((A puts out puzzle pieces on the table in front of JR)))
3 (2.7)
4 JR: this is easy.
5 A: is it easy, can you show me?
6 Mum: *huh huh (. ) [ huh huh (. ) huh ° ]
7 (2.5) / ((JR puts puzzle together) )
8 A: o:h it was easy wasn’t it. a:h well [ done. ]
9 Mum: [“huh huh huh]huh huh huh*
10 (2.2)
11 A: now some of them might get a little bit more tricky.
12 ((A picks up puzzles pieces))
13 Mum: ((cough cough [cough]))
14 JR: [ >can isly do< ] puzzles.
15 (((A is putting away puzzle pieces below the table)))
16 (0.2)
17 -> A: sorry?
18 JR: I can ea:sily do [ puzzles:. ]
19 A: [you can easily] do puzzles, yeah, you’ve just
20 shown me that was really, really quick.

ID 512: 33-JR. 23:04 (TD: 4:5)
WPPSI-III – vocabulary subtest. Participants are sitting at table facing
one another. Most of A is off-camera, Mum is completely off-camera
1 A: what is an umbr ella.
2 (1.5)
3 JR: it keeps you dry out of the rain?
4 A: yeah, perfect.
5 (5.7)
6 A: what is a bicy cle.
7 (0.5)
8 JR: something that you ride on?
9 A: good.
10 (4.1)
11 A: well done. tsk, what are lollies.
12 (0.9)
13 JR: .hh something that you e:at
14 A: goo:d.
15 (0.8)
16 A: can you tell me a bit more;
17 (0.8)
18 JR: mm
19 (1.4)
20 JR: no [ you gotta ] tell me something then I’ll tell it=
21 (((JR points to A)))
22 =back to you.
23 -> A: sorry?
24 (4.0) / ((Mum giggling)) / ((JR smiling))
25 A: lollies? w- wh- what was that? huh
26 (2.5) / ((mum chuckling))
27 MUM: ((smille voice)) he said you gotta tell me something else and
28 then [I’ll tell it back to you huh huh]
29 A: [ oh:: huh huh oh ] I see.
30 MUM: [huh huh huh]
A: [.hh] ah well I can’t give you any more help but you’re on the right track. you do eat lollies. is there anything else you can tell me about lollies?
JR: "er" (3.9)
A: that’s okay. that was a good answer, you do eat them. (. ) tsk what is [a- ]
JR: [but] they’re not good for you.
A: they’re not good, they’re- very good, they’re not good for you, well done.
MUM: ((clears throat))
A: what is a dog.

ID 513: 33-JR. 37:25 (TD: 4;5)
Tigger-Piglet inhibition task. Participants are sitting on the mat facing one another.
1 A: well this (0.3) is Tigger (0.5)/(JR nods head))
2 A: and this (0.3) is Piglet. (0.4)
3 A: tsk now (0.9)
4 A: we’re going [to]-
8 JR: [I’ve] seen a baby (. ) pig(. )le:t¿
9 -> A: sorry?
10 JR: I’ve seen a baby [piglet]
11 A: [you’ve] seen a [ baby piglet have you ] (((JR nods head a few times)))
12 A: where did you see a baby piglet,
13 JR: um, (3.0)
16 A: did you see it at the zoo. (0.9)/(JR shakes head))
18 A: no, was it at (. ) a friend’s house. (0.6)
20 JR: no it was at a circus and I went to see one.
21 A: oh wow.

ID 514: 51-JW. 5:05 (TD: 4;0)
WPPSI-III - information subtest. Participants are sitting at table, facing one another.
1 A: so maybe I’ll pop the lid on, (0.2) and now they can go here, (0.3)
3 A: tsk and now could you tell me (. ) what colo[u]r is grass.
4 JW: (. ) mm [ ah ]
5 A: [what] colour is grass. (((JW looks towards A)))
7 JW: um [me and you.] (((JW makes hand gesture towards himself then A)))
9 -> A: sorry?
10 JW: [me and you.] (((JW makes hand gesture towards himself then A)))
12 A: yeah¿
13 JW: mm
14 A: d’you know what colour grass is. (0.5)
16 JW: [Erm (let’s) (. ) number (. ) that one.] (((JW stands and leans over towards A and points to something on her test sheet))

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A: that one;
JW: [yeah.]
([A moves test sheet to her chest covering the answers and JW sits back down on his seat])
A: how many ears do you have.
JW: [two!]
([JW holds up two fingers with palm facing towards his face])

ID 515: 52-NC. 36:52 (TD: 4:4)
Transition from the semantic fluency task to the test of pretend play.
Participants are on the mat. NC is lying on the mat on his stomach with his legs bent and his feet in the air.
A: you came up with some good ones then (.) and we are gonna play with the [other toys, 'cause I've got some things here.
([A turns her body to her right (away from camera) to look through the toy box])
NC: oh.
A: no:w, let's have a [little look]
NC: [ can I be  ] baby¿
A: [sorry?]
NC: I want (to) play goldilocks.
A: well (. ) what do you reckon you [could do with these¿]
([A lays out a plastic bowl and a plastic spoon in the play frame])
NC: [ u h : ]
A: [we’re gonna] play with some different things (.) what could you do with these¿

ID 516: 55-TV. 1:01:36 (TD: 4:4)
Transition from a break back into the room. TV sits down at chair facing the camera and is eating an apple.
A: huh huh
TV: sometimes I need to >(cough [ (a bit)<. ] )
([noise of ]door closing)
A: sorry?
TV: sometimes I >(cough a bit)<.
A: huh huh
A: no::w
TV: what are those toys.

Excerpts containing OCRI in interactions involving children with ASD

ID 517: 12-LT. 34:45 (ASD: 5;7)
Free play session. Participants are sitting on mat facing one another. LT is playing with an orange toy truck; intently watching it as he slowly makes it drive around the play space. A watches him but isn’t really involved in the play; she acts more as a spectator.
A: [t's a noisy car isn't it. huh ]
([LT looks up at A, then down again to the truck])
A: truck.
(12.5)/([LT is still driving truck around slowly])
LT: somebody's not 'n [there¿]
([LT looks to A with a slight shake of his
ID 518: 12-LT. 38:48 (ASD: 5;7)
Transition from a break. The beginning of this excerpt takes place outside the room and for most of the interaction neither participant is on camera. LT briefly becomes visible on the camera in line 19 when he picks up the toy box.

ID 519: 14-MT. 3:53 (ASD: 6;9)
WPPSI-III - block design subtest. Participants are sitting at the table facing one another, but only MT is visible on camera.
8    A:  tsk [n-]
9    MT:  [Le]anne has [that. ]
10   ((MT grins and puts both hands on the book))
11  (0.4)/(MT slides book towards him))
12  --> A:  sorry?
13    MT:  [Leanne has this. ]
14   ([MT plays with the pages of the book, still smiling))
15    A:  oh, does she? huh huh yeah, it's very similar, you've just
16  done one very similar. tsk now just watch me because I'm going
17  to put the blocks to make this picture,

ID 520: 15-SI. 23:51 (ASD: 4;11)
Free play session. SI and A are sitting on the play mat but SI has her back
to A for the majority of this and is not physically orienting to A until
the repair initiation in line 29, when SI turns her body and looks at A for
the first time. SI is playing with the doll and a white plastic bowl rather
absentmindedly while she is talking when this begins.

1    SI:  look at that.
2 (1.1)
3    A:  woo:::h, (0.4) it's another crown;
4 (1.1)
5    SI:  wee ha ha (0.8) you know which princesses I like?
6 (0.5)
7    A:  which princesses.
8 (0.5)
9    SI:  Snow White.
10    A:  oh she’s nice isn’t she.
11 (0.7)
12    SI:  but the Queen’s not
13 (0.2)
14    A:  no she’s not (0.2) she’s wicked.
15 (0.2)
16    SI:  .hh
17 (0.8)
18    SI:  she’s (a a) very nasty when she wants to kill Snow White=
19 (0.7)
20    SI:  cos she does- cos Snow White’s even (. ) mo:re beautiful than
21 the ;Queen: and she doesn’t li:ke Snow White.=
22 (0.2)
23    A:  
24 (0.2)
25    A:  tsk what’s [Doll] (. ) [(‘ere)
26    SI:  [and-] [(A begins to point towards SI/Doll
27 but cuts the gesture off))]
28 (.)
29  --> A:  [sorry what were you saying (*sorry*) Snow White (who) was=
30  [((SI turns and looks towards A))]
31    A:  =going to kill her?
32    SI:  [yeah because she didn’t like her,
33  [((SI looks down again, lies on mat then picks up some new
34 toys))]
35 (0.9)
36    SI:  she didn’t [like Snow] White=
37 (1.7)
38    A:  [ ohhh ] =that’s not very nice,
39 (0.9)
40    SI:  ’s not very nice if you kill someone.=
41    A:  "mm"=are you getting [really hungry?]
42    SI:  I’m feeling ve:::ry hungry= ((SI smiles))
43    A:  ((smilie voice))=are you getting [really hungry?]
[((SI looks towards A grinning))]

ID 521: 30-AA. 11:10 (ASD: 7;3)
WPPSI-III – information subtest. Participants are sitting at table, facing one another. A is completely off-camera.
1 A: good. it does well done. what day comes after Saturday.
2 AA: Sunday!
3 A: perfect.
4 (0.9)
5 A: what are shoes made of.
6 (6.2)/((AA leans forward on the table holding his chin in his right hand))
7 AA: hm tsk tsk
8 (6.0)
9 AA: dunno.
10 A: that’s ok, that’s a tricky one. (. ) tsk how many days make=
11 AA: [=a duck!]
12 (((AA looks up at A, keeps eye gaze))
13 (0.7)
14 -> A: so(h)rry?
15 AA: duck
16 A: duck go(hh)od.
17 (1.3)
18 A: how many days make a week.
19 (3.5)
20 AA: Monday Tuesday Wednesday Thursday
21 (0.6)
22 A: good
23 (3.2)
24 A: tell me the four seasons of the year.

ID 522: 30-AA. 58:14 (ASD: 7;3)
Test of pretend play – Stimulus object is Ted. Participants are sitting on the mat, facing one another.
1 A: there he goes o:h good one. very good=
2 AA: I need one piece of wool =this is gonna be funny.
3 (0.3)
4 A: .hh well we might (.) we’ve got a few things we’ll do without the wool. could you make Ted do something else, what else could Ted do.
5 (.)
6 ((AA holds Ted above his head with his right hand))
7 A: ooh what’s he doing?
8 (0.5)/((AA begins to move Ted in the air above his head))
9 AA: [n:ye:::::::w ]
10 (((AA is moving Ted in slow circles in the air))]
11 A: o:h is that a plane?
12 AA: yep [ and ] something else
13 (very-)
14 AA: [click click-a-click click-a-click click-a-click click-a-click click-a-click click-a-click click-a-click [AA still holding Ted above his head but now using a rocking motion to move him])
15 A: is that a helicopter?
16 AA: [very-
17 (AA gives 2 nods of his head))
18 A: very good=
19 -> A: wha(h)t?
AA: this is funny
A: [it’s funny?]
AA: [watch this.]
(3.0)/((AA slowly and deliberately moves his head to the right
scanning the room))
AA: wait there was- there wasn’t-
((AA holds Ted in his right hand and slides him around on the 32
mat))
A: oo: h wow. is that a train.

ID 523: 30-AA. 1:35:46 (ASD: 7;3)
Session has finished. A has left the room but AA continues to play in the
room and is still on camera. A and Mum talk outside - their speech is
audible in the background but I cannot make out what is being said.

ID 524: 34-ML. 20:40 (ASD: 4;1)
WPPSI-III - object assembly subtest. Participants are sitting at table,
fac ing one another. A is often not visible, ML is very engaged in the task
throughout this whole excerpt and does not look up at A at all. During the
repair sequence ML is intently looking down at the puzzle continuing to
work on it.
~
ID 525: 34-ML 1:25:18 (ASD: 4;1)
Free play session. Participants are sitting on the mat, facing one another. ML is engaged in solitary play with the orange truck. A watches on but is not very involved with the play.

1. (ML is holding a truck and a block and makes them bang into one another)
2. ML: crash.
3. A: oh huh huh huh it crashed. huh huh huh
4. (2.3)
5. ML: jump
6. A: huh huh huh
7. (1.5)
8. ML: [boo:m jump.
9. (%%(ML holds the truck in the air and makes it hit the ground twice))
10. A: oh it’s jumping.
11. (4.7)/(%%(ML playing with truck and makes it hit the ground twice more and then ‘land’ in a plastic bowl))
12. ML: crash:::
13. (9.9)/(%%(ML is driving the truck along the ground))
14. ML: it’s making racing then crash.
15. A: [oh racing
16. (%%(ML crashes the truck into the white plastic bowl))
17. ML: POW
19. (2.6)
20. L: it’s ma:ki:::ng,
21. (4.7)
22. A: mm it’s=
23. ML: [=g to see mummy?
24. (%%(ML stops playing and is crouching on all fours looking down to the ground))
25. (0.6)
26. -> A: [sorry?
27. (%%(A looking towards ML))
28. ML: to see mummy?
29. A: yeah, shall we go and see mum? you’ve done re:ally re:ally well and you know what () you’ve done such good playing that you can choose a l:olly.

ID 526: 38-PO 1:38:00 (ASD: 4;8)
Testing session has finished and both participants are packing up toys. This is a session conducted in the participant’s home. PO’s mother, who has been in a different room for the whole session, enters the room somewhere around turn 16 as indicated by A now addressing her talk to her. All participants are off camera for the whole of this excerpt.

1. (A and PO are packing up toys))
2. PO: it's time for you to go.
3. A: it is almost time for me to go, and you've- you've done really really well. I've really enjoyed playing with you PO;
4. (0.8)
5. A: you've done excel[lent.]
6. PO: (but): when you see me again at- (0.4) you
7. when (it’s:::) hh you have to come. (0.2) you you (0.3) you uh
8. you know how you get-
9. (0.6)
PO: thaa- you have to come to my party.
A: oh are you having a party.
(0.4)
PO: it's only: (0.3) only: (0.5) only a birthday for me, I'm turning five.
A: OH WOW, five years old
(in adult-directed voice) .hh tsk we're all done
Mum: all done [oh god] it's warm in here isn't it.=
A: [ye::ah]
PO: = (beco) you take too long.
Mum: pardon?
(0.5)
PO: it- .h we saw a digger?
Mum: digger;
PO: and the,
(1.1)
PO: and we played Teddy?
Mum: cOOOh, what did Teddy do.
(0.6)
PO: nn goed (. ) different things,
A: yeah >can you [remember what-<]
PO: [AND WE] (wrapped/rocked) the baby again.
Mum: yeah,
(1.0)
PO: you gonna take these back home¿
A: [yeah], I'm gonna take them back with me.
Mum: [yeah] ((smilie voice))
A: he’s done really really well. he’s done great.

ID 527: 42-SO. 46:17 (ASD: 4;1)
Semantic fluency task. Both participants were on the floor, but SO has left the play mat and is now seated on the couch in the back of the room which means his whole head is off camera. A is crouched in front of SO on the mat, facing him.

1  A: could you tell me some different things that you could ea:t (.)
or dr:ink, (. ) and say them as fast as you can and keep going
3 until I say stop. so ;tell me some things to ea:t (. ) or dr:ink
4 ((beep))
5 (10.0)
6 A: what could you eat or drink
7 (2.0)
8 A: you could Ea: an apple,
9 (0.4)
10 A: or you could dr: ink milk¿
11 (0.7)
12 A: what else could [you eat or drink.]
13 [{((SO bends his whole body forward at the
14 waist and up again,))}]
15 (9.8)/{((SO hits his right hand on the couch three times then
16 sits still on the couch looking around the room))}
17 A: tsk what else could you [EA:t or drink. ]
18 [{((SO bends his whole body forwards
19 then up again))}]
20 (10.0)
21 SO: "X"
22 (1.7)
23 A: >what could you eat or drink.<
24 SO: "X"
25 (5.2)
26 -> A: [what did you say?    ]
'XXXX'

A: yeah? (. ) what could you eat or drink.
A: tell me some things that you could eat or drink.
SO: 'XXX (. ) XX'
A: you know what that one was really really hard,
A: [ well good ] effort. good try. shall we go and see mum and
dad.
SO: yea::h.
Appendix C: Excerpts containing prosodically marked yeah

Excerpts containing PMY in interactions involving TD children

ID 601: 4-CJ. 1:22:26 (TD: 5;7)
Free play session. Participants are sitting on the mat. CJ has been playing with the toy truck for about 2 minutes prior to this excerpt.

1  CJ: the- there's a man in there. it can control the digger.
2      A: ah: great
3 (16.2)  /((CJ makes the truck drive around the play space))
4  CJ: going to dig somewhere else now.
5      (2.6)
6  CJ:  vroom
7 (25.8) /((CJ plays with the truck in the play space))
8  CJ: look at THAT. then it digs up high.
9      A:  yeah it is isn't it.
10 (14.7)
11  CJ:  they have to dig everywhere just one-.hh they have to dig one hole everywhere.
12      A: ah:: so it has to dig one hole everywhere.
13      (2.6)
14  CJ:  vroom- vroom::m
15 (15.2) /((CJ drives the truck around the play space))
16  CJ: °that’s all, X (go)°
17 (7.3)
18  CJ:  he’s gonna make a big [(0.5) thing around.]  
19   [{(CJ moves his right arm in anti-clockwise circles with his index finger pointed)}]
20  CJ: like a big GAte.
21      A: o::h ok.
22 (1.7) /((CJ makes truck drive around))
23  CJ:  vroom::m
24 (4.3) /((CJ plays with truck))
25  CJ:  [he's gonna buy a new car.]
26       [(CJ stops touching the truck and picks up a toy car)]
27   -> A: ye(hh)ah?
28 (0.6)
29  CJ:  [>he's gonna buy a new car.<]=
30       [((CJ continues to play with the car))]  
31      A:  =buying a new car;
32  CJ:  bomb brum brum this isn’t a- this is his old car,  
33      the workman’s old car.
34      A: O::h ok.=
35  CJ:  =it- he's buying this car.  
36      A: Oh he’s gonna [buy that new car. ]  
37         [(CJ puts down car)]
38 (2.0) /((CJ turns his attention back to the truck and makes it slowly drive))
39  CJ:  [vroom  
40       [((CJ makes truck drive))]

ID 602: 4-CJ. 1:43:49 (TD: 5;7)
WPSSI-III - vocabulary subtest. Participants are sitting at table, facing one another.

1  A:  double.
2  CJ:  I don't know what that means.
3      A:  not sure;
4  CJ:  nah not sure.
5      A: how 'bout COurage.
A: do [y’kno w what courage means? (0.4)]
   {{(CJ shakes his head multiple times)}}
no that's a tricky one.
CJ: [courage?  
{{(CJ looks towards A)}}]
A: yeah.
CJ: that means courage >the (couraging)< dog.
A: ye::ah.
CJ: (there -) 'cause I watch that
A: ye:ah huh?
CJ: ((smilie voice)) ‘t’s so funny.
A: what does (. ) ancient mean.

ID 603: 13-JM. 1:22:50 (TD: 5;2)
Generation of object substitutions task, with cardboard tube as stimulus object. Participants are sitting on the mat, facing one another.

JM: a knife¿
A: it could be a knife. good idea. what else¿
JM: u::m
(3.2)
JM: [a sword¿
{{(JM swishes the tube through the air)}}]
A: it could be a sword. good idea. keep going. what else¿
JM: [a (lock flicker¿)]
{{(JM puts the tube vertically on his finger and flicks it)}}
A: oh GOOD ONe I like that one. good (. ) what else
(1.9)/{(playing with the tube still vertically on his finger})
JM: [round in circles¿]
{{(JM moves the tube around in a circular motion)}}
A: ye(h)ah it could go round in circles, what could it be (.)
°°what could you [pret]end it could be°°
°°what cou:ld it be::°° (.) a::h
(3.4)
JM: a hammer.
A: it could be a hammer good idea.

--> A: ye(h)ah?
(1.0)
JM: a (powER ess ewe bee),
A: oh a- yea:h good one.
(3.7)
JM: °°what cou:ld it be::°° (.) a- a::h
(3.4)
JM: a hammer.
A: it could be a hammer good idea.
ID 604: 28-CB. 9:42 (TD: 5;0)
WPSSI-III - block design subtest. Participants are sitting at table, facing one another. A is not visible on camera. A has just finished showing CB a demonstration of what she wants him to do with the blocks.

A: now you have a go, make the tops of the blocks look the same as that picture.
CB: looks like the pointer.
A: this looks like the pointer. =yeah it does look like the pointer, you’re right.
CB: [ X X X X X ]
A: [tell me when you think] they’re the same.
CB: er:::
A: keep going you’re doing well.
CB: I wanna make it to the same.
A: yeah can you- can you make it look the same?

ID 605: 28-CB. 30:45 (TD: 5;0)
WPSSI-III - vocabulary subtest. Participants are sitting at table, facing one another.

A: what is (.a dog.
CB: eh: they go like ruf ruf ruf ruf
A: they do,=
CB: =ruf (0.5) ruf
A: what else can you tell me a bit more.
CB: [they have six legs like this. ]
A: how 'bout a dog can you tell me a bit more about a dog, you said they go woof woof what else can you tell me a bit [more about-]
CB: [(there’s one, two, three, four. )
A: [they point to each hand then each foot as he counts)]
CB: [there’s one, two, three, four. ]
A: ye(h)ah?
CB: they have four legs.
A: ah, they’ve got four legs.
CB: I didn’t know- they have (.4) they have (.4) four legs.
A: that’s right you’re very right they do have four legs.

tsk now could you tell me, what is (.a letter.
ID 606: 28-CB. 32:55 (TD: 5;0)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. Prior to this CB has been asking A about the functions of the cameras and microphone in the room.

1. A: "hh now we've just got a couple more things left to do, just a few more, and then we'll go see how your mum's getting on."
2. CB: "hh but could you tell me, what is (.) a leaf:"
3. (1.6)
4. CB: ["falls down"][((CB moves his right arm downwards))]
5. A: "ye:ah they do fall down, can you tell me a bit more;"
6. CB: "eh the wind blows them .h>it goes< [((whistling noise))]
7. [((CB puts both arms in the air and sways them)]
8. A: "ye:
hah, can you tell me a bit more¿"
9. CB: "I just saw a (ba: with the) cl:own."
10. (.)
11. 12-> A: ["ye(h)ah?"
12. [((A looks towards CB))]
13. (1.1)/((CB nods three times quickly))
14. A: "now could you tell me what is (.) a he:ro."
15. (1.3)
16. CB: "eh (2.9) to make a >super< hero.

ID 607: 37-HS. 9:23 (TD: 5;0)
WPPSI-III - information subtest. Participants are sitting at table, facing one another. A is off-camera for duration of this excerpt. HS is learning forward over the table throughout this excerpt.

1. A: "tsk now could you tell me some animals."
2. HS: "um there’re’s,"
3. (1.3)
4. HS: "there’s a lion¿"
5. A: "yeah,"
6. (1.6)
7. HS: "and a ti:ger;"
8. A: "yeah can you think of one more¿"
9. (2.3)
10. HS: "a:n and,"
11. (1.3)
12. HS: "something else eats meat"
13. (0.3)
14. HS: "um tsk"
15. (2.0)
16. HS: "a cub eats meat"
17. (0.4)
18. A: "ay::?"
19. (0.3)
20. A: "another animal?"
21. (1.3)
22. "can you think of one more animal¿"*
23. (0.7)
24. HS: "ah Xs eats meat"
25. A: "oh yeah >a d- an animal does eat meat you’re right can you think of the name of another animal? you said a li:on,< .h a ti:ger’s an ani:mal, (. ) can you think of another ani:mal¿"
26. (0.5)
27. HS: "a cub¿"
28. (1.0)
29. -> A: "ye(h)ah? very good=
30. HS: =[a Cub eats meat]
31. =[((HS stands up at table and leans towards A looking at A’s
ID 608: 37-HS. 12:20 (TD: 5;0)
WPSSI-III - information subtest. Participants are sitting at table, facing one another.
1 A: tell me the four seasons of the year.
2 (0.6)
3 HS: um summer.
4 A: yeah >can you think of another?<
5 HS: ooh its not summer anymo:re?
6 A: no:
7 HS: it’s AU:Tu:mn
8 A: yeah? (.) and what are the other two- j- can you think of the
9 other sea:sons.
10 (0.4)
11 HS: mm
12 (1.3)
13 HS: uh (1.4)
14 HS: I’ll tell you the name of the calendars.
15 A: yeah,
16 HS: um there’s October November December January February March
17 A: oh [very-]
18 HS: [(it’s mar-)] [(it’s MA:rch.)]
19 [(HS throws both arms in the air)]
20 A: yeah it is March [very] good=
21 HS: [ X ] =yeah ‘cause um ah
22 (2.5)
23 .hh I’ve got- I’ve got- I found some old tiddies.
24 -> A: ye(hh)ah?
25 HS: yeah some old teddies um (.)(its)- um there’s Snow Teddy and
26 Morrish =
27 A: =ah[h:.]
28 HS: [he ] [he’s my n- he’s my (one).]
29 [(HS folds arms across his chest)]
30 A: wow. (.) what’s the opposite of south.
31 HS: west.

ID 609: 37-HS. 24:45 (TD: 5;0)
WPSSI-III - vocabulary subtest. Participants are sitting at table, facing one another. A is off-camera for the duration of this excerpt. HS is sitting with his arms crossed and resting on the table.
1 A: what’s a dog?
2 (0.3)
3 HS: ah
4 (1.1)
5 HS: how do you make dogs
6 (0.5)
7 A: tsk I’m not sure that you ca:n make dogs but what Is a dog.
8 (0.7)
9 HS: A::h it gets bo:nes, it digs for bo:nes,
10 A: goo::d.
11 (1.5)
12 A: d’you know anything else about dogs ;tell me a bit mo:re.
13 HS: hm:
14 (1.0)
15 HS: they run- they fe:tch.
16 A: good ve(h)ry good.
17 (3.9)
A: I have seen Futurama, do you like Futurama?

HS: =>yeah< (1.0) yeah 'cause there's a- (0.3) a robot who loves humans. h

HS: [(an] alien loves a human.]

A: [oh] =ye(hh)ah?

HS: [th- the- the alien girl loves a human.]

A: oh: go: id tsk that's silly isn't it?

HS: yeah,

A: yeah. (.).hh >can you tell me< what's a letter.

ID 610: 51-JW. 9:06 (TD: 4:0)

WPPSI-III - object assembly subtest. Participants are sitting at table, facing one another.

A: these make a clock. ((beep))

(JW puts puzzle together)

A: very: go(hh)od (.). that was good [that was a big clock.]

(JW slides puzzle to side of the table)

A: now let's see what we've got here. ((A puts out puzzle pieces face down on table in front of JW))

JW: ["let]'s XXXX°].

((A puts out puzzle pieces face down on table in front of JW))

A: ye(hh)ah?

JW: mm:

A: have a go at making (.). the car. ((beep beep)) ((beep))

(5.7)

A: oh wow ((beep)) very quick (.). excellent stuff.

ID 611: 51-JW. 14:24 (TD: 4:0)

WPPSI-III - object assembly subtest. Participants are sitting at table, facing one another. JW has his head down doing a puzzle of a cow for the most part of this.

A: now [there's lots of pieces for this one we've just got]

((A gets next puzzle bag from beside the table))

A: two more puzzles left 'cause you're doing so well.

["now we need to put that there"

((A begins to place puzzle pieces face down on the table))

tsk now [these (0.5) make (0.2) a cow, ((beep beep))

((A places puzzle pieces face down on the table))

(14.0)/((JW putting together puzzle of the cow))

JW: hey (mm) I'll make this on (.). on the TV at my home.

A: ye(hh)ah?

JW: mm°

(2.8)

JW: it's a long way away isn't it.

A: it is isn't it

JW: mm

(12.6)/((JW putting together puzzle of the cow))

JW: this one's a bit tricky,

ID 612: 51-JW. 18:11 (TD: 4:0)

Transition from WPPSI-III - object assembly subtest to WPPSI-III - vocabulary subtest. Participants are at the table, facing one another, but JW is standing up leaning forwards over the table looking at A's sheet.

JW: can I (.). try another one?

A: .h well we don't have any more puzzles, but we have got a couple more things to do, tsk hh now (0.4) could you tell me
(0.2) what is (..) a shoe.
(1.2)
JW: [on the re.
[(((JW lifts up his right leg so that A can see his shoe, then puts it down again))]
A: yea:h. that is one isn’t it. so what is it, what is a shoe?
JW: [it’s Sp:iderman (1.3) I [got Sp-]]
[(((JW sits and lifts up his right leg onto the table))]
A: -> [ye(hh)ah?
JW: I got Sp:iderman on mine. [((JW puts his leg down and sits properly in the chair))]
A: your- Spiderman is on yours. [he’s great [isn’t he?]]
JW: Spiderman (two/too), X Spiderman XX.
A: oh real-ly.
JW: yeah.
A: wow.

ID 613: 51-JW. 22:06 (TD: 4:0)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. A is completely off-camera.
1 A: tsk what is a ca:stle.
2 (2.7)/((JW puts his arms above his head in a tent shape))
3 A: [ye:ah]
4 JW: [that ] hm
5 A: a bit like that aren’t they so what is it, what is a castle.
6 JW: a castle fo:r (. ) (everyone’s got married) and that um
tsk .hh hhh (dargee).
8 A: yea:h very good.
9 JW: whether they’re pretty.
10 A: that’s right.
11 JW: and they get married.
12 A: yeah that’s ri(h)ght isn’t it;
13 JW: yeah but my mum and dad are alre:ady married.
14 A: oh ok.
15 JW: °mm°=
16 A: .hh what does glo:w mean.
17 JW: aw:: that’s for Shre:k. (0.2) Shrek is a ogre.
18 -> A: ye(h)ah?
19 JW: °mm.°
20 (0.7)
21 A: .hh what does polite mean.
22 (0.3)
23 JW: a light¿
24 A: pah-lite. it’s a bit, sounds a bit like light but pah-lite.

ID 614: 51-JW. 1:06:32 (TD: 4:0)
Generation of object substitutions task, with pencil as stimulus object. Participants are sitting on the mat facing one another, but A is off camera.
1 A: [now this could be: (. ) a magic wand; what else could it be.]  
[(((pulls out pencil, waves it around, then hands it to JW)) ]
2 (beep))
4 (1.6)/((JW waves the pencil around))
5 A: yea:h? what else, ">what else could you pretend< that
6 [could be¿"]
7 [(((JW taps pencil against the floor three times))]
8 JW: °X°
9 (1.5)
10 A: what could it be.
JW: a pencil.
A: [yeah],
JW: [it- ] it is a pencil anyway.=
A: =it is a pencil what could you pretend it could be. 
(1.0)
JW: [Chair like this ((singsong voice)) XXXX]=
[(JW gets up, walks to the back of room and sits on a chair)]
A: =yeah,
JW: ((singsong voice)) XX=
A: =could go on the chair:r.
(0.6)
JW: gn:::[: : ]
A: [What else could you [pretend that could] be.]
JW: [ X X X. ]
XX XX(ring) the doctor.
(0.5)
A: ye(hh)ah?
JW: °mm°
A: what else could you pretend that could be.
JW: could be a cupboard¿
A: yeah it could be a cupboard,

ID 615: 55-TV. 1:09:14 (TD: 4:4)
Generation of object substitutions task, with pencil as stimulus object. Participants are on the mat, TV is lying on his back and A is sitting up.
1 A: °what else could you pretend it could be°.
2 (0.4)
3 TV: a pistol?
4 A: could be a pistol good.
5 (1.2)
6 TV: um
7 (3.1)
8 could it- (. ) could be something that you can (. ) like be a bow
9 and arrow set¿
10 A: [yeah could be a bow and arrow set, ]=
11 [(TV throws pencil across the room)]
12 A: =go:od. [what else? ]
13 [((A slides pencil back towards TV))]
14 TV: it could be [a: pe:n cil.]
15 [((TV picks up the pencil and drops it))]
16 A: yea:h. good.
17 (2.0)
18 TV: that was being a (woom).
19 (0.4)
20 -> A: ye(hh)ah?
21 TV: yep, that was being a- (0.7) a bison.
22 A: [a :bison.]
23 [((TV picks up the pencil and drops it))]
24 (0.6)
25 wo:w.
26 (0.8)
27 what else could it be.
28 TV: I don°t know: (. ) nothing else.

ID 616: 57-KD. 19:30 (TD: 4:4)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another. A is writing the answers in the test booklet.
1 A: .hh now you said le:aves they fall off trees and onto the
2 ground and that’s right. (. ) tsk what else do you know about
Excerpts containing PMY in interactions involving children with ASD

ID 617: 14-MT. 1:16:38 (ASD: 6;9)
Generation of object substitutions task, with cardboard tube as stimulus object. Participants are sitting on the mat, facing one another.
1 A: now we’ve just got one more object,
2 (1.6)/(A rummaging through bag of task resources))
3 A: tsk (0.8) now (1.3) what could this be, it could be::
4 [(.) a s::nake. (0.4)]
5 [((A makes the tube slither along the ground))]
6 (0.2)
7 MT: ((smilie voice)) no:::
8 A: huh huh [>(why's) that.<]
9 MT: [ I hate ] snakes.=
10 A: =oh huh you hate snakes then what else could it be. (1.3)
11 MT: it can be
12 (1.1)/(MT holds the tube up to his mouth))
13 it can be
14 (.)/((bangs the tube against the floor twice))
15 can [hit heads
16 ]
17 [((MT bangs the tube against his head twice))]
18 -> A: ye(hh)ah?
19 MT: [ hit
20 ]
21 A: what [ else ] could it be?
22 MT: [heads.]
23 (.)
24 MT: [it can hit (there hard) the head.]=
25 [((MT hits himself on the head with the tube multiple times))]
26 A: =ooh don't hurt yourself;
27 MT: ye(hh)ah. [I'll hit somebody's head.]
28 [ (( MT rubs his head )] )
29 A: huh what else could that be.

ID 618: 15-SI. 57:42 (ASD: 4;11)
Free play session. Camera angle is pointed at the mat, however only adult is visible seated on the mat. SI is only briefly visible when she walks across the camera view in line 17.
1 SI: ((cough cough [cough]))
2 A: [ just ] sit down here for a little bit.
3 SI: I’ll just um (.). look in the box. (1.4)
A: yeah those things are we've finished playing with those things (. ) so we can put them away.
(0.9)
A: so we can pop the lid on there,
SI: X
A: yeah,
SI: X these are very good things
A: they are. now that's- ooh can't play with a plastic bag,
we're going to pop these things (. ) just over here 'cause we're just going to play with these toys for a little bit longer,=
SI: = [you know um you know um . hh 'scuse me ((A's name))¿]
[ (( SI walks across the room )) ]
SI: you- you know (that)¿
A: yeah;
SI: when it goes brum brum brum,
A: ye(hh)ah?
SI: you c- you can do this when it (go) brum brum brum
A: oh, it's going >brum brum brum<. good one.
(1.7)
SI: and (you) can bend down,
A: yeah?
(0.6)
SI: ° (a:nd) °
A: could you drive it onto the mat over here, can you show me how it could- (. ) brum brum over here.
(2.9)/((truck driving noises))
A: ye(h)ah, here it comes. can you do it to me¿
(1.2)
SI: okay I'll just (. ) bend it.
(2.3)/((truck driving noises))
A: here it comes, good o::ne.

ID 619: 19-CT. 38:01 (ASD: 4:8)

WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another.

A: now what is (. ) a he:ro.
(0.7)
CT: [hero. hh]
(((CT stands up and puts her right arm out towards A with fingers pinched together)))
A: °yeah°,
(0.7)
CT: [I can't
(((CT attempts to pull up both her sleeves))]
(that’s grey).]
(((CT puts her right arm out again with fingers pinched, then forms a fist)))
A: ye(h)ah?
CT: [hh .hh]
(((CT looks down straight after A’s yeah, then sits down, with eyes fixed on A’s worksheet))]
(2.3)
A: what is (. ) a castle. (.)
CT: a cars::
(1.2)
CT: uh a princess.
A: go:::od,
Free play session. Participants are sitting on the mat, facing one another. CT is surrounded by objects and toys. She has a hard plastic plate in her hands when this excerpt begins.

> CT: (play)
> (1.2)

> CT: a bar,

> A: o:h, that could be a drum. a good idea. good one.

> CT: a drum

> (2.4)/(CT bangs it twice more then drops the plate, and picks up a plastic spoon)

> CT: (it’s going to use) this

> A: ooh.

> CT: um some

> (1.6)/(CT picks up a pipe cleaner)

> CT: (it's going to use) this

> A: ye(hh)ah?

> CT: some [turn (it ar) hh (1.7)"and" <turn around> (1.0) a::r::oun]

> [ ((CT twists the pipe cleaner around the spoon )) ]

> (0.8) X:'s (1.4) [and I'll make an (end)].

> [((CT holds out the spoon with pipe cleaner twisted around it towards A))]

> A: oh, an egg. good one.


WPPSI-III – object assembly subtest. Participants are sitting at table, facing one another. GM has just made a puzzle of a bird.

> GM: twee tweet (.). [ tweet: ]

> A: [that was] great,

> GM: [tweet] tweet tweet [ tweet ]

> A: [no:w,.] [w- make-] make the bird fly over here,

> 'cause I’ve got another [one. (. ) now these make a clo:ck. ]

> [((A places puzzle pieces on the table in front of GM))]

> A: put them together as fast as you can.

> (9.4)

> (beep)

> A: wo::w. that was fast GM. very very good, that’s a nice big clock well done.

> GM: <o::n::e>

> (1.3)

> A: ye(hh)ah?

> GM: ma- (. ) big hand on O:N:e.

> A: ye(hh)ah, the big hands on the one. very clever.

> (1.0)

> A: excellent.

> GM: making (. ) a XXX. (. ) .hh and you XX that’s not working.

> (0.8)

> A: yeah, the big hand is almost on the one. well done.

> .hh have a [look at this one. ]

> [((A places next pieces of puzzle out))]

> A: wooo:h, [I’ll pop these over there. ]

> [((A slides clock puzzle pieces to the side))]

these make a ca::r.
ID 622: 22-LL. 24:48 (ASD: 5;7)
WPPSI-III - vocabulary subtest. Participants are sitting at table, facing one another.
1 A: now tsk could you tell me what is an umbrella.
2 LL: umbrella (0.5) um you use it for y- rain;
3 A: good.
4 LL: and [peep- when it’s raining you can pla::y in the rain with=
5 [(LL leans forward over the table and begins to slowly
6 pick up the chair by her legs)]
7 LL: =your umbrella?
8 A: goo:d.
9 LL: [I’m doing tri:cks::]
10 [(LL is leaning forward over the table and
11 wiggles the chair
12 slightly from side to side)]
13 (0.4)
14 -> A: ye(hh)ah?
15 (0.8)
16 LL: you didn’t look at me.
17 (0.6)-
18 A: °°’s see°°
19 LL: watch.
20 (0.8)/((LL moves the chair from side to side with its legs off
21 the ground))
22 A: OH:::; huh huh
23 (0.9)/ (LL audibly panting))
24 A: now could you tell me (.). what is a bi:cycle.
25 LL: bicycle (0.3) you ride on it.

ID 623: 22-LL. 1:19:15 (ASD: 5;7)
Transition back to the room after a break. A is off-camera for the duration of this excerpt, but LL is walking towards the table.
1 LL: >huh [huh<]
2 A: [ I]'ve got some different things in here,
3 LL: >LOOK AT [ THAT-<
4 [(LL points to something off camera to her right)]
5 LL: IT LOOKS LIKE (.) [ FOOTBOO.
6 ][(banging noise of door closing)]
7 LL: it’s (.). Collingwood.
8 (0.2)
9 -> A: ye(hh)ah?
10 (.)/((LL points again to the right, off camera))
11 A: O(hh)H I se- the football >huh huh<=
12 LL: =we::h
13 A: [almost ]
14 LL: [when my]- when my (dad is/daddy's) little, (.). mah- wh- When
15 my (dad is/daddy’s) (0.7) young, he (got) to play football.
16 A: oh wow.
17 (1.8)/((A prepares next tasks))

ID 624: 26-FM. 23:20 (ASD: 6;10)
Transition from the WPPSI-III - object assembly subtest to the block design subtest. FM is sitting at the table to begin with but leaves in line 11. A is on camera with her back to the view and she is writing things in her notebook. She doesn’t appear to be paying attention to FM until line 20.
1 ((beep))
2 A: ve(hry) good. you did- that was the last one and you did it
3 really really well=
4 FM: =four. twenty four seconds is the biggest number.
5 A: yeah that was really good you should be very proud that was
6 very very good working [well done]
FM: [ X X X ] that but that (wasn’t very much) X (. .) I wanna go get a new toy:.
A: yeah you can go and choose another toy fr’m from outside if you’d like;
(FM walks off-camera, sound of door opening)
FM: (emphatic) and this is going to be the hardest (. .) one you’re never going (to do).
→ A: ye(hh)ah?
FM: (emphatic) can we (make) a ↑ cubby house.
A: huh huh
FM: you need to help me carry it.
(0.9)
A: ye oh- ah you [want me to help you carry it]
((A stops writing and gets up and walks towards FM, so is now also off-camera)))
(FM, so is now also off-camera))
(1.8)
A: we could take that back out ↑ here if you like.
(1.7)
FM: hey (. .) why are there other tables then on the (. .) white mat.
A: because we’re gonna just do some playing ((trails off))

ID 625: 26-FM. 26:07 (ASD: 6:10)
Transition back to the room. The camera angle is pointed at the table where the next task is planned to take place, however both participants are off camera when this excerpt begins. When the excerpt begins FM is distracted by some food left in the room and A is encouraging him to throw it in the rubbish bin. A comes on camera in line 10 and FM comes on camera in line 25.
A: might be a good idea if we pop those in the bin cos I think they’re a little bit old and a little bit dirty. (. .) there’s a bin behind here.
FM: when (0.4) .h who was- (. .) who had- (. .) who bringed this container when- when- when you k- who brang this container.
(1.0)
FM: how many days was it.
(0.3)
A: oh I think it was- I [think that container’s been there=
preparing the next task]
(A sits at the table and begins)
(1.4)
FM: I think you have- I think it’s- you’ll play- I think you- you in- in the olden days you were playing with it.
A: ye:ah a long time ago. now I’ve got something else to show you,
FM: now will we play something on (that/mat).
A: yeah we’re going to in a minute.
we’ve got some good toys to play with on the mat.
(1.6)
FM: and I WOnder Why you have (. .) THIs under the mat.
→ A: ye(hh)ah? huh huh
(1.5)
A: have a look at these shapes that I’ve got he[re, ]
FM: ((si)gh)
(1.7)/(FM comes over to the table and sits down))
A: no::w
(1.2)
tsk .hh have a look at the shapes up at the top,
ID 626: 29-MV. 4:24 (ASD: 4;3)
WPPSI-III - block design subtest. Participants are sitting at the table, facing one another.
1 A: that's perfect very good. let's try another. I'm gonna pop
2 (0.7)/((A is finding the right blocks))
3 A: a:: [rEd one ]
4 [((A places a red block on the table in front of MV)]
5 (.)
6 A: [and a half red and half white. ]
7 [((A places a red & white block next to the red block on the ]
8 table)])
9 (1.2)
10 A: have a go at making that one.
11 ((beep beep))
12 (11.0)/((MV arranges her set of blocks))
13 MV: (same?)
14 A: YEAH VERY good. well well done that was excellent.
15 MV: see XXX
16 -> A: ye(h)ah?
17 (1.2)
18 A: (an idea?)
19 MV: throw it
20 A: ah you throw it
21 (1.5)
22 A: now this time tsk I'm going to put the blocks together to make
23 this design,

ID 627: 29-MV. 28:46 (ASD: 4;3)
WPPSI-III - vocabulary subtest. Participants are sitting at the table, facing one another.
1 A: what is a castle.
2 MV: di di (.) da da da:
3 A: huh
4 MV: a XX a castle a (CRoss) XX
5 (0.7)
6 A: yeah [good.]
7 MV: [a (ch)rist) castle
8 A: goo:d.
9 (0.4)
10 MV: a (christ) X, window.
11 A: yeah there's window,
12 MV: a house.
13 (0.2)
14 A: good .h what does glo:w mean.
15 (0.3)
16 MV: <I don’t know> (fish) mm: ((mwah mwah mw[ah ] )]
17 -> A: [ye(hh)ah?]=
18 MV: =(mwah mwah mwah)
19 (0.6)
21 (0.2)
22 MV: a FIsh um [((mwah mwah mwah))] 
23 A: [fish oh:: I see. ] .h goo:::d.
24 (0.2)
25 MV: (a dolphin and) (0.3) X:=
26 A: =ye(hh)ah what does <Polite> mean.
ID 628: 38-PO. 32:21 (ASD: 4:8)

WPSSI-III - vocabulary subtest. This session is recorded in the child’s home. PO is lying on the mat on his stomach with his head in his hands. A is mostly off camera, sitting cross legged, facing PO.

1  A:  very good.
2    (0.9)
3  well done.
4 (.)
5   .hh what are lollies.
6    (0.7)
7  PO:  eh makes children h and babies when they’re hungry,
8  A:  very good;
9    (3.3)
10 PO:  un I’m very good at guessing.
11 -> A:  ye(hh) ah?
12   (0.9)
13 A:  what’s a dog.
14 PO:  a dog is h h different kind of (.) pets.
15 A:  yeah very good perfect.
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