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DOING TALK ABOUT SPEECH:
A STUDY OF SPEECH/LANGUAGE THERAPISTS AND PHONOLOGICALLY
DISORDERED CHILDREN WORKING TOGETHER.

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CONTENTS

ACKNOWLEDGEMENTS	1
ABSTRACT	2
INTRODUCTION	3
CHAPTER ONE: LITERATURE REVIEW.	
1.I Introductory Outline	7
1.II. The nature of Phonological Disorder	8
a) Theories of Phonological development.....	9
b) Phonological Disorder.....	10
c) Phonological Assessment.....	11
d) Approaches to Phonology Therapy.....	13
1.III. Normal development of phonetic repair strategy	16
a) Child response to adult clarification requests.....	17
b) Maternal clarification requests and phonologically disordered children.....	18
c) Specification of lexical versus phonetic repair.....	19
d) The constraint on other correction.....	22
e) The status of the interlocutor.....	23
1.IV The analysis of interactional moves in therapy	23
1.V. Possible sources of trouble for the child in therapy	26
a) The isolation and segmentation of phonetic material...26	
b) Metalinguistic and pragmatic skills and their role..... in therapy.....	27
1.VI. CA Methodology	29
a) Basic theoretical assumptions of CA.....	30
b) CA and repair organisation.....	32
c) CA and Discourse Analysis.....	34
d) CA and institutional talk.....	38
1.VII. Summary and Design of thesis	42
a) Summary.....	42
b) The analytical chapters.....	44
1.VIII. Methodology	46
a) Data collection.....	46
b) Contextual information.....	46
c) Subject selection.....	47
d) CA Transcript notation.....	50
e) Phonetic and phonemic transcription.....	56

CHAPTER TWO:SETTING UP TARGET MODELS FOR IMITATION AND REPAIR.	
2.I. Introduction.....	58
2.II. Initial data analysis;.....	60
a) summary.....	72
2.III. Behaviours that highlight a model;.....	74
a) The nature of speech perturbation for target words and phones.....	75
b) Removing words from the syntactic domain.....	79
c) Novel words not set up for special attention.....	86
2.IV Differentiating targets as models for imitation.....	90
a) Clearly understood repeat requests.....	91
b) Redoings as part of therapist closing utterances.....	98
2.V. To repeat or not to repeat? Noncoordination of expectation.....	111
a) A case of repetition obliged but not given.....	115
b) Cases of unexpected repeats. Whatever next?.....	116
2.VI. Conclusion.....	121
 CHAPTER THREE:INTERACTIONAL SOURCES OF PHONETIC ERROR.	
3.I. Introduction:Sources of phonetic error in child speech.....	124
3.II. Analysis of an incident; practising a single phone.....	126
a) The data for analysis.....	126
b) Analysis of the main extract.....	127
c) Summary:two types of error on the therapy target.....	135
3.III.Errors of imitation.....	136
a) The imitation of critical and noncritical phonetic features.....	136
b) Augmented imitations and their antecedence.....	144
3.IV A reversion to his own phonological system.....	149
a) Working at word level.....	149
b) A case of cued response rather than imitation?.....	153
c) Letternames and sounds. Are they equivalent?.....	156
3.V. Summary.....	161
 CHAPTER FOUR: ADULT REDOING OF CHILD ERROR IN REPAIR SEQUENCES.	
4.I. Introduction.....	163
a) Research into repair initiators and their outcome.....	164

4.II. Spots or pots? Primary analysis of a repair sequence..	167
4.III.Redoing of problematic speech in mundane talk.....	173
4.IV Structures incorporating redosings in therapy and the nature of the redosings.....	176
a)Queries involving single word/phrase redosings.....	177
b)Offering the alternative or not:forced choice question form.....	183
c)conclusion to this section.....	187
4.V. The nature of the redosings in the light of therapeutic aims.....	189
a)the /sp/ word group.....	191
b)the /st/ word group.....	192
c)another example of a consistent approach.....	195
4.VI Child response: the consequences of an inaccurate redoing of a childtry.....	196
a)Child responses that are a repeat of their own original try.....	196
b) Child responses that confirm or reject the therapist's version of the original try.....	208
c)child responses to adult redoing that involve lexical repair.....	214
4.VII.Conclusion.....	218
 CHAPTER FIVE: A MOTHER DOING THERAPY.	
5.I. Introduction.....	220
a)The parent in speech therapy.....	220
b)The length of task bouts in mother/child data.....	222
5.II A lengthy bout; an initial data presentation.....	224
a)the data.....	225
b)Summary of initial analysis.....	230
c)structure of ensuing analysis.....	230
5.III.The construction of lengthy bouts in mother/child therapy talk.....	231
a)modelling of multiple target phones.....	231
b)absence and deferment of maternal closing moves in lengthy repair sequences.....	237
5.IV. Accomplishing a child repeat in next turn.....	243

a) repeat initiating turn types.....	244
b) a comparison of mother and therapist's use of repeat initiations.....	245
c) The mother's use of repeat requests and redoings in lengthy repair sequences.....	249
d) Summary.....	261
5.V. A comparison of the repair sequences of therapist and mother.....	263
a) the ending of a bout.....	263
b) therapist versus maternal style of modelling.....	266
c) further therapist displays of articulatory features..	272
5.VI. Conclusion.....	276
 CHAPTER SIX. CONCLUSION.	
6.I. Summary.....	279
6.II Therapy talk and ordinary mother/child talk: a comparison of findings.....	280
6.III. The nature of child phonetic error.....	283
6.IV. Theory and therapy.....	285
6.V. The comparison of maternal and therapist style in this study.....	287
6.VI. Final comments.....	289
REFERENCES.....	292
APPENDICES.	
1. Transcript of advice given to Stuart's mother during the first session.....	302
2. Example of the coding of turn types, as in Table 2, used in three bouts forming part of a mother/child practice sequence.....	303

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ABSTRACT.

This study presents a summation of the findings of a detailed analysis of therapy talk taking place between adult and child in the clinic and at home. The analysis utilises the ethnomethodological practice of Conversational Analysis to derive the fundamental orderliness of this type of institutional talk.

The children involved have phonological disorders that affect the intelligibility of their speech. The therapy involved is therefore aimed at working on speech 'sounds' in a way that is rather different, in some aspects, to the way pronunciation is treated in mundane talk. The initial part of the thesis looks at the way target words are highlighted as models, many for imitation. Much of the remaining analysis looks at what happens in repair sequences following a phonetic error and how some of these errors may be interactionally lead rather than deriving from the child's own phonological rule system.

The way in which the therapist approaches the talk is shown to be affected by the theoretical knowledge that informs her work. The differing states of knowledge between adult and child become clear through the interaction. The styles of both therapist and mother are considered in this study and the results of the analysis show that there is a difference in the proportional frequency of certain turn designs employed by the two adults. The study finishes with a consideration of the therapeutic implications of this work and suggests that conversational analysis is a valuable research and assessment tool.

INTRODUCTION.

The interaction which is the focus of this thesis is that in which a speech therapist or a parent seeks to bring about change in the speech output of the child. Speech disorders, when the child's phonological patterns are not developing in a predictable manner, form a large proportion of the paediatric therapist's caseload. This type of 'phonological disorder' can occur distinct from other language disorders affecting comprehension or semantic/syntactic aspects of language or as part of the wider problem. The children in the sample for this thesis fall predominantly into the former group.

After a child has been referred to the therapist it is her (they are all female in the data collected for this thesis) job to assess the precise nature of the speech disorder and to decide if and what forms of intervention are appropriate. The broad objective of the therapy itself is to make the child aware of those aspects of his output which are problematic and to coach him gradually into being able to self-monitor his own patterns and to produce more intelligible speech. In the course of this it is expected that improvement in the clinic will generalise to other settings. Parents are also expected to participate in this therapeutic process in that they are seen as capable, under guidance, of giving home instruction which can support and further the work of the therapist.

Clinical research into speech/language therapy with phonologically disordered children has tended to focus on theories of speech disorder as a starting point for therapy rationale. Less research has been done into how therapy actually works in terms of how the tasks are presented. Therapy is an interactional process in the same way as the everyday carer/child exchange is. Therapy is a special adult/child dyad where many of the phenomena that occur in ordinary talk are also found but where phonetic and articulatory matters become the explicit topic of the interaction in a way that has rarely been found in mundane talk. My focus will be on the actual workings of the face to face encounters which make up the therapeutic process itself. This will involve the close analysis of speech exchanges on a turn by turn basis with a view to examining the nature, and sequential consequences, of different kinds of involvement with the child.

I chose to work using the qualitative approach of conversational analysis. This sets my thesis apart from other work which has sought to capture the flavour of therapy through quantifying utterances in the framework of various codings. CA is an ethnomethodologically based technique that has sought to show, first and foremost, how participants orient to, and create, the orderly features found to be inherent in mundane talk. However in recent years it has been increasingly applied to more stylised forms of 'talk at work' forms which have proven to have interactional qualities that make them recognisably special. In part my work documents how speech therapy is also a distinct form of talk.

The analysis concentrates on tasks aimed at the verbal 'production' side of therapy rather than those exclusively dealing with auditory skills. This is partly due to the fact that imitation and repair sequences dealing with phonetic accuracy seem more akin to the type of exchanges that ordinarily take place in mother/child talk. Additionally, tasks where verbal output is expected, occur routinely with greater frequency in therapy talk than auditory work at all stages of treatment.

There are various themes that run throughout the literature review and analytic chapters. The major part of the thesis deals with occasions of child error, predominantly those where the pronunciation of a target word is inaccurate following a test question or model but also those which occur subsequently in repair sequences. Errors can be differentiated as to those that show 'work being done' and those where the child does not appear to be working on the phonetics at all. The thesis seeks to show how errors arise through the interaction, and how the nature of the error can be shaped by the prior talk. The analysis also shows how repair on particular target words are initiated, worked on collaboratively and brought to a conclusion.

Another major theme of this work is how the way in which therapists approach modelling and repair is influenced by the theoretical knowledge they have, especially that of phonetics, phonology and learning theories. The child responses sometimes clearly display that not only is this not shared knowledge but that the therapist's approach fails to make her/him address the phonological nature of their speech error. In turn the mother comes to therapy with a different set of beliefs and the analysis shows how her approach can be very different.

The shape of the thesis is as follows: the purpose of the **first chapter** is to contextualise this analysis, to give the reader a picture of the other research which bears on the workings of these encounters and a sense of why I have chosen to analyse the aspects I have and in the ways that I have. It includes coverage of those theories that inform the therapist's work as mentioned above. Methodological issues are also covered.

Four analytical chapters then follow: **chapter two** starts by describing how modelling is used to highlight target phones and words through the turn design. A variety of behaviours are used to make models stand out, including perturbation of the normal speech flow and disruption of syntactic patterns. Some of these models are then shown to be differentially designed in order to engender a child repeat of the target. The differentiation of imitable models is not always clear cut and noncoordination of expectation between the interactants can arise. Attention is paid to redos as models in repair sequences to show how the trajectory of the child's repair is affected by the prior discourse, a theme which is then taken up again in more detail in **chapter three**. This chapter looks at the phonetic detail of the therapist's model and child's imitations. The therapist's model is clearly shown to be informed by the theory of phonetic production. The therapeutic consequences of this are that the child is seen to imitate certain features of the model closely but they may not be those that are critical to 'correct' production on the therapist's terms. Additionally there are occasions when the child appears not to be doing work on the phonetics at all. These occurrences together with some particularly bizarre patterns of error are found to be interactionally linked to the prior turn design.

Chapter four then moves on to look at approaches to repair where self rather than other-correction is initially encouraged. Redos of the child's error occur routinely as part of the adult responses to problematic speech. The structures in which these occur and the nature of the redos themselves in the light of therapeutic aims are discussed in detail. The consequences for child response following inaccurate and accurate redos of their prior try are illustrated in detail. There is evidence that such turns do not always lead the child to consider the phonetic component of his speech as the source of the communication problem.

The penultimate chapter (**five**) then tackles the data from a slightly different perspective, that

of comparing one mother's approach to therapy tasks with that of the therapist. Some quantitative data are used to illustrate the lengthy nature of the maternal task bouts in comparison to the therapist. The turn types that make up the bouts are then described in some detail, especially those that engender a repeat of the child's prior try. There is evidence that it is not the type of moves the adults make that are so different but rather their proportional frequency of occurrence and deployment within the repair sequence. In the conclusions (chapter six) the analytic findings will be considered as a contribution to the body of knowledge on institutional talk and more specifically to how therapy is done. The therapeutic implications of the above analytical chapters will also be considered

CHAPTER ONE.

LITERATURE REVIEW AND METHODOLOGY.

1.I. INTRODUCTORY OUTLINE.

Speech therapy is an eclectic discipline, informed by other disciplines such as medicine, psychology and linguistics as well as its own clinical research. In this literature review I will provide an insight into the work of the speech/language therapist and into the disorder she/he is dealing with when we talk of 'phonology disorder'. I will then go on to discuss conversation analysis in order to show how pertinent this discipline is to the study of language disorder and therapy. The structure of the discussion will be as follows;

1.II: A brief overview of the main streams of theory that inform the work of the therapist when dealing with the phonologically disordered population. It is vital to have some conception of the intellectual baggage the therapist brings with her to the clinic, not only as a way in to the data but also because throughout this thesis the argument will be raised that the therapist's application of theory to therapy has a discernible affect on the interaction. This will include an overview of theories of phonological development and disorder, and their incorporation into assessment and therapy techniques.

1.III: The next section will deal with the types of device and turn design that are available to therapists to engender an accurate try at a phonetic target or effect repair on a previous error. Much of this section will deal with ordinary adult-child modelling and repair as the foundations of the stylised therapy interaction lie here.

1.IV: The next section will be devoted to research into the type and distribution of turns at talk within the therapy sequence. Some researchers point to the control of proceedings lying very much in the therapist's hands with little initiation on the child's part. Other work looks at the types of turn that engender a try at target words or engender repair.

1.V: This section gives an account of problems arising out of the type of therapy covered by this thesis from the child's point of view. The presentation of isolated fragments of speech in therapy has given rise to discussion regarding difficulty with generalisation of new skills to normal conversational contexts. Some difficulties may arise due to differing states of knowledge between the two interactants which are not addressed fully by therapy techniques.

1.VI: Following on from the discussion of past research into the makeup of therapist/child interaction the discussion moves on to consider the types of approaches that can be used to analyse these encounters. In particular a comparison will be made between Conversational Analysis (henceforward CA) and Discourse Analysis(DA) in order to highlight the unique contribution that I believe CA can make to this type of research.

1.VII: Ethnographies of communication reveal that each social grouping develops its own norms and expectations regarding participation in events and activities. Analysis of 'Institutional talk' is a fairly recent development in CA and work on a variety of stylised interactions has some bearing on the work of the speech therapist. This section takes us back to the first in that what happens in these therapist/child encounters are the enactments of various theories about therapy, the nature of errors and the ways in which these encounters should be structured. The child has to come to grips with such arrangements and understandings, as does the mother when she takes on the role of therapist within the home.

1.VIII: This section constitutes a summary of how the thesis will be structured round the questions raised in the body of research discussed.

1.IX: Methodological considerations are discussed, including transcription notation, subject selection and choice of medium.

1.II. THE NATURE OF PHONOLOGICAL DISORDER.

The medical model of speech and language disorders is valuable up to a point as it can isolate any obvious physical problems but specific speech and language disorders, such as a phonological disorder, can only be thus defined by exclusion (Bishop and Rosenblum 1987) of any physical or other identifiable aetiology. In the past a distinction was made between articulatory (physical in origin) and phonological disorders but now the distinction is blurred as we have gained more understanding of the interaction of language levels. In this study it is taken that these particular children's deficits are being treated predominantly as a specific language learning disability and are being viewed as such. What the therapist decides to 'treat' is founded on the basis of normal phonological development and on methods of therapy which additionally take account of learning theories. For instance Newman, Creaghead & Secord (1985) reviewed forty years of therapeutic intervention and identified 'traditional (atheoretical) approaches, behavioural, communication-centred and linguistic approaches which were not mutually exclusive.

a) Theories of phonology development.

There are various theories of phonological development and their development has some bearing upon current clinical practice. The reader is referred to various texts that give good accounts of these including Hewlett (1990), Howell and McCartney (1990), Yavas (1991). All that will be said here is that they fall into two main categories regarding the role of the child. Some, such as Jakobson's 'structuralist' theory (1968) and Stampe's (1969) 'natural' phonology, see the child in a relatively passive role (as do Mowrer's (1960) and others' behaviourist theories). According to such theories the child is subject to universal laws or properties that determine how phonology develops and external events (such as therapy) only shape how these occur. Other theories, such as Waterson's (1981) 'prosodic' theory, Menn (1980) and Macken and Ferguson's (1983) 'cognitive' theories put the child in a more active role stressing individual differences rather than universal mechanisms. The child is seen as using a variety of problem-solving strategies to perceive and produce the sounds of language, including that of *hypothesis (rule) formation*. The latter authors describe how children may initiate and *create* novel solutions to the "puzzle" of phonological acquisition, and evidence has shown that children individually and uniquely *select* the type of phones and contrasts that they add to their phonological system (Schwartz and Leonard 1982, Vihman 1981). Phonological learning is viewed as a gradual process and a phenomenon such as *regression* in the pronunciation of previously correct words is seen as evidence of the incorporation of new rules into the phonological system.

In order to encompass the auditory-perceptual, cognitive-linguistic and neuromotor-articulatory components that are implicated in speech disorders various theoretical models have been proposed, often in information processing terms. Looking purely at speech production Hewlett (1985,1990) proposes a three part interconnected model with corresponding disorders :

- i) 'phonology' is the highest level of cortical functioning where words are selected and stored,
 - ii) 'phonetics'; when phonological constituents are converted into movement sequences,
 - iii) articulation; is the peripheral stage in speech production when the movement takes place.
- As part of this model he introduces the idea of separate *input* and *output* lexicons in which different forms of the same word may be stored. Hewlett characterises speech development as an interaction between a gradual phonetic maturation and cognitive mechanisms of

learning about meaningful sound contrasts.

This is a model that researchers such as Grunwell (1991,1992) have found fits well with their own work on linguistic assessment of phonological disorder, although their work does not claim to go further than analysing the surface forms of the rule governed child's phonology system. Similar surface forms may have different underlying causes, and researchers such as Brett, Chiat & Pilcher (1987) and Stackhouse & Wells (1993) link this type of model into a psycholinguistic approach to the assessment of the speech disorder that taps the different levels of input and output processing to generate a hypothesis as to where the breakdown is occurring. They argue that labelling children as 'phonologically disordered' can mask both individual differences in their speech processing abilities and possible subgroups of disorder (Williams and Chiat 1993). However the generic labels "phonological delay & disorder" were predominant at the time of my data collection, and are still meaningful for many therapists working now, in the terms laid out briefly below.

b) Phonological disorder.

There is general agreement that phonological disorder is one where, despite normal intelligence, with hearing within normal limits and no overt neurological or articulatory oro-muscular structural defect, speech fails to develop along 'normal' lines and is often unintelligible. The disorder is one of the organisation of phonological patterns and this is the main focus of remediation. However, the perceptual and articulatory modalities cannot be totally ignored as various researchers have shown that motor and perceptual programming affect the phonological system. For instance Hewlett (1985,1990), in arguing for the abandonment of the dichotomy between articulatory and phonological disorders, reinforces the importance of the interplay between different processing levels as have Stackhouse and Wells (1993). As Stoel-Gammon (1991) points out, the impact of an early hearing disorder can negatively influence the child's ability to categorise speech sounds and have a lasting effect on speech development. In this study, for instance, fluctuating hearing disorders have been apparent in the case histories of some of the children yet their 'diagnosis' is one of 'phonological disorder'. Chiat (1983) claims that unintelligibility may stem from different sources within one child let alone across subgroups of children with phonology disorders.

The theoretical controversy has some bearing on the work in the clinic. On the therapeutic front the battle continues to rage as to whether there is any value in 'treating' various areas of language skill. For instance it has been suggested that there is little value in working on auditory perception when this skill often appears intact. Yet this is contested by the position of researchers such as Chiat above. Alternatively 'Metaphon' theory (Dean, Howell, Hill and Waters 1990) avoids any work on peripheral articulatory production skills, preferring to build up cognitive, 'metalinguistic' knowledge instead (See sec 1.IV for more on this), although in recent updates a more broadbased view has been put forward (Dean, Anderson and Waters 1992).

For the everyday therapist the dilemma is generally solved by treating each child as an individual case and deciding on a regime of therapy suited to their problem, based on thorough assessment of neurological, hearing and articulatory mechanisms as well as phonology. The eclectic viewpoint comes across strongly in the work of the therapists involved in the data for my study where they are clearly working from a linguistic analysis of the child's speech but include work on auditory discrimination and articulatory aspects of production as well. A multisensory approach seems sensible when one considers models of language where levels clearly feed into one another. As a case in point Hodson (1991) argues that the practice of production is not to establish an absent motor pattern but to help the child build up a kinaesthetic image for self monitoring.

c) Phonological assessment.

The argument that runs through all assessment and treatment of phonological disorders is that all child errors are based on a rule-governed system. An individual assessment is made of each child's phonological system before therapy can commence, building up a picture of the child's patterns of speech, the restricted phonetic inventory, syllable structure, range of contrasts and homophony to estimate the communicative implications of their system. The assessment also compares the child's system to the adult target system as well as the child's peers to see if the patterns are immature or deviant. One of the easiest ways of getting to grips with what therapists are aiming to teach is to understand the way in which they approach the assessment of their speech patterns. Assessments are based on single word and continuous speech samples and regular patterns of production derived from these. A set of

characteristics typical of phonology disorder have been drawn up by researchers such as Stoel-Gammon and Dunn (1985) and Grunwell (1987). These include: a restricted set of speech sounds ('phones' hereafter), limited word and syllable shapes, persistence of error patterns beyond age appropriate levels, a chronological mismatch of error patterns, unusual and idiosyncratic error types (including a tendency to a favoured articulation), and extensive variability of patterns without any apparent advance in intelligibility.

Amongst the various theoretical frameworks that have affected clinical procedure Stampe's (1969) 'natural processes' have proved popular, especially following the work of Grunwell(1985) on the assessment of phonology disorders which incorporated this notion as one element. These processes 'simplify' the adult target phones¹ through various systematic strategies. Grunwell points out that whatever the theoretical standpoint of the clinician, process analysis is a useful tool whether it is viewed simply as systematic description or more categorically as a psycholinguistic explanation. Bleile(1993) advocates the former approach as it avoids theoretical pitfalls, and this is certainly how many contemporary therapists use process terms. Without going into extensive detail four main types of process have been identified in English children and are used as a basis for assessment. Descriptions that occur in the text of this thesis include references to such terms:

i)the syllabic shape of a target word is altered e.g. a final consonant is deleted or a cluster reduced,

ii)one phone in a word may be assimilated to another,

iii)one phone may be substituted for another e.g. a fricative may be 'stopped' to become a plosive ([s] becomes [t]), a phone may be 'fronted' (a velar articulation [k] becoming an alveolar [t]). Two or more processes may occur together so that a phone is both stopped, backed and even voiced (so [s], an alveolar fricative becomes [g] as with Subject 2, Elizabeth).

iv) a voicing feature may be changed.

This system of assessment is not without its critics although it is not apposite to go into

1

The word 'phone' is used to describe a sound segment of speech, avoiding the theoretically weighted 'phoneme' and the more ambiguous 'speech sound'.

details of alternative theories here as clinical application of these theories is in comparative infancy and such criticism was not evident in the work of the therapists involved in this study. Researchers such as Leinonen(1991) are working to establish a more functionally driven view of phonological development; a 'data driven' rather than 'theory driven' view. The work of Kelly and Local (1989a,b), on the interactional bases of phonology, Spencer (1988) and Bernhardt (1992)'s theory of nonlinear phonology, the interaction of dynamic and linguistic modes of assessment by Sahlen & Lofqvist (1993), and Wells(1994) work on syntagmatic assessment of phonology in connected speech have all raised questions. Together they doubt the relevance of the traditional segmentation of phonology to speech/language development and question whether assessment and therapy for language disorders should really be founded on such theory. It certainly cannot be guaranteed that the theoretical segments and processes postulated are the building blocks the children acquire per se, especially when what they hear in interactive talk bears little direct relation to abstract categories such as phonemes. The topic of the kind of language knowledge the child is acquiring in therapy is taken up again in section 1.IV. These more radical approaches have had little effect on clinical practice as yet. The interested reader is referred to the above authors for more detail on each theory.

d) Approaches to Phonology therapy.

In this section I will limit discussion of therapeutic techniques for the most part to those that arise with the therapists involved in my sample. Therapy based upon thorough phonological analysis aims to attack the rules of the basic system rather than individual phones and this appears to be the strategy that the therapists in this study are taking. Stuart's therapist in chapter 4, for instance, is operating on the 'group' (e.g. fricative) principle as advocated by McReynolds and Bennett(1972) and Weiner(1982). In this type of approach an individual phone error is not tackled but rather a critical feature (voicing, place or manner of articulation e.g.friction/plosion) is presented across a range of phones in contrast to the manner at present employed by the child. Phones are presented in groups e.g. of 'fricatives' to eliminate 'stopping', or consonant clusters are grouped to eliminate consonant reduction. In consideration of the gradual nature of phonological change Hodson & Paden(1983) advocate introducing groups cyclically without one group being necessarily 'correct' before introducing another.

Another feature of much of clinical therapy is the set of techniques that are used to confront the child with the communicative consequences of his own error. This is a factor which, as we will see in the research below, is rarely tackled so explicitly in mundane adult/child talk. Some therapies make the child's rule system errors the basis of the treatment programme. Weiner (1981) first recommended the minimal pair approach in which homonymy is tackled through the presentation of such pairs where two words are differentiated by one contrast e.g. 'tea' and 'key'. Thus different phones signal different meanings and contrast the child error with the desired 'adult' target. An extension of this is Gierut's (1989) 'maximal opposition approach'. Instead of choosing very closely contrasting minimal pairs therapists choose phones contrasting on a wide range of features and slowly work towards the minimal pair. The child's error is not involved in the contrast however; distinction instead is made between phones that are correctly used in the child's speech and those that are not. The theory behind this is that treatment of maximal distinctions allows a child to attend to those specific feature dimensions that she/he finds relevant, much as children have been shown to first maintain wide extremes of contrast during normal development (Jakobson 1941/1968, Crocker 1969). In minimal pair therapy the therapist more clearly controls the parameter of contrast.

Contrastive therapies follow research that advocates the need for therapy to have a communicative component apart from simple drilling and this is a factor most therapists recognise. For instance Greenfield and Smith's (1976) 'Principle of informativeness' outlines a positive influence of speaker-listener interaction which produces less articulation errors than in other less interactive contexts. Leonard (1971) had earlier found that phones necessary to meaning were more frequently correctly pronounced than when they are low in information value. Another aspect of communicative therapy is the importance of making the child aware of the nature of their error and the effect it has on communication. As Blank (1973) said:

"The effectiveness of any teaching programme critically hinges on the management of the wrong response"(p85)

Van Kleeck and Richardson (1986) point out that how clinicians choose to deal with children's error is determined by their implicit and explicit assumptions about how language learning occurs: the body of knowledge available to them is extensive. A first principle of

therapy is to assess the nature of an error, why an error has occurred and the subsequent response will also depend on the child's learning stage. Amongst the reasons for error that Van Kleeck and Richardson describe are not only those derived from the child's own phonological system but also those that she calls "positive errors". These show a move on from the child's own system. Errors may arise because of a combination of factors such as memory or other cognitive limitations and pragmatic/discourse problems. She outlines their differential treatment in ways that modify the context or type of material presented but not in terms of discourse patterns as such. In considering how errors arise and are handled it becomes clear that psycholinguistic theory is not the only body of knowledge that informs work in the speech clinic. Various approaches advocate incorporating aspects of psychological theory as to how children learn. A therapist comes across the broad range of theories of learning in training and some have direct clinical application. Therapists take into account theories that effect not only what they teach but the way in which they teach it. These run the gamut from operant learning through to cognitive, information processing and social models of learning. For a thorough review of such theories and their clinical application see Newman, Creaghead and Secord (1985), Van Kleeck and Richardson (1986) and more generally Flavell, Miller and Miller (1993).

Part of the outcome of various therapeutic approaches to phonology disorder is assumed to be the enhancement of the child's explicit metalinguistic knowledge about how language is put together. The term metalinguistics was defined by Menyuk (1976) as those abilities which allow a person to reflect on, or to think about language itself. Metacommunication is, in a way, the underlying theme of all therapy in that the issues of articulatory phonetics and phonology become the actual topic of the exchange. As part of the focus on metalinguistic knowledge Stackhouse and Wells (1993) advocate psycholinguistic assessment of the child's developing phonological awareness as so much of therapy depends on their skills with segmentation into syllables/sounds and words as well as rhyming etc.

An example of how theory is applied overtly to therapy is in the currently popular phonology programme, Metaphon therapy (Dean, Howell, Hill & Waters 1990), which draws heavily on 'Event Theory' (Constable 1986, Harris 1990), and particularly the notion of 'scripts' where language forms become associated with particular events or contexts. The emphasis is on

conceptual 'metalinguistic' skills rather than those of the production of phones. These authors advocate that the cognitive events should be kept simple in order that children can focus on the pertinent linguistic aspects. Learning moves from other-regulation to self-regulation with a more active involvement on the part of the child rather than simply rote imitation.

I have not given an exhaustive list of theories that inform therapy but I have tried to describe some of those that inform the data in this thesis. Whilst many of these approaches offer a framework for therapy they offer little concrete description of how the work is done in interactional terms. There is another body of research that appositely looks at the actual devices or 'turn designs' that are available to a therapist to effect repair in encounters where error occurs. Some of the interaction that occurs in the clinic has the flavour of any pedagogic encounter between adult and child and the repair strategies often parallel those found in such mundane interaction. This justifies the examination of the literature on ordinary adult-child interaction, the task to which I now turn.

1.III. NORMAL DEVELOPMENT OF PHONETIC REPAIR STRATEGY.

Most research on repair strategies in child/adult talk have been aimed at disentangling lexical (mislabelling) and syntactic (grammatical) rather than phonetic (pronunciation) repair in adult/child data. However there is ample evidence that very young children are capable of phonetic manipulation in repair although it is a strategy that is gradually supplanted by other types of repair as linguistic skills advance. Although phonetic self-repair is rare Scollon(1979) and Clark and Anderson(1979) both cite cases at as young as 18 months but they also found that they diminish proportionally as syntactic and lexical reformulations take over in later preschool years. McTear (1985) also notes that phonetic self-repair rarely occurs in child-child talk. In the following section I will focus on firstly 'normal' child responses to clarification requests and then more particularly phonological disordered children and maternal clarification requests in mundane conversation. The discussion then moves on to consider how lexical and phonetic repairs are differentiated by the adult and how much 'other-correction' rather than invitation to self-repair is involved in adult/child talk. Finally the effect on the interaction of another adult rather than parent making a repair initiation is considered.

a) *Child response to adult clarification requests.*

Much research has centred on what happens when listeners display that they have not fully grasped the message, using *clarification requests*. These have traditionally been categorised as: *neutral requests* such as 'Pardon', *specific constituent Requests* such as 'You wanted a what?' and *confirmation requests* which repeat an interpretation of the child's utterance e.g. 'a knife?'. Whilst most of this thesis is concerned with phonetic repair following *models*² chapter 3 also touches on other repair initiators, which clarification requests in some instances can be considered.

Looking particularly for evidence of developmental variation in phonetic aspects of speech repair some studies have data pertinent to this. Gallagher(1977) observing children 2.10-5.7 years notes phonetic change as a response to people's misunderstanding in the early years but then word substitutions became more predominant. Responses to clarification requests in children (talking to other children) are considered to be 'phonetic' revisions if there is a gross phoneme substitution but if there is only some "within-phoneme category variability" then it is not noted as significant.

Gallagher and Darnton (1978) looked at clarification requests (using an experimental procedure where children are asked "What?" twenty times in an hour's play). They note that children with language disorders (but no "clinically significant articulatory deviations") revised their utterances 75% of the time with only 17% straight repeats. 31% of these revisions involved changing the phonetic shape marked by reduction in tempo, more careful articulation, widening of pitch range and use of contrastive stress, not phone substitutions. VanKleeck and Frankel (1981) note that language disordered children seemed to follow a similar path to normal children from their research.

Clarification requests often do not just occur in isolation as set up in these experimental approaches. A misunderstanding may not be resolved at once and further clarification may be sought. Langford (1981), analysing naturalistic conversation, shows how these clarification requests differentially treat the prior problematic turn and how there is increasing specification

²'Model' is a target word for imitation by the child; the nature of these targets and how they are denoted is discussed in Chapter 2.

of the problem as a repair sequence progresses. He also found that children expect displays of understanding after a response to an adult's clarification request. Again in experimental mode Brinton, Fujiki, Loeb and Winkler (1986) look at 'stacked' sequences of clarification requests with normal and language disordered children, to study repeated attempts to repair the same message. 87% repaired at first request with diminishing numbers for each subsequent request. Repetition was cited as the most common response, but as sequences went on more 'inappropriate responses' were evident from the language disordered and younger children. The authors state that there were some revisions of phonetic form without making phonetic substitutions e.g. by lengthening vowels or aspirating final stops.

Although the above research has given rise to some interesting insights regarding the development of repair in children, as a category system 'clarification requests' has a limited value as the utterances so labelled are actually multifunctional. For instance they not only ask for clarification but may also acknowledge certain parts of the content. Additionally there has been very little research regarding actual phonetic repair following these utterance types as it has often been subsumed under 'repetition', with no detailed phonetic analysis. As Tarplee (1989) has pointed out there is also some problem with the differing meaning given to 'repetition' across different research. For example, in Brinton et al's work it is cited as the most common response but in Gallagher et al. it made up only 17% which suggests they were operating at different levels of definition. What is not clear is what type of clarification request prompts which sort of repair. ³

b) Maternal clarification requests and phonologically disordered children.

This subject is covered partially by other research such as McCartney (1981) and Gardner (1989), using similar methodology (both involved mother/child dyads with phonologically disordered children). McCartney (1981) studies the use of contingent queries by mothers and unfamiliar adults with 3 phonologically disordered children in conversation. These dyads therefore equate to those in this thesis. She found that mothers use confirmation requests

³In order to avoid the theoretical connotations of the term 'clarification request' in my own study I have adopted the term 'misunderstanding check' as used by Schegloff (1987) in his CA research. I will only use the former term when referring to other people's work or making some form of comparison with other research.

most (55%) while strangers use them less frequently. Strangers in turn used more neutral requests such as "Pardon?" which typically do not claim to interpret what the child has said. 'Confirmation request' is a term that covers any redoing of the child prior with a rising pitch, but simple yes/no confirmation is not necessarily what they are seeking or receive. McCartney found that they were often followed by phonetic repair, although direct modelling more frequently had such a repair following. One mother in the study tried to use specific constituent requests (such as "You ate a what?") as a phonetic teaching method but they did not result in the required phonetic repair.

In mundane conversation (in play and looking at books) between mothers and their phonologically disordered preschool (3-5yrs) children, the present author (1989), found a wide variation in use of clarification requests across 8 dyads (2.1-11.6%). Similarly repetitions of the child's prior made up between 3.1-13.4% (other than requests for confirmation with rising pitch). Importantly, it was found that the phonologically disordered children made 50% structural/lexical repairs following clarification requests and 30% phonetic revisions (phone substitutions not suprasegmental within-phoneme category variants).

Thus in both these works clarification requests were not found to be the most efficient way of stimulating phonetic repair. Phonetic change most frequently followed a direct model so it would seem phonologically disordered children, enrolled in therapy, do not predominantly seek to repair their speech phonetically unless it is clearly required by the prior utterance. In both studies there were more occurrences of augmented modelling with phonologically disordered children than with their peers. These directly highlight the nature of the error in a way most clarification requests do not. The topic of the design of response to error is continued in the discussion of Tarplee's (1993) work on mother/child dyads using CA methodology in the following section.

c) Specification of phonetic versus lexical repair.

The most significant piece of recent research for comparative normative data for this thesis is Tarplee's (1993) work on mother/child interaction. As part of her thesis on picturebook labelling episodes and mundane mother/child talk Tarplee isolates incidents of phonetic error and repair. The children in her study are considerably younger (1.7-2.3years) than those to be

presented in my work but the didactic nature of the teaching approach provides a valuable basis for comparison to therapy. In her study, having the shared context of a picture may assist in reducing the need for clarificatory repair work (in terms of hearing and understanding) and allow room for corrective repair work. In signifying whether repair is needed third position receipt of the child utterance is found to be very much part of the design of this talk. Out of 70 labelling moves by the child only 7 receive no adult receipt in next turn. The design of the receipts has significant implications for the trajectory of the talk that follows in terms of carrying the conversation forward or initiating repair. In conversation adults typically do not orient so much towards correcting linguistic features of the child's talk but rather to affirming ones where there is little problem.

Part of Tarplee's argument identifies certain 'redoings'⁴ as having a complex role, initiating phonetic repair at the same time as confirming the child's lexical choice. Frequent other-repair initiation mean the child's opportunity for self-initiation of repair is rare and Tarplee suggests these features are characteristic of talk involved in "doing instructing". Activities of adult repair initiation and affirmation:

"reduce the responsibilities left with the child for a self-monitoring of the adequacy of the talk produced."(p330)

Tarplee finds that phonetic teaching episodes are easily identifiable as different to those dealing with lexical matters on a number of parameters. Looking simply at redoings occurring in one sequential position, following a child's attempt at a label, Tarplee states that they can be distinguished in terms of their prosodic design and interactional accomplishments. A dispreference for overt phonetic other-correction exists (where the listener provides the repair) and this affects turn design, whereas other-correction commonly occurs when factual/lexical knowledge is being dealt with. Adult repeats of the child's prior are seen as a form of embedded 'disguised' phonetic repair (after the notion discussed by Jefferson (1987) discussed

⁴ To do a redoing..

"is to pick that utterance up and display it for some kind of work to be done on it. That work may be corrective, evaluative or investigative; may be immediate or delayed and may be undertaken by the redoer, the speaker of the original utterance or by both collaboratively". P7.Tarplee 1993.

below). There is no explicit rejection and the lexical (word) accuracy has to be dealt with first, phonetic work only taking place after this.

The key feature that signalled the repeats as corrective in nature was their 'contrastivity' to the child's prior. Where a redoing was not set up as a correction contrastivity along phonetic parameters was minimised, in some cases 'mimicking' closely the child's pitch and tonicity. In such a way the labelling sequence could be terminated. Particularly lexical repairs are not initiated typically by a repeat of the child's label, even in the form of a query e.g. child: 'x' Ad:'x?-where 'x' is a wordform). Where a repeat is used it signals that no further labelling work is required but it may initiate phonetic work.

Lexical repair initiation in Tarplee's data is typically direct ('It's not x it's y'), drawing attention to the contrastivity through syntactic means whereas phonetic repairs are more subtle, having elements of rhythmic prosodic camouflage (Couper-Kuhlen 1989) or other "disguise" (Local 1992) as found in selfcorrections in adult-adult talk. Pitch is typically very high to low fall in nature and stands in contrast to the child's own utterance. (This pattern was also associated with adult self-corrections by Local, as was an increase in loudness.) Temporal delay in the placement of some of these redoings also is shown to disguise them as re-elicitations rather than corrections. Tarplee's summing up emphasises the routine "embedded and disguised nature" of phonetic correction as compared to lexical work. Tarplee finds one single case of outright overt correction in mundane talk which dealt with articulatory aspects of the child's prior turn in an undisguised fashion. In this instance it dealt with the teaching of a new word and Tarplee suggests these could constitute a special case.

It would be surprising if talk in therapy were to share all the characteristics outlined above when phonetic matters are the issue in hand. For instance Tarplee does not find the mothers giving phonetic contrastivity through juxtaposing two versions of the same word (e.g. 'It's not x it's X') as the articulation is not central to the interactional business. However in this author's work (1989 and this corpus) this is exactly the type of structure that occurs frequently in the therapy data and is taken up by the mother when undertaking supportive therapy work at home. The phonetic details are what is central to therapy in a way that is not true of mundane talk.

d) The constraint on other-correction.

It was initially suggested by Schegloff, Jefferson and Sacks (1977) that a differential between adult-child and adult-adult talk might exist in terms of the amount of overt 'other-correction' (by the listener) compared to occasions when the listener invites the speaker to self-repair. Thus whilst other-correction is dispreferred in adult-adult talk there could be a lessening of the constraint on other-correction in adult-child talk. In describing the embedded and disguised nature of adult-child phonetic correction Tarplee does not present much evidence of the latter. What may be the case is that other-correction may occur where the adult has a warrant to treat the child's error as one of inability rather than a temporary slip (see later discussion on the notion of 'preference organisation'). Maclure (1981) in her thesis (using children 18-42months, a wider age range than Tarplee) found that there was more frequent other-initiated other-correction in her adult-child data than in adult-adult (although dealing with lexical not phonetic matters) and stated that this could be explicable due to the greater linguistic ability of the older children resulting in an occasional identifiable aberration rather than frequent systematic error.

Drew (1981) describes the hierarchical nature of repair in adult/child talk, with an increasing specification of the trouble source and a greater likelihood of other-correction, if the repair sequence progresses without resolution. Norrick (1991) puts this hierarchy into a developmental perspective when language errors of all kinds (as opposed to factual) matters are at stake. In such circumstances, with younger (preschool) children other-correction of language errors is frequent but with older children there is a definite preference for adults to request clarification, thus encouraging self repair and then initiate further prompting before other-correction is brought in.

e) Status of the interlocutor.

In this study I am dealing for the main part with professionals talking with children rather than their parents and this factor has to be taken into account. Most experimental investigations of clarification requests and similar repair initiators have used experimenter/child dyads yet there is ample evidence that the status of the interlocutor has an effect on the proceedings. Tizard and Hughes (1985) found that if 4 year old 'working class'

children are misinterpreted by the teacher they tend to withdraw from the conversation rather than initiate repair. This is in contrast to Gardner's findings with the phonologically disordered children with their mothers where the children are typically keen to clear up any misunderstanding on behalf of the parent. Very young speakers are found to take the status of the listener into account. Tomasello, Farrar and Dines (1984) looked at children with familiar and unfamiliar adults and found differing patterns of discourse. They found children at a very early stage of language development rely heavily on the familiarity of the listener to make interpretations but use conversational cues more readily once using word combinations.

McTear (1985) investigated a small selection of phonetic errors and their sequiturs using child-child data. Generally the children in the early recording did not invite self-correction but used direct rejection and other correction. However in later stages there is some indication that a preference for self correction might develop (examples were for children aged 3.8-5.1 in this section). More importantly children respond to their peer other-corrections with some phonetic changes.

1.IV. THE ANALYSIS OF INTERACTIONAL MOVES IN THERAPY.

There have been very few studies that have sought to look closely at the dynamics of phonology therapy in the clinic, the exception to this being McCartney(1989). Some researchers have looked at speech therapy in broader terms to find patterns of therapeutic interaction. Kovarsky and Maxwell(1992) report on a handful of studies that paint a consistent picture of adult-centred discourse, with the therapists making many requests for known information, providing feedback and controlling the topics of conversation by leaving little room for child initiations. Note is also made of the clear division between 'work talk' and other conversation, the former being marked by more deliberate delivery, pronounced intonation and other structural differences.

Letts (1985) used a discourse analytic approach to look at the structure of speech therapy for a variety of disorders, including therapy for phonological disorder. She found similar patterns

of discourse to those established by Sinclair and Coulthard (1975) in classroom talk and in clinical sequence by Crystal (1980). The initiation-response-feedback 'teaching exchange' and the use of "boundary markers and orientations" to introduce new activities are particularly characteristic. Letts also found that across different disorders the therapists consistently produce two thirds of the "conversational (c)-acts", with only 4 spontaneous acts being produced by the phonologically disordered child. There were 32 responses to the adults 68 c-acts. Turn design is not discussed in anyway as being a local contextual factor which might serve to influence the child's next move. At one point she states that children "know intuitively" or through experience what type of response is required without being directed explicitly. One example she cites is imitation following a model. In evaluation of the clinical interaction she concludes that therapists tend to be more positive or noncommittal in feedback to child responses rather than negative but describes 'repetitions' as being used as both types of feedback. She does not differentiate particular types of repetition through their particular characteristics.

Letts' model set out to cover speech and language therapy in general terms and therefore does not have detailed findings on interactional moves in phonology therapy in any detail. There is one piece of research that deals in detail with the phonologically disordered/therapist dyad and is therefore especially relevant to this thesis. McCartney(1989), using audio tapes of 10 dyads, devised codes for 'Speech teaching strategies', for teaching carryover at an advanced stage of phonology therapy. She included counts of models, 'meta' comments (where the therapist gives information about the production) and 'error copies' (where the child's error is reproduced with question intonation or as a forced choice question with the correct version). She herself discusses the shortcomings of some of the codes as they mix functional characteristics such as 'feedback' with descriptive categories such as repetition. However her results make for an interesting comparison to the therapist and maternal styles discussed in this thesis.

McCartney found a high proportion of modelling occurring in therapy. Analysing the initiation of speech teaching episodes that resulted in a child attempt at target she found 48% were modelled by the therapist, even at this later stage of therapy, and 39% had no model. One sub-type of model she distinguishes is that of 'augmented models' where there is

considerable distortion of the speech signal. They constitute only 6-13% of her sample and mainly stem from one of the therapists in particular. They also tend to follow an unsuccessful try as extra information rather than as an initiator. She attributes this frequency to the late stage of therapy recorded, where children were expected to begin carryover of learned skills to other environments.

What is interesting here is the low rate of episodes ending in failure (10 out of 649 speech teaching episodes analysed, 5 from one therapy session) with a very rare incidence of 'negative feedback'. This is despite the fact that the episodes are typically quite brief so 'correctness' is not pursued at length. When McCartney looked at the length of speech teaching episodes she found 78% have less than ten 'elements' (approx. equivalent to 'turns') and of these just over 37% had 3-5 elements. It would be interesting to know whether it is due to the accuracy of the child's repair or whether the therapists accept a compromise as to what is acceptable. How the repair episodes are constituted or managed in order for a successful conclusion to be reached is not discussed.

In 1990 Howell and McCartney looked at the few instances of therapeutic dialogue extant in the data across the traditional, behavioural, communication centred and linguistic approaches and concluded that, taking all these dialogues at face value there is a remarkable level of similarity and that this could explain the similar levels of success found across treatment types:

"It may well be that therapists say the same sort of things whatever their theoretical background might be" (p57).

However the analyses involved were not particularly detailed or sensitive and greater attention to the structural detail of different types of interchange could well reveal valid differences.

Much of practical clinical training depends on the input of the working clinicians that a student is placed with rather than the ethos of the establishment they are attending. However most courses these days encourage students to analyse clinical interaction through the use of reviewing recordings and using behavioural coding strategies. This practice is based on evidence of its efficacy. For instance Irwin (1981) advocates direct training of Stimulus-Response-Evaluation techniques, the use of visual and proprioceptive 'feedback' and allowing

for latency of response. She quantifies such behaviours to show that self-reviewing of videos prove more valuable in training than simply clinical advice. She makes little mention of the client's performance as a possible influence on the interaction however.

1.V POSSIBLE SOURCES OF TROUBLE FOR THE CHILD IN THERAPY

It is interesting to consider the problems that are recognised to arise from the speech therapy interchange. Many critics address the unnatural nature of therapy talk and what it teaches as it bears little resemblance to real communication. Ripich and Panagos (1985) point out that how therapy proceeds and develops may be negative as regards generalisation of learned skills to other contexts as the patterns used in the clinic are so removed from the type of language that occurs outside. This section discusses how information provided in therapy may not necessarily bring about the prescribed alteration in the child's state of knowledge necessary for generalisation of skills to other contexts. The child's view of therapy may be very different to the adult's.

a) The isolation and segmentation of phonetic material.

One possible problematic area is the way phonological information is presented. By breaking down speech into its smallest phonetic components and distorting the normal speech signal, as often occurs in modelling, therapy may create as many problems as it resolves. Jimenez and Brasseur (1988), in a longitudinal study of one child, B, over nearly 7 years (from 2.10 years), found a movement from appropriate to inappropriate suprasegmental features and concluded that extended therapy on isolated phones, syllables and phrases could be responsible for this and did not lead to intelligible speech. The authors made contact with the child at 3.8 years. They described her sound system as being one restricted mainly to vowels but she produced utterances of 1-6 syllables in length "with inflection, intonation and general prosodic characteristics similar to that of adult speakers"(p 245). Up to this point therapy had been concentrating on increasing B's poor receptive and expressive functional vocabulary but now the emphasis changed to a phonologically based programme to expand B's phonetic repertoire and phonotactic combinations (syllable shape i.e. final and initial consonant use). The treatment is described as consisting primarily of drill activities using a 'model-imitation-feedback' sequence and using visual cues (alphabet, pictures) to provide additional support. It is not until the age of 6 years or so that there is much mention of

aiming to expand her use of consonants to more (unspecified) complex linguistic units.

At the age of 9 years it was noted that although remaining articulation difficulties were minor there had been a gradual onset of rhythm and prosody problems as well as abnormal 'resonance' (vocal quality) due to "limited mandibular movement and a retracted tongue carriage". She had monotonous pitch and equal syllable stress. After direct therapy for a term the resonance problems resolved but the word by word delivery remained a problem. Whilst other researchers (Hargrove 1982) report the adverse effects of poor prosody on intelligibility, none have reported such a shift from correct to incorrect patterns over time. The authors hypothesise that, like a second language learner (or a learning reader), B is concentrating on word by word production rather than producing the sentence as a unit. They suggest this may be a function of the extended therapy programme that has concentrated on isolated units (sound, syllable, word and phrase).

b) Metalinguistic and pragmatic skills and their role in phonology therapy.

As we have seen in research already described, therapists routinely present the child with isolated phones and words that display considerable distortion of the speech signal. They also describe explicitly how the articulations are produced and where the sounds occur in sequence. It would seem logical that phonologically disordered children enrolled in therapy would have increased metalinguistic awareness due to this focus. The studies outlined below show that the children may not be as aware of the 'metalinguistic' content of the sessions as the adult assumes. It has already been mentioned that some phonology disorders may have their roots in poor internal representations of phonological detail (Chiat 1983, Stackhouse and Wells 1993) and many speech disordered children obviously have problems dealing with linguistic information, not manipulating it as easily as the average child. Crystal (1987) raises the question of what it is that the child learns in phonology therapy; phonemes or rules, and at what level of unit, sound, word or suprasegmental.

Klein, Lederer and Cortese (1991) state that there is a tacit belief in therapy that to reach a speech sound target one may need to 'know' how the sound is made. These 'meta' skills generally develop between 5-7 years and children learning language normally appear to do so without these explicit skills. These authors found no relation between 'meta' skills and

production skill. Magnusson and Naucler (1987) also suggested that preschool (6yr old) children who have been enrolled in therapy are no more linguistically aware (based on segmentation and rhyming abilities) than the children with similar levels of problems who have not embarked on such therapy (therapy type not defined but not specifically aimed at meta-awareness). The same children did however rapidly learn 'phoneme awareness' when they began specific phonic reading methods. Howell(1991) also found phonologically disordered preliterate children to have poorer 'meta' skills in terms of classing sounds into fricatives/plosives/nasals etc. However they did have some skills and these skills improved after specific therapy aimed at these skills.

One of the problems in interpreting the findings of metalinguistic research is that the evidence for what constitutes 'linguistic awareness' varies considerably and what type of awareness is critical for therapy to be successful. This research by Magnusson et al and Howell shows that specific teaching and testing reveal improvements in certain aspects of metalinguistic awareness. What children learn about language from speech therapy may be specialised and context specific. Whatever the arguments there is no doubt many therapists believe that 'metacomments' are valuable in therapy.

What the children learn through therapy may indeed be less to do with meta awareness than to do with a maturing social awareness and pragmatic skills. The link between social and conceptual factors in therapeutic interaction is highlighted by the various methodologies used to access the ethnography of the speech clinic setting. McTear and King (1991) show how pragmatic skills can carry a child through therapy without necessarily coming to grips with the metalinguistic or conceptual content. In their work on how miscommunication arises in clinical settings they look particularly at speech therapy (albeit for language difficulties). They describe how the therapist has highlevel global goals that determine the plan of the session and is likely to be guided overridingly by these goals, a finding generally referred to as typical of institutional talk. Yet a child can provide responses that attend to the local coherence of the conversation, for example giving a 'yes' response to a yes/no question or an imitation following a model, but in the context of the whole conversation topic or the therapist's global plan, these responses are inappropriate. In other words the child can cope at the local level of conversation without ever being aware of what therapy is aimed at.

In line with this discussion Ripich and Panagos (1985) found that their phonologically disordered subjects (children were older than in my study, being 7.9 years on average.), when questioned about the instructional process, do not perceive the interaction in the same way therapists do. They comment:

"The misarticulating child brings a sociolinguistic history to the speech therapy session and this largely determines how lesson activities are perceived as social events.....What is this place, who is this lady and what do I have to say for her to get along?"(p342).

Like McTear et al they also argue that the child may be focussing on the pragmatic components of the session whereas clinicians focus on linguistic structures which the children are barely aware of. They additionally noted how children viewed their role in therapy as "errormakers" as this was how the therapist cast them.

Kovarsky and Maxwell (1992) outlined a particular perceptual mismatch between adults and children, of Sign Language, where deaf children saw American Sign Language as a language in its own right, a direct conveyor of meaning. Therapists saw it only as 'standing for English'. This resulted in the adult's poor evaluation of the children's language skills. Similar mismatches may well occur with other aspects of language.

Thus, providing the child with the wealth of phonetic information in the way we do does not guarantee that the child will have grasped what the therapist is aiming at conceptually, even if, superficially, the child is providing appropriately articulated responses.

1.VI. CA METHODOLOGY.

There have been rapidly developing specialised fields in sociology, linguistics and psychology that have sought to produce "a naturalistic observation-based science of actual verbal behaviour"(Drew 1990) and Conversation Analysis (henceforward CA) has been one response to this challenge. There is little room in this introduction for a history or critique

of CA but rather a brief description of the working practices of its proponents will be set out. For a full review of the work of Conversation Analysis the reader is referred to Atkinson and Heritage 1984, Heritage 1984, Schegloff 1989, Wootton 1989, Drew 1990.

a) Basic theoretical assumptions of CA

Rather than looking at an utterance in isolation from its context as occurs with more idealised structural views of language such in the Chomskian tradition, the thrust of interactional theories is that linguistic domains such as syntax and semantics and the design of 'turns at talk' are actually shaped by interactional considerations. This has been clearly established through the work of Schegloff (1972), Schegloff and Sacks (1973), Sacks, Schegloff and Jefferson (1974), Levinson (1983) and others.

Sequences and turns-within-sequences are the basic material of analysis and CA works empirically to make explicit interactional devices and strategies that the interactants are unlikely to be aware of, in the same way that they are unaware of the linguistic complexities of their talk. There is an avoidance of grounding analysis in speculation as to the motives and orientations of the speakers. Instead participants, as speakers and listeners, are shown to orient to the routine procedures by which turns at talk are transferred from one participant to the next and to how listeners display their understanding of the interaction in their own talk in next turn.

Schegloff and Sacks (1973: p296) referred to this as the 'sequential implicativeness' of a speaker's turn i.e. whether and how a current turn will project a relevant activity for the next participant in his following turn. The first speaker can then determine what sense the second speaker made of his utterance through the given response. Interaction is organised turn by turn and thus:

"a context of publicly displayed and continuously up-dated intersubjective understandings is systematically sustained" Heritage (1984:259).

Thus a speaker reveals his understanding and, equally importantly, his misunderstanding of

what the prior speaker has said. Any such misunderstanding can then be put right in the ensuing turns. This is one facet of that group of techniques known as '*repair*'; one that is crucial to this thesis. Conversation Analytic techniques have now been used to show the orderliness of conversational turn exchange, describing routines of question and answer, greetings, invitations, topic initiation, repair, overlap and other sequential phenomena.

The work of the conversation analyst is not just to provide empirically grounded descriptions of individual conversational items. Rather it is to establish the interactional tasks an item can handle, (such as 'reporting troubles' or 'agreement/disagreement'), the alternative ways in which a task can be executed and the solutions available to participants when interactional problems arise. CA makes explicit the recognition procedures by which units of interaction are identified and Wootton (1989) states how important this is for an empirical discipline in order that analyses may be *reproducible*. Those procedures identified must be one and the same as those produced and interpreted by the participants.

Five types of evidence are frequently drawn on in order to establish what the turns at talk are doing: the relationship of the device to just prior turns; co-occurring evidence within a turn; subsequent treatment of the device in question; discriminability of the device in question from other turns; and explication of deviant cases of the device (Wootton 1989). These are important working practices for any CA based analysis.

CA typically uses mundane and institutional talk direct from recordings as the medium for investigation and transcription ensures that any disfluencies, restarts and silences are noted as "no order of detail can be dismissed 'a priori' as disorderly or irrelevant" (Heritage 1984). Another fundamental assumption is that contributions to the interaction are contextually oriented, both 'context-shaped' and 'context-renewing' in that each utterance is designed with reference to its context and is part of the context of the next turn. Context here then is "endogenously generated... in and through the talk" (Heritage 1984:283). Atkinson (1982) has detailed how we can recognise the wider context of talk simply from reading a dialogue so that institutional talk of the classroom, courtroom or clinic is equally recognisable whether it is produced within the physically appropriate setting or outside of the usual location, purely through the construction of that talk. The subject of context in the wider institutional sense

will be discussed further in the methodology section.

One last comment regarding context concerns the states of knowledge of the participants. Writing in 1991 Schegloff points out the importance of 'socially shared cognition', that is what knowledge interactants have or do not have in common (a topic already touched upon in therapy terms). CA reveals the systematicity of '*recipient design*' where a turn is built to take into account the other participants' knowledge of the topic. This affects, for instance the choice of anaphoric or personal reference. Speakers may make wrong assumptions about what conversational partners know or do not know and this in itself can lead to misunderstanding because the structure of language chosen, the turn design, is shaped by the speaker's belief in what the conversational partner knows.

b) *CA and repair organisation.*

Schegloff, Jefferson and Sacks (1977) instigated the use of the word 'repair' rather than 'correction' to cover a broader range of events by which parties in talk-in-interaction can address problems they have with speaking, hearing or understanding the ongoing talk. Repair includes initiation of a corrective procedure and its outcome whilst 'correction' is only one sort of repair as not all repairs concern replacement of one item with another. Schegloff in later work (1991) describes how the possible recourse to repair strategies means that language can be more flexible and by no means invariant in its reference, its meaning established between the interactants;

"..sounds, words and sentences have the character they have and are formed the way they are in part because they are designed to inhabit an environment in which the apparatus of repair is available and in which, accordingly, flexible arrangements can be permitted." 1991 (p155.)

Schegloff et al (1977) described how a repair event may be self or 'other' initiated and the repair itself may be carried out by self or other. In this way one can find the trouble source dealt with by *self initiated self-repair* within the same turn, *other initiated self-repair* in next turn, and finally *other initiated other-repair* in the third turn.

Schegloff et al described self correction as a *preferred action*, one that is routinely performed in a straightforward manner, with no delay. This terminology of 'preference' does not refer to any psychological state of the speakers but only to a structure of the talk itself, the sequence built to allow self correction to happen. Dispreferred actions are delayed, accounted for or qualified in some way. Schegloff et al established *dispreference* for other-correction and there is a sequential ordering of opportunity for selfrepair, for instance extending the Turn Transitional Space by pausing ('withhold') to allow selfcorrection before other initiation of selfrepair. 'Other initiation-other repair' is the final option. Schegloff et al suggested that adult-child interaction was a possible exception to the pattern of preference for self-repair and that other-correction here could function as a "vehicle for socialisation". He described other-correction therefore, in adult-child talk, as of "transitional usage...whose supersession by selfcorrection is continuously awaited "(p381).

Since this seminal work was written other researchers have questioned the universal nature of preference organisation (Bilmes 1988, Besnier 1989). Whilst not discarding the notion entirely Norrick (1991) has broadened its perspective and states that the repair is negotiated between the participants based on their differing states of knowledge. As evidence he describes how 'accountings' of errors by participants frequently address issues of differences in knowledge or competence between speaker and listener regarding the matter in hand. Who does the correcting of an error is based on the interactants' respective ability to carry out this task. Thus in pedagogic dyads or parent/child there is often a shared perception that the listener (teacher/adult) is better equipped to do this when the error comes from the least competent partner. Where states of knowledge are assumed to be equal then self-correction is the preferred event. Hence:

"the organization of repair turns out to depend on how participants perceive their respective roles and abilities vis-a-vis their goals in conversation."

Norrick p63.

An important phenomenon highlighted by Jefferson (1987) was that of 'embedded' as opposed to 'exposed' repair in conversation. She describes how correction can occur without it "emerging on to the conversational surface" i.e. not making it the overt interactional business.

For instance a second speaker, through consecutive reference to a key subject from the first speaker's talk, may offer an alternative label. This label may then be taken up by the first speaker in next turn. Tarplee (1993) uses the notion of embedded phonetic correction as one that occurs as a feature of some adult repeats of child utterances. In these cases correction, although not the explicit business of the utterance (which might be something like lexical confirmation), is disguised but present in the turn design. Jefferson's examples deal with lexical errors but this idea can be extended to phonological data as Tarplee did.

c) CA and Discourse Analysis (DA).

Much of the research quoted previously has been informed by the methodology of discourse analysis (DA) rather than CA and I will highlight the basic divergence in these two analyses as it pertains to this thesis. For a detailed discussion of these two disciplines the interested reader is referred to Levinson (1983). While this introduction is not seeking to give a critique of other research methodology it is necessary to consider DA in relation to CA to show that CA has something unique to offer in the field of interactional research.

Both CA and DA have an advantage over other linguistically based analyses in that they look at sequential data rather than isolated sentence structures. Both are seeking to describe how sequences in discourse are produced and understood. CA particularly avoids dealing with the idealised language, as proposed by linguistic theories, or experimentally produced data as in psychological methodology. Interview data and fieldnotes as well as intuitive inventions make up a list of techniques that have been avoided because so much of the natural detail is lost or idealized. CA looks for recurring patterns across a large amount of naturally occurring data whilst DA uses few texts and even ones constructed by the researchers themselves. Discourse analysis (DA) as propounded by such researchers as Sinclair and Coulthard (1975), Labov and Fanshel (1977), isolates a series of units of discourse, typically applying coding categories to them and then formulating wellformed as opposed to illformed sequences of categories. Thus discourse coherence is viewed in "grammatical terms", with hierarchical arrangement of structures. They state that coherence of organisation is found at the 'speech act' level that their coding describes and not at the surface sentence level. They also state that it should be possible to produce a delimited set of such acts that encapsulate all talk.

Levinson (1983) points out that DA's strength lies in it "promises to integrate linguistic findings about intra-sentential organization with discourse structure"(p287). The rules work well to capture the regularities of questions, offers, greetings etc. There are however areas where CA and DA diverge. DA copes with the illocutionary force of utterances but not with the perlocutionary force that the next utterance may well respond to. The issue of coding is one where conversational and discourse analysts disagree. To begin with it is the coding that represents the principle evidence in a DA paper while in CA actual transcripts form the basis of the evidence. Within these transcripts nonverbal communication and even silence can be seen to occur as appropriate utterances in a way that DA does not capture. However whilst DA finds the coding easy for quantification there is a problem in keeping a coding system within manageable limits when it has to accommodate so many goals and functions. For instance it can be difficult to define one meaning for an utterance and CA analysts believe that pushing utterances into categories can hide much of what is really going on in the interaction. In CA meaning is treated as socially constructed and sequential organization can reveal meaning to be revised in the light of subsequent utterances.

Wootton (1989) states that judicious use of coding categories in analysis is of value where the categories are an outcome of the research itself. A major part of objective research must be the empirical justification of such categories and this is a major divergence between CA and DA where much of the categorisation is more intuitive, presuming a connection between surface features of utterances and their functional description that may not tally in reality. For the interested reader a thought provoking critique of a child language coding seen from a CA viewpoint is presented in Drew (1981). DA has usefully quantified, for example, the sorts of behaviours that mothers employ but CA more closely reveals the sequential consequences of these acts. Drew points out that DA codings provide a list of components that do not easily deal with the systematic differential distribution of turn designs within the sequence. Thus it does not explain 'preferred' and 'dispreferred' activities, for instance the fact that 'other-correction' rarely occurs in first position in a repair sequence.

In order to illustrate how CA and DA differ in their approach to interaction, and especially how coding may disguise the actual intent of an utterance, I will return to the subject of *clarification requests* and other *repair initiators*. The first part of this presentation is taken

from Langford (1981) who looked at some of Garvey's(1978) work and by looking into the actual sequential consequences of turns found that their coded descriptions were often inadequate. As described previously clarification requests had been divided into 'neutral requests' (where no interpretation of the prior utterance was presumed), specific constituent requests and requests for confirmation. Langford showed how 'neutral' requests such as 'Pardon' were not simply due to a failure in hearing: subsequent responses typically showed that the utterance had been perceived superficially but not decoded. The children clearly frequently treated them as displaying some other form of difficulty than perception as they reformulated their initial utterance. In addition to this whilst Garvey described a complete clarification sequence as a three step "embedded speech act" Langford showed that the child expects a fourth move, a display of understanding from the adult following their clarification; without this they will repeat a first response to the clarification request until the display is received.

Garvey described clarification requests as eliciting information not known to the present speaker but presumed to be known to the first speaker whose utterance was queried. However Langford clearly showed that certain turn designs lead to cooperative correction instead of self-correction. In these cases there could be no assumption that the first speaker knew what an adequate response would be. When self-correction is projected then there may be such a belief by the second speaker (seeking clarification) that the initial speaker can put it right. The second speaker (requesting clarification) may have the answer available already as is clearly the case in pedagogic talk where a test question has been posed and the structure of the ensuing sequence reveals that the questioner already has the information. Some of the cooperative repair sequences Langford describes began with 'recasts' where the adult repeated the child's utterance with some alteration. Saxton (1993) points out that DA coding of recasts has not taken into account the fact that they differ qualitatively according to whether they follow a grammatically correct or incorrect child sentence. Following a correct child utterance the recast may contain replacement of lexical items with pronouns or anaphors. After an error the recast corrects the illformed item specifically. It is not the type or category of the parent's response that is important to the child but its actual content.

One final piece of work to look at in respect of the CA/DA dichotomy is McCartney's (1989)

coding of modelling and repair in phonology therapy. Whilst this is a valuable insight into the basic workings of therapy I will now show, through the use of some of her data, how much more could be derived from it when CA methods are applied. McCartney codes various elements of the 'speech teaching exchange', including turns that initiate (I) a try, re-initiate (Ir) a try at target following an error and 'Meta' comments that give information about production. The latter are described as occurring freely in the sequence. Looking at coded data provided by the author it can be seen that certain of elements of turn design are not captured within the coding.

1.Th.	Now where shall we put that?	<i>I</i>	<i>no model</i>
2.Ch.	In the pur' (4secs)	<i>Try.</i>	
3.Th.	You forgetting about snake noises?	<i>Meta</i>	
4	Tell me again, where does it go?	<i>(Ir)Reinitiation</i>	
5.Ch.	Purse. /pəʔ/	<i>Purse./pə s/</i>	<i>Try selfcorrection</i>
6.Th.	Good, lovely. In the purse.	<i>Feedback(F) +ve.</i>	<i>Repeat.</i>

In the coding the (Ir) reinitiation is classified as such because it is followed by a repeat try. An (Ir), within McCartney's system, can constitute a model, an error copy, a clarification request or a 'meta' comment and her coding scheme treats as the same acts which have different kind of sequential consequences in next turn. Meta comments are thus doubly classified according to whether a repeat follows or not. If one is looking to make comments about the comparative frequency of certain sorts of reinitiation careful consideration of similar occurrences could give a more accurate picture. The sequential overlapping position of line 5 which contains an appropriate correction could be in response to the 'Meta' comment which preceded it and which is classified outside the repeat initiating turns. In fact a similar occurrence displays that the child is treating a Meta comment as an 'Ir' although his try is coded as responding to a model (line 3). The way in which his repair at 4 is initiated at the same time as line 3 makes this unlikely.

1.Ch.	Half a mars bar.	<i>Try</i>
2.Th.	Anthony, you're not remembering the sounds.	<i>Meta</i>
3.Th.	Half	<i>Ir model.</i>
4.Ch.	Half a mars bar. Half a mars bar.	<i>Try self correct.</i>

Another factor that would not be taken into account in McCartney's coding is the request for self-repair implicit in the long pause following an error, in the first extract (lines 2-3). Looking through therapy data it is possible to find occasions when a pause is interpreted by the child as requiring a repeat try. The 'Meta' comment that follows makes the need for repair more explicit. It is a consideration that these 'Meta' comments are not as unconstrained in the sequence as McCartney supposes. They can be seen to function as requests for self-repair; as such they are preferred actions which typically come earlier in a repair sequence than other-repair initiators. Thus using a CA approach could give a more considered description of what is really happening with these types of utterances. One last point about the problems with delimiting the function of an utterance by one coding again concerns an utterance coded as a 'Meta' comment which is followed by a repeat try.

Th.	Anthony will you please remember about the rabbit sound on <u>half</u> ?	<i>Meta</i>
Ch.	half.	<i>Try</i>

In fact the utterance contains an augmented model 'half' which the child could be responding to. Information about pitch and other suprasegmental details could determine this but is not available in this type of transcript. By coding the utterance without reference to the model there is a danger of giving a skewed picture of the type of turns that initiate repeat tries but it would be equally abstruse to classify the above utterance as simply a model. Further perusal of the data could well reveal a distributional difference between this and other model containing utterances.

d) CA & Institutional talk.

In 1966 Labov noted that linguistic phenomena such as phonetic aspects of talk showed systematic variation according to the dialogic context ("casual" to "careful" speech in this case). The application of CA techniques to institutional talk began in the 70's and continued this theme. Many settings have been examined and some contexts that are particularly pertinent to the topic of adult/child interaction in specialised settings are discussed in this introduction, for example classroom talk (McHoul 1978) and psychological testing, (Marlaire and Maynard 1990).

Heritage (1984) outlines two basic phenomena that institutional interactions share: first, there are less interactional options available to participants than there are in mundane talk; second, basic elements of mundane interaction become heightened and specialised. In other words the roots of specialised interaction are in ordinary conversation. Drew and Heritage(1992) point out that talk, akin to that found in specialised institutional settings (e.g. instructional or interrogative) can occur in ordinary settings. Context is not determined by the physical context but by the talk itself. Heritage(1984) said of institutional contexts:

"..notwithstanding the panoply and power of place and role it is within these local sequences of talk, and only there, that these institutions are ultimately and accountably talked into being".(p290)

Goffman (1974,1981) also, in developing his theory of contextual 'frames' in which the participants give meaning to their current social activity, has shown how context is not invariant but dynamic. Combining this with linguistic analysis Tannen and Wallat(1987) have shown how a paediatrician's speech alters with the demands of two competing frames, that of consultation (with mother) and examination (of the child). This is very similar to the position the therapist finds herself in the competing frames of 'therapist' and 'friend ' to both the child and mother.

Drew and Heritage(1992) also suggest that institutional interaction is special because of at least one participant's orientation to a core "goal, task or identity" and in this respect there are often differences between the goals pursued by the professional and nonprofessional participants. This is a theme echoing that in the discussion of therapy above where Ripich et al (1985) particularly discuss the child's view of therapy as a social rather than goal oriented exercise whilst the therapist may have clear conceptual goals which the children remain unaware of.

Whilst the speech therapy dyad is less formal than many of the institutional contexts studied it shares the characteristics of other professional/lay and adult/child dyads in that there are asymmetrical contributions on a turn by turn analysis. In this thesis the therapist, and to a lesser extent the mother, will be shown to do most of the initiation and questioning whilst the child is in responder role. However this does not mean the child is a passive participant.

Two other CA studies of adult/child institutional talk are particularly pertinent to the study of repair in the speech therapy setting. A recurrent theme in this section is again that of adult differential treatment of error/repair according to whether the speaker is judged to have the correct answer available or not. McHoul (1978) studied classroom interaction. The classroom situation is special in that it involves a large group of children with one adult unlike the one to one speech therapy involved in this study. He found that a three part 'question,answer,comment' procedure, much as that outlined by Sinclair and Coulthard (1975) is indeed typical but he went further than that in finding other distinguishing features of classroom as opposed to other pedagogic talk. The distance created by this context defers nonverbal communication to a lesser role than that possible in a dyad such as speech therapy. However there are similarities in that teachers (and ergo therapists) do not generally need to worry about interruptions as they control the turns at talk. Supporting this Mchoul found that teachers used more intratum pauses with less alteration of speed of delivery as next turn was not taken up at these points. In its turn the child may take time to consider his answer as he has been allocated the turn. It is significant that it is the teacher that decides on the length/sufficiency of the answer and not the student and this is also a role that the therapist takes on.

In the classroom the initiation of repair is interesting as it would seem that teachers routinely withhold answers they obviously have. Hence 'other initiated self corrections' are common in class but 'other corrections' are rare, there being an interest in the answer being co-produced. This is not so all pervasive in the therapy situation.⁵ Recursive initiations of repair override the "3 turn maximum repair space" as outlined by Schegloff (1977) and this is something that also applies in therapy where extended repair sequences are common.

Drew(1981) looked particularly at adult corrections of children's mistakes using data from home and school and found similar differential treatment. In some the adult makes a request for self repair, treating the child as having suffered a momentary lapse and as having a possible correct answer available. However in instructional sequences (occurring in both

⁵ Tarplee(1993) also found evidence that 'other-correction' seems to occur in adult/child talk when the adult has a warrant to treat the child's error as one of inability.

home and school) the child is not treated as having the same access to the appropriate correction and 'other correction' occurs. Thus the form of repair request displays the adult listeners understanding of what type of error has been made. These types of structures also occur in therapy exchanges where the topic is not lexical but phonetic, which the above author did not consider. Redoings as models in particular occur as a routine form of other-correction.

Marlaire and Maynard (1990) looked at Psychological testing procedures as a collaborative process. This situation bears more similarity to therapy interaction than the classroom as there is the intimacy of the dyadic relationship as opposed to a group/adult situation. Psychological testing is similar in construction to a therapy task in that it has 'test' questions where the answer is already known to the adult and answers that are a display of knowledge rather than informing. An adult's reading of a child's underlying competence is shown in the construction of the answer that follows. Thus as Marlaire et al pointed out, incidence of requests for child self repair imply a temporary psychological lapse rather than inability to perform. In contrast an adult giving a model displays an interpretation that the child does not have that ability internalised. This echoes the pattern found by Drew (1981) in classroom talk and described above. This may well be akin to therapy where the incidence of modelling is high in early stages but as the child's skills improve requests for self repair increase.

Also similar in therapy is the reliance on shortcut strategies such as 'elided presequences' where the intelligibility of the prompt for the next part of a task relies on the prior full sequence for understanding. If the child exhibits problems then more explicit instructions have to be instigated. Tarplee (1993) also found this drill like structure in picture labelling tasks.

Speech therapy is another kind of institutional activity whose roots lie in mundane talk. It may share similarities with the pedagogic talk outlined above but also has its own unique features. The aim of this thesis will be to capture the unique flavour of the interaction and to describe some of the similarities and differences in detail.

1.VII: SUMMARY and DESIGN OF THESIS.

a) Summary.

The primary aim of this thesis is to describe through conversation analysis (CA), some of the routine adult turn designs that make therapy talk special. The descriptions that arise through this analysis are empirical evidence for speech therapy as a particular form of institutional talk. This is true across the contexts of home and clinic, therapist and mother. The study is concerned with work on phonetic productions, particularly adult response to child error and what repair sequences reveal about the participants understanding of the interaction. The work explores themes and questions engendered by the literature review and summarised below.

The adult's treatment of child error is fundamental to this thesis. In the above review details are given of the types of interactional devices that adults routinely use when confronted with a child error in mundane talk. This thesis will look at some of the elements of mundane talk which are preserved and some which are suspended in therapy talk, in particular those elements that engender phonetic repair. Therapist/child is a form of competent/precompetent talk in which Schegloff suggested dispreference for other-repair may well be suspended. Certainly a considerable level of other-repair in the shape of redoing/modelling and explicit rejection (rarely softened through modulation) takes place in the early sessions where the therapist's assessment may be that the child is not able to self repair. Invitation to self-repair may also occur in first position following an error but be relinquished when appropriate phonetic repair is not forthcoming.

It has been shown that the speech therapist's approach to speech disorder is informed by various theories of phonological, general cognitive and social development. A recurrent theme in this review has been the differing states of knowledge between conversational partners, even affecting the structure of repair. Particularly, various authors have suggested that the theoretical goals oriented to by a professional will be different to those of the other participants in the talk. In this thesis I am therefore particularly interested in seeing how the theoretical stance of a therapist is embodied in the interaction. This is a theme that is taken up in a number of chapters. Enquiry is confined to the production side of therapy rather than any auditory work, looking at some of the therapist turns that seek to engender a try at target

in the child's next turn. It will be seen to affect the shape of models, of redos of the child error and the explicit descriptions of articulatory mechanisms.

Following on from the above is the consideration of the understandings the children display in their turns at talk. Given the evidence across the disciplines as to disparate views between therapists and children as to the role of therapy a consideration of this thesis must be to explore what children display of their understanding of this phonetic/metalinguistic talk. It may well be that children react to the local coherence of the conversation, for instance in their compliance with model/imitation, but do not necessarily get to grips with the therapists overall phonological goal, especially when it is not explicitly stated in the talk.. It will be interesting to see how much a correct or 'incorrect' response can really be attributed to interactional as much as metalinguistic maturity.

An analysis of the nature of the child error is critical to our understanding of the interaction. While an adult may attribute child error to other mechanisms, including the child's own inefficient phonological system, many errors can be shown to be interactionally derived. Analysis of the child's responses may display something of the child's awareness of the therapist's overall phonological goal in therapy. Breaking down the target phones and words into their components and distorting the normal phonetic signal will be seen to have immediate consequences in the child's next turn, resulting in moves away from their own system. However the elements that are picked up on by the child are not necessarily those that the therapist intends as the target. Additionally, what will become apparent through this thesis is that for the child even to tackle phonetic rather than other language matters depends very much on the structure of the surrounding turns in talk; they can be thrown off track by ambiguities in the interaction. Such occurrences illustrate that the children do not necessarily treat phonetic matters as the overriding theme of the tasks. Certain child phonological errors will also be used as evidence that they are not working at the phonetic level of talk. In such cases it may be that the way theory shapes the adult response to repair bears little relation to what the child has actually said.

b) The Analytical chapters.

Chapters 2 and 3 of the thesis looks at the adults' production of models which engender an initial try at a target as well as their use as a response to child error, clear examples of other-correction that dominate the data. They are differentially designed to those models that are not imitated. Direct models have been shown to be by far the most efficient means of engendering an accurate try or phonetic repair and the precise detail of the following tries is taken up in this thesis. Figures from McCartney's (1989) paper show a relatively low incidence of what she calls 'augmented' models i.e. ones where the normal speech patterns within the word are disturbed.⁶ 'Augmented' models make up a larger proportion of these turn types than in McCartney's data and it can be seen that they they can lead the child to produce more distorted versions of the target in next turn. This matter is dealt with particularly in chapter three. The shape of the models will also be shown to be influenced by the therapist's theoretical knowledge.

There is evidence that phonological errors are treated differently to lexical or syntactic ones and differing turn design results more specifically in phonetic repair. For example the design of *redoings* as confirmations and as *models* for imitation will be looked at in terms of contrastivity of structure. Tarplee found that lexical and phonetic correction could be differentiated on the basis of these designs. She found that undisguised other-correction "not x but X" (i.e. two versions of the same word) did not occur in phonetic correction, only in lexical repair as "not x but y". Yet incidences of the former pattern do occur in the therapy talk. Therefore does the undisguised nature of phonetic topic mean that it takes on some of the features of the more explicit lexical work? Possible interactional bases for noncoordination of expectation of lexical or phonetic repair are looked at in chapter 4, especially concerning the role of certain forms of invitation to self-repair. The ambiguity of certain adult turn designs as regards the desired outcome of a phonetic repair are discussed in light of the way they are treated by the children. The problematic nature of some of this talk will be again shown to lie with the therapist's application of theory to therapy.

⁶This result would be surprising when looking at the type of data collected for this thesis (taken from all stages of therapy) but the 'carryover' stage of therapy McCartney is concerned with should only occur once the child had reached a certain level of facility with the work in hand, lessening the need for such models.

Much of research into repair has considered the role of *clarification requests* in engendering repair. Clarification requests are touched on in this thesis in **Chapter 4** as invitations to self repair in contrast to the more direct other-correction of *redoings as models*. Tarplee found that apparent requests for clarification (involving a repeat of the child's prior) did not initiate lexical repair; hers and other research suggests they can engender some phonetic repair. Generally as a response to clarification requests phonetic repair has been superseded by other devices by the age of four years or more (as the children in this study) and it will be interesting to see how these structures are treated when embedded in the business of therapy explicitly dealing with phonetics.

In **chapter 5** the parent's role in therapy is considered⁷. The analysis of therapy talk up to this point has mainly dealt with the clinical setting, the therapist's workplace. However in line with the arguments above, that context is created by the institutional nature of the talk itself, the mothers will be seen to be 'doing therapy' in the home in a style different to their mundane talk with the child. Coming to the work with a differing theoretical knowledge to the therapist and a different relationship with the child also has some consequences for the talk in interaction and strengthens the argument that theory affects therapy .

This analysis of mother/child data is then compared to certain aspects of therapist/child interaction. Quantifications that McCartney made on the length of speech teaching episodes and type of closing moves therapists employ show some correlation to the frequency counts given in **Chapter 5** which are used as a basis for comparing the therapy bouts of a mother to a therapist. Some of the differences of style highlighted in this chapter point to a disparity in the goal oriented behaviour of the two adults. Like teachers, therapists and mothers are very much in control of marking acceptability of a child's response and to what lengths to which 'correct' answers are pursued. Therapists and parents display differing standards through the talk-in -interaction. For instance use of overt and implicit positive/negative evaluation is discussed, especially where the therapist's willingness to compromise on a final outcome is

⁷ The chapter deals only with one mother/child dyad. That there is overlap in the styles of mothers and therapists 'doing therapy' is clear from the occasional incorporation of mother/child examples in earlier chapters dealing with modelling and repair.

discussed.

Chapter 6 will consist of the conclusions drawn from the analytical work presented in the thesis as to the benefit of applying CA to such institutional talk, the implications for child language learning and any therapeutic indications.

In the next section the method of data collection and transcription will be discussed and then details of the subjects given.

1.VIII METHODOLOGY

a) Data collection.

It was decided that using video data was advisable as the visual information available could prove vital in capturing the dynamics of the interaction, both in terms of both nonverbal, supralinguistic communication and subtle shifts in articulatory postures. It was felt the benefits of the additional information would outweigh any possible effect of the intrusion of the camera.

On most occasions the researcher was present throughout filming, for technical convenience rather than due to the desire to take extra notes. There has been some debate as to the effect of observers in such research. Maclure(1981) found more 'unmodulated'(Schegloff 1977) direct correction in data where there was no observer present than when there was an observer present, in her own data on mother/child interaction. She also found that sequences of 'reformulations' (repair) were longer when the observer was present. This may have significance for this work where, especially with the mother, lengthy repair sequences are recorded as a feature of the interaction. Therapists are certainly more used to being observed and recorded as part of their training than mothers are.

b) Contextual information

The fact that two interactants are engaged in a specific activity does not mean that it has any immediate consequence for the type of talk being investigated. For instance 'labelling' or

'repair' can occur both in mundane talk and in institutional interaction and it has to be shown through the analysis that the external context is 'procedurally consequential' i.e. is of consequence to the talk-in-interaction. The therapist/child dyad is filmed in the clinic and the mother/child is at home. The setting is unlikely to be of any consequence to this analysis. As Schegloff(1992) says:

"It is through the ways in which the talk (and other conduct) is produced that the work setting is realized (by and for its' participants, in the first instance) as a concerted interactional accomplishment." p117.

The purpose of this study is to show how mothers and therapists 'do' therapy. In the first chapters, dealing with styles of modelling and redoing, the examples given are predominantly taken from therapist/child data. However mother/child examples are also included as they clearly are accomplishing the same objective of 'doing' speech work. It is not until chapter 6 that any comparison is made based on the identity of the adults concerned. It is likely that the children orient to the difference in status of the two adults but this thesis does not set out to show how this is exemplified in any detail. Information on the stage of therapy at which filming took place is provided. This study is cross-sectional despite the longitudinal nature of some of the data. Potential future longitudinal research questions are alluded to in the conclusions.

c) Subject selection.

Regarding socio-economic status, sex and age of the participants: Schegloff (1992) highlights this type of categorisation as only having relevance when the participants themselves are orienting to such distinction. Therefore the relevance of such information would strictly only come after an analysis has taken place. Such orientations are not of particular concern in this thesis and factors such as socio-economic group have therefore not been controlled.

The information regarding the ages and sex of the children is provided in the case histories out of a sense of completeness. Certainly the age of the children is of clinical significance as 3-5 years is the typical age for children to embark on therapy for phonological disorders.

One cannot control for exposure to various linguistic experiences and to attempt to do so would not necessarily be of significance to this type of project. However the children were predominantly preschool 'prereaders' and this point may become relevant to discussions regarding 'metalinguistic' knowledge in later chapters.

Detailed linguistic assessments of the children have been provided as they give a fuller picture of the type of language disorder that the children are subject to. Therapists were clearly asked to provide subjects with predominantly phonological disorders and to state that this was the aspect that the current therapy regime would be oriented towards. 'Pure' phonological disorders (with no measurable problems with other aspects of language) are a rare thing but it was felt that for reasons of professional credibility a fairly homogenous group of children should be found, where the therapists would not be concerned about the child's ability to 'comprehend' instructions and so forth. These children then are predominantly untrammelled by major problems with comprehension or verbal expression, although all formal assessments and 'age' levels have to be treated with caution. Only one subject (Leon) was involved in a programme aimed at tackling expressive difficulties at the same time as phonology, although others had experienced language therapy in the past.

LONGITUDINAL CASES, filmed regularly over six months.

ELIZABETH. d.o.b.25/4/85.

Filmed March-August 1989. C.A 3.11-4.4yrs.

Language Skills: (Reynell(1977),Developmental Lang Scales) Comprehension.C.A.4.0 years,
Language equivalent 5.6yrs.

Expressive lang. skills (Bristol Lang Dev Scales)Age equivalent 4.0 years.

First seen September 1987 with language delay.

Language therapy Sept 1987-Feb 1988. Therapy for phonology commenced March 1989.

Filming commenced at second session.

Therapy aimed at establishing all fricatives (in her system backed to velar, voiced and stopped [s]and [f]-[g].

STUART d.o.b.19/6/84.

Filmed June-October 1989 C.A.4.0-4.6yrs.

Language: Comprehension (Reynell Developmental Language Scales). C.A.4.0years, Language equivalent 4.10yrs.

Expressive skills (Bristol Lang. Dev. Scales) Age equivalent 4.0yrs.

First seen Oct.1988 and for assessment/review February 1989. Therapy commenced at time of filming.

History of fluctuating hearing loss but 'normal' at time of instigating therapy. August 1993 some detriment again noted on audiological assessment. Some positive family history of speech delay.

Therapy aimed at establishing fricatives, notably [s](presently 'stopped') and eliminating 'fronting' of initial velar consonants ([k]-[t]).

INDIVIDUAL 'ONE OFF' SESSIONS.

Bernice. d.o.b.12/4/85. Filmed 13/4/89 at C.A.4.0 years.

Referred April 1988 (family history of problems).

First seen July 1988 and seen regularly (1xweek) since Oct 1988.

Fluctuating middle ear problems.

Language slightly delayed in comprehension on Reynell Developmental Scales C.A. 3.5years
Language Equivalent 2.8years.

Phonology Assessment (Phonological Assessment of Child Speech,PACS, Grunwell 1985)
Equivalent age 2.6yrs.

Therapy aimed initially at establishing bilabials /m/,/p/,/b/ in initial and final position, then [t] and [k] similarly (all-[h]or [ʔ]). Introduced fricative [f] in March, two sessions before filming.

Leon d.o.b. 21.5.83. Filmed 12/7/89 at C.A. 5.2 years.

Language skills:comprehension (Reynell Dev. Language Scales) Equivalent age 4.3years.

Expressive syntactic skills (Language Assessment Remediation & Screening Procedure. Crystal 1982), 2.0.years equivalent.

Phonology.(PACS,) approx 2.6years and severely disordered and unintelligible.

Predominantly omission/glottalisation of most consonants.

Therapy since February 1989 in school aimed at language and phonology skills.

Chris d.o.b. 10/10/83. Filmed 3/89 at C.A 5.5 years.

Language: Comprehension (Reynell Dev Lang Scales) C.a.5.0yrs Language Equiv 4.1yrs.

Expressive language skills (Bristol Lang. Dev Scales 4.6yrs)

History of fluctuating middle ear problems.

Phonology (Phonological Assessment of child speech. Grunwell(1985).)approx 3.6years.

Therapy since March 1988 for language and phonology in school.Recent therapy aimed at establishing bilabials (omitted or alveolar) and fricatives ([f]/[s] usually stopped or glottalised and alveolar).

Thomas; d.o.b. 12.7.83. Filmed 7/4/89 at C.A. 5.9.years

First seen in school in January 1989.

Filmed first clinic appointment. Due for a month's course.

Problems described as minor; \int l, /s/ and /t / dentalised and not contrasted.

James d.o.b.9/10/84. Filmed 7/4/89 at C.A. 4.6 years.

Seen at clinic March, June and December 1988. Due for short advisory course. /s/ and \int not contrasted. Affricates stopped.

Rachael. d.o.b. 12/11/83. Audio Recorded 7/4/88. at C.A. 5.6 years

Seen at school.

Most fricatives and plosives stopped or omitted (or substitute [ʔ]/[h])

d) CA Transcript notation.

A CA transcript is not meant to replace the video recordings from which it is taken as the transcript can never be considered to be complete. Transcription has to be selective, especially in a thesis such as this where it is sometimes necessary to show details of phonetic and suprasegmental features. A transcription would be hopelessly cluttered and unreadable if

all the information were available all the time. Therefore what is included is restricted to that which pertains to the text. Care is taken to denote the sequential features of the talk including nonverbal behaviour where appropriate and transcription conventions are taken from "Structures in Social Action"(Atkinson and Heritage 1984). Modifications have been made to suit the type of material being dealt with.

Nomenclature.

The *interactants* in the extracts are initialled on each turn; the therapist is referred to as 'Th', mother as 'M' and the children are identified by their initials, e.g. B=Bernice. The sessions are referred to simply by number in temporal order (e.g. 'Th/E.2' is the second recorded session) and there is no reference to the time within the session that the extract took place. The *extracts* (#) are numbered by chapter, e.g #3.6; the sixth extract in chapter 6. Repeats of the same extract are noted e.g. #3.6,1 is the first repetition and so on. Where the extracts form part of longitudinal data there is some reference as to which session was filmed. The *utterances* in an extract are numbered on each line, for ease of reference when quoted in the text.

Transcription.

OVERLAPPING UTTERANCES.

The start and finish of the overlap are marked with single straight brackets.

Th. Let's do the one about Postman Pat again.
Ch. | I done that.

CONTIGUOUS UTTERANCES.

If there are two adjacent utterances with no overlap but with no gap between them they are tied together with an equals sign at the end of the first and the beginning of the second.

Th. Those are gnomes=
Ch. =gnomes

PAUSES WITHIN AND BETWEEN UTTERANCES.

These are marked with curved brackets and are timed in tenths of a second unless it is a micro pause which is marked with empty brackets.

Th. .h k (.) K.

(1.5)

Th. Can you do that?

Speech and utterance characteristics.

- A single dash indicates an abrupt cutoff.

VOLUME.

Capital letters are used to indicate a stretch of speech much louder than the surrounding speech.

Ch. I said FITH.

Degree signs will be used to indicate a passage of speech quieter than the surrounding talk.

Ch. °a fur coat°.

Where indication of volume accompanies a phonetic transcription the following will be used after the style of Kelly and Local (1989);

Ch. ^f[kɑ]^f indicates 'forte' i.e. loud.

Ch.^p [kɑ]^p indicates 'piano' i.e. quiet.

Also accompanying phonetic transcription will be the use of crescendo < & diminuendo > under the text to mark comparative increase and decrease in volume.

ACCOMPANYING ACTIVITY.

Double parentheses will be used to describe other details of the extract such as characterisations of the talk, nonverbal noises etc.

Th. ((pointing to book)) Where's the fountain?

Where the action is co-occurring with the speech its initiation may be marked in the text by a square bracket (where it would not be visually confusing). It will be placed under (or occasionally over) the speech.

Ch. ((sneezes)) There.
 └───┬───
 ((points and mouths 'fountain'))

GAZE.

Where applicable detailed gaze patterns are marked in the extract, otherwise they are described verbally. Where the gaze of one interactant remains stable e.g. looking continuously at the speaker then a description will be given initially but no further markings follow. The speaker's gaze is marked above his/her own talk whilst the listeners is marked below. The fall of the gaze onto the other person is marked with an 'X' and then dots mark the duration of the gaze before a change occurs. Movement of gaze is marked with commas and any other items are described verbally.

X.....

Th. And what is that one?

((St looking at book)).....

.....X.....

St. A motorbike.

.....

.....,,,,,,((to book)).....

Th. Good boy

.....,,,,,,((to book))....

DUBIOUS TRANSCRIPTION.

Enclosed in single parentheses with possible alternatives divided by a slash. Where appropriate a phonetic transcription will be given below.

Th. What did you say?

Ch. (It slipped/ripped)

[jipt]

STRESS.

Where unusual or marked stress patterns occur or are significant to the text the stressed syllables will be underlined, otherwise they are left unmarked.

Ch. a walking stick.

Th. a walking stick?

Sound or syllable extension, marked by colons. A series of colons marks the extent of prolongation.

Th. It's a gn:ome.

Ch. gn::ome.

PITCH.

Where necessary to the text the pitch is marked above the text by line contours. These show relative rise/fall by individual lines syllable by syllable or show movement on one syllable as a rising/falling curve (as in Kelly and Local 1989). The use of 'intonation' as a description is avoided as the term has traditional theoretical connotations that are not adhered to in this thesis (after Local, Kelly and Wells 1986).



Th. It isn't a card is it?

However standard CA text markings will be used for shorthand description at other times.

. A full stop indicates a falling tone as occurs at the end of an utterance but not exclusively so.

, A comma indicates continuing intonation, as occurs between clauses and phrases of a sentence but not exclusively.

? A question mark indicates rising intonation as occurs with a question but not exclusively.

! An exclamation mark denotes animated tone.

↓↑ Marked rising and falling shifts in intonation may be marked by upward or downward arrows immediately prior to the shift.

SPEED OF UTTERANCE.

Where part of an utterance is delivered at a pace quicker than the surrounding talk it is enclosed by 'less than' signs > <

Th. Now let's see if you know this one, >are you ready?< Car.

KEY LINES.

When lines are significant to the text these will be marked with arrows in the left hand margin.

Th. Tell me that one again.

→ St. tar.

Th. Is it a tar?

e) Phonetic and Phonemic transcription.

Phonemic and phonetic transcriptions in this thesis are based on the IPA conventions (1989) but including some diacritics from 'Extensions to the IPA for the transcription of atypical speech (Duckworth, Allen, Hardcastle and Ball 1990)⁸. Also following the work of Kelly and Local (1989) detailed articulatory points may be described verbally as an adjunct to diacritics. This facilitates ease of interpretation. The *phasing* of certain articulatory features is occasionally referred to in the text and this obtains to the relative timing of one articulatory feature (for instance liprounding) in relation to another (for example the onset of velar closure). The temporal placement of certain features of the articulation may be shown underneath the main phones of the transcription through their placement left-right. As much normal orthography as possible is used outside of the target words in order to make the transcripts easier to read. In most cases the child speech is written as a phonetic transcription in square brackets, [p^hit̃]='Pete', although the transcription is not intended to show every detail, only that which after analysis has been considered crucial to the ensuing argument. Other speech is occasionally transcribed in less detailed phonemic transcription in slanting brackets, for instance where detail is unnecessary but where the utterance clearly does not correspond accurately to a known word.

Generally the concept of a 'phoneme' as in traditional phonological theory is not adhered to in this thesis, hence the term '*phone*' is used for a speech segment. In line with this the child's speech patterns are described as having '*phonetic*' or '*articulatory*' rather than '*phonological*' errors unless there is a strong argument for the error arising from their own phonological rule system rather than being imitative or innovatory.

⁸ Current IPA practice leaves unaspirated plosives unmarked but I do mark it to provide extra contrastivity where appropriate.

A list of the diacritics used in this text is given below:

- ◌̥ lips more spread.
- ◌↔ lips with unusually wide spread.
- ◌̩ lips more open.
- ◌̥ tongue raised.
- ◌̣ tongue lowered.
- ◌̣ labialisation.
- ◌̥ devoiced.
- ◌̥ prevoicing.
- ◌̣ lateralisation.
- ◌̥ weak, lax articulation (physiological).
- ◌̥ unusually tense articulation (physiological).
- ◌̥ no audible release.
- ◌̥ unaspirated.
- ◌̣ palatalised.
- ◌̣ coarticulation.

CHAPTER TWO.

SETTING UP TARGETS AS MODELS FOR IMITATION AND REPAIR.

2.I INTRODUCTION.

Therapists work hard to put work on phonetics in a context of essentially normal adult/child conversation practice wherever possible. This is after all the medium the child has to work with everyday. So how is the child who has problems dealing with the phonological content of connected speech going to be made aware of what the key issues are for him/her? The target phones and words which are to form the core of the therapy session have to be highlighted in some way. What tends to happen is that the targets are presented in such a way that their semantic reference is established and then the target words or single phones are dissected out for intensive work before being replaced in a more natural linguistic context. The skill of the therapist lies in being able to keep the targets from getting so far removed from 'real' speech that the connection is lost. In this and subsequent chapters the process will be occasionally shown to go awry, and with some bizarre consequences.

One of the simplest ways of presenting and practising targets with children is the process of **modelling¹ and imitation**. Modelling routinely occurs not just on **first presentation** of a target but as an essential part of repair, as **redoings/models** of the child's prior try. The preference for self repair common in normal adult/adult conversation does not appear to apply so strongly in child/adult therapy, at least until the therapist has some confidence in the child's ability to self correct. Even then modelling for imitation will ultimately be utilised if the child exhibits trouble with phonetic repair.

Forms of modelling and imitation are processes with which children are essentially familiar, as mothers use these processes, especially in a didactic situation such as looking at books. Tarplee's

¹producing a *model* is defined as the intention to highlight a particular target word, or phone(s) within the word, for special attention by the listener (child). This may be through suprasegmental, syntactic or other means.

(1993) work deals with this topic, especially as regards the use of redosings (repeats of child prior). She described redosings as being disguised or embedded phonetic corrections of the child prior which dually confirm the lexical content of the child's talk and in certain circumstances expect a phonetic repeat/repair. In therapy talk the disguised nature of the phonetic corrections is routinely overridden by highlighting their production as models through **speech perturbation**.

Obviously the material the therapist chooses includes as many opportunities for tackling the target phone as possible and the adults speech patterns are modified in order to draw the child's attention to the key words, aiming to present the targets 'in the clear', uncontaminated by the effects of surrounding speech. The crucial phonetic aspects for the target will be amplified, such as the essential 'velarity' of /k/ or the friction of /s/. Crystal (1987) describes how parts of words are stressed in normal speech, the principle of 'tonicity' where maximum prominence is placed on a given syllable. Primarily there is pitch movement but added loudness, duration and even silence may be involved to heighten the contrast between the stressed part with the speech on either side. It will be seen in this chapter that modelling in speech therapy uses these features but that it also goes beyond what would be found in mundane talk.

In this chapter the issues to be addressed will be essentially those to do with the modification of the adult's communication for the child's particular attention. Target phones and words will then be shown to be differentiated in various ways from the normal flow of speech by the adult. Informational talk regarding the semantic referent is detached from phonetic talk but sometimes used as a marked build up to the target. In the course of this discussion it will be shown that perturbation of the normal speech flow occurs across a number of parameters and is accompanied by certain nonverbal behaviours that help highlight the target in question. A key part of this issue is how such a modelled target word or phone is set up as **imitable** and whether this imitation is obliged or not. There is a dispreference for overtly worded demands for repetition in therapy talk, at least in first presentation, though they are found in repair sequences where utterances such as "say it again" or "say s:pade" are more common. (For comparison of mother and therapist see chap 5.) This dispreference means that requests for repetition are conveyed by other means as part of the highlighted target utterance.

One of the key behaviours in setting up models for imitation will be shown to be that of the precise timing of movement of gaze. Goodwin(1981) described how gaze is both a social act and a means of gathering information. Backing up Kendon (1967) he found that, at beginning of an utterance, speakers tend to look away from hearers, but towards the end look towards them. The hearer at this point tends to look away so that when he takes up a next turn he is not looking at the next hearer. As a generality these patterns are suspended in the special talk of therapy where mutual gaze is extended over several turns or else specifically established at crucial points in the talk. With a third object such as a book involved, as occurs in this data, mutual gaze is not necessary to achieve full mutual attention, but when articulation itself becomes the topic of talk then mutual eye contact is commonly established. The behaviours follow Goodwin's findings that gaze is used to gain the attention of the listener when combined with *pause* until the eye moves to the speaker. The speaker may lengthen or restart a phrase to be timed with the arrival of the recipient's gaze, or indeed may lengthen the final phone or medial vowel. In therapy this type of behaviour is especially linked to the use of intakes of breath and glottalstops before utterances containing a model, or before models themselves if mutual gaze is not already established. Eye contact may even be established during speech perturbation on the target segment itself.

2.II INITIAL DATA ANALYSIS.

To show how models arise and to trace the pattern of turns that elicit repeats, a key text will be presented and discussed in detail specifically attending to adult prosody, gaze and gesture patterns and their consequence for child response. The key text for this chapter involves a number of attempts at imitation; all following clear models set up by the adult. These models occur both as first presentations and as redoings of the child response. The child in this case is Bernice (the day after her fourth birthday) who has been involved in therapy for some months so has some experience of this style of talk. The extract comes well into the session, after lengthy periods of work on /f/ as well as other sounds. The stimulus material would seem to be new to the child and a little time is spent with general discussion (of a pedagogic sort) as to the content of each

picture before a target word is tackled in detail. A description of the extract will now follow²;

#2.1. *Th/Bernice. 21.30. Looking through scrapbook. Target /f-/ in 'fountain'.*

- 1.Th. The lion is pointing to: (0.4).h w
- 2.B. $\left[\begin{array}{l} - \\ [wɔʔə] \end{array} \right.$
- 3.Th. Yes water.
(0.5)
4. The water's coming out isn't it!
(1.0)((Bernice nods))
- 5.Th. .h Water comes out of the, .h [f: aʊntɪ n]
- 6.B. $\left[\begin{array}{l} \\ \text{tap.} \end{array} \right.$
- 7.B. * [fɔʊntɪn] + muffled resonance.
 $\left\langle \begin{array}{l} \text{exolabiodental} \\ \text{stricture.} \end{array} \right.$
- 8.Th. ((nods))It comes out of a tap as well, doesn't it.
- 9.Th. What noise does it make when it drips out of a tap?
 ((gestures 'dripping'))
- 10.Th. t, t, $\left[\begin{array}{l} t, t, t. \end{array} \right.$ ((ends gesture))
- 11.B. $\left[\begin{array}{l} \text{(those).} \end{array} \right.$
- 12.B. >t, t, t,<
 ((minimal imitation of gesture))
- 13.Th. That's right.
- 14.Th. The water is coming out of a, f:ountain.
- 15.B. [f: aʊntɪ n]
 $\left\langle \begin{array}{l} \text{exolabiodental} \\ \text{stricture.} \end{array} \right.$
- 16.Th. >Try again< . [f: aʊnt ə n].
 $\left\langle \begin{array}{l} \\ \end{array} \right.$
- 17.B. [f: aʊntɪ n]
- 18.Th. Good try. $\left\langle \begin{array}{l} \text{exolabiodental stricture.} \end{array} \right.$

²Details of pitch and gaze are given later in the text in order to keep the first presentation of the extract simple to read.

Initially the task is set up as one of sentence completion in line 1: the sentence is left hanging on a monotone after a stepwise rise in pitch (see #2.1,1) with a slightly extended final word "pointing to:". The therapist stops the voicing finally in a way that would be unlikely to occur if she intended to hold the turn and finish the utterance herself. Rather it is offered up for completion by either party, there being no evidence of "trail off" cueing an ending as outlined by Kelly and Local (1989). After a short pause she is about to talk again but her utterance (cut off) is overlapped by Bernice's own attempt at an answer. (The high pitched nature of the interrupted utterance does not sound like a completion to the prior whereas the child's turn picks up on the pitch of the turn for completion).

#2.1.1.

1.Th. The lion is pointing to: (0.4).h w

2.B. [wɔɹə]

3.Th. Yes water.
(0.5)

4. The water's coming out isn't it!
(1.0)((Bernice nods))

5.Th. .h Water comes out of the, .h [f:: aʋ nt'ɪ n]

The therapist responds positively at line 3 to the child's semantically accurate answer "water" and at lines 4/5 goes on to use this answer to build up to the target word 'fountain'. The therapist's repeat of the word "water" contains a clearly articulated medial /t/ in contrast to the child's glottal stop but the speech flow is smooth and does not have the characteristics of a highlighted model. It is notable that the adult's repeat with the embedded correction is preceded by a confirmatory "yes" and is not divorced from this by any form of break in speech rhythm. The child does not imitate it. This combination of factors may be significant in precluding it as being set up as a model for repetition and repair. This style of redoing plus confirmation marker as utterance terminator was outlined by Tarplee (1993) and found to have pitch contrastive to the child's prior. The evidence for that here is rather inconclusive as the adult simply uses a high-fall as compared to the child's midfall. This type of adult repeat will in due course be compared to other examples where child imitation/repair follows.

It is interesting in this case that the adult does mark her first repeat of 'water', just at the point where the error occurred, by looking up to the child from the book and maintaining this gaze during the slight pause (see #2.1,2). She does not look down again until she has taken up the turn again herself.

#2.1.2.

((to book + point)).....

1.Th. The lion is pointing to: (0.4).h w [-
 ((to book)).....X.....

2.B. [wəʔə]

.....,X.....

3.Th. Yes water.
 (0.5)
 ,,,((to book)).....,X.....,((to book)).

4. The water's coming out isn't it!

 (1.0)((Bernice nods))

.....X.....

5.Th. .h Water comes out of the, .h [fɪ: ɔ vntɪ n]

6.B. tap.

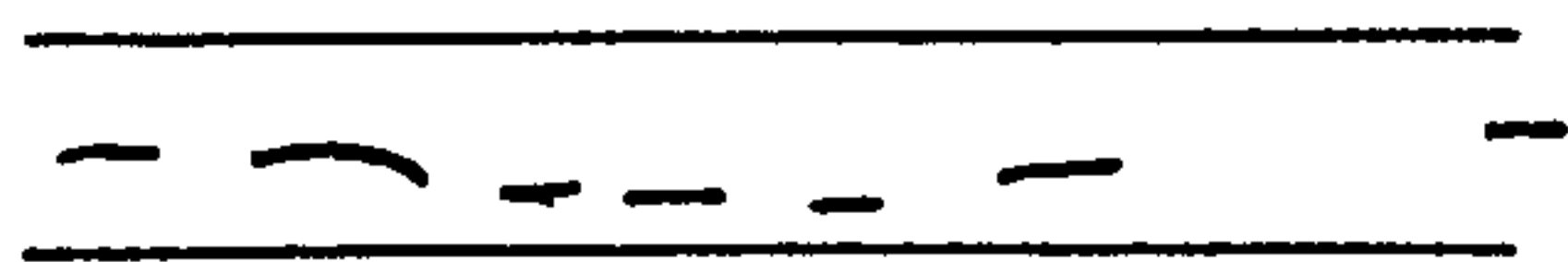
Other notable features of line 4 are the animated style of the pitch and the use of the tag question "isn't it" at the end of the turn. Such objects routinely seek nexts but minimal ones. These features plus the absence of gaze at the child seem to mark the utterance as doing something outside of work talk. It is interesting that the therapist chooses to reiterate the noun in a place where a pronoun might have done just as well, giving another opportunity for Bernice to hear the adult version. The flow of speech is smooth however, with 'water' again not marked out auditorily as a key word. For instance the /ð/ of "the" is smoothly elided with the /w/ of "water", not separated by a /ʔ/ glottal stop as typically happened in these circumstances where a noun is being marked out. Then the contracted form of 'is' is affixed, when in other instances where a

word is to be of special note, even when embedded in conversational talk, the adult may interrupt the speech flow and use the uncontracted form 'is'.

Bernice nods in agreement with the statement that "water's coming out" but adds nothing further and there is a slight pause before the therapist marks her take up of the turn with an intake of breath (line 5) and makes another statement about water. This is the return to work talk, a precursor to the target itself. Indeed these statements that require some kind of response from the child are more frequently preceded by an audible intake of breath than other informative statements. Line 5 also is worklike due to the less flowing, less animated rhythm and pitch (except on the target itself); contrast the range illustrated below between lines 3/4 and 5.

The exception to this is the pitch range on the actual target word. The target words in the utterances in 3 and 5 have a falling pitch. As part of a longer utterance this naturally occurs due to their position at the end of the sentence, but, in addition if they present novel or important material the range of the fall appears wider than routinely occurs in statements. There is contrast here is between line 3 with 'water' (a redoing,) and then at 5 with 'fountain' at the end of a sentence, being the first presentation of a new word. The culmination of this statement is the first presentation of a new /f/ initial word; "fountain". The therapist looks up to the child as she says this key word. The word 'fountain' is preceded by a break in the pulmonic airstream and then a tiny intake of breath. There is considerable similarity between this construction prior to the noun and line 1, where the noun is not provided, both in prosody and in the break before the last word.

#2.1.3.



1.Th. The lion is pointing to: (0.4).h w



2.B.

[wɔʔə]



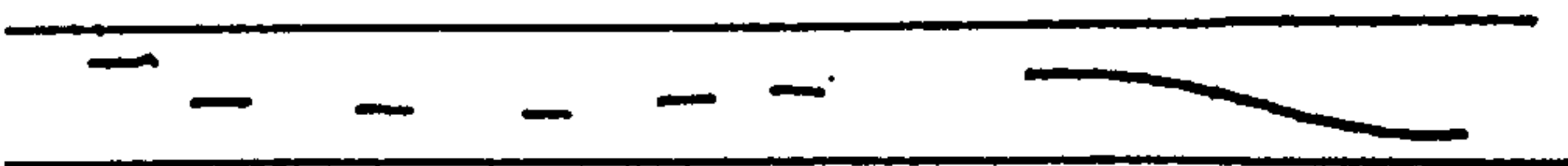
3.Th. Yes water.

(0.5)



4. The water's coming out isn't it!

(1.0)((Bernice nods))



5.Th. .h Water comes out of the, .h [fɪ: a v n t 'ɪ n]

6.B.

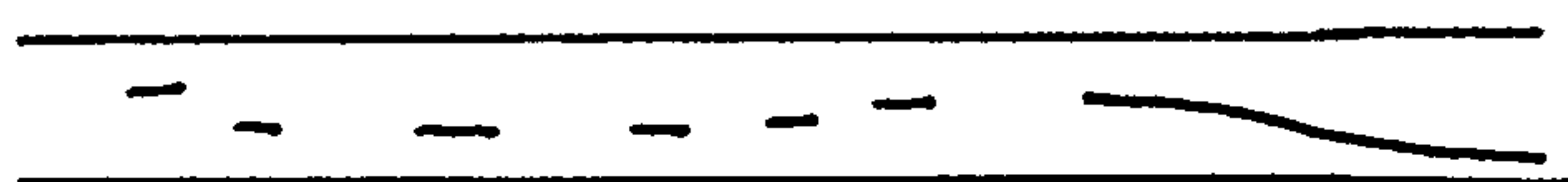
tap.

Some contrast exists in that there is no prolongation of the vowel in "the"(line 5) compared with "to:" (line 1) but the sentence shares other characteristics with line 1 (e.g. mid pitch range stepping down and deliberate delivery) which was interpreted as a request for sentence completion. Certainly Bernice appears to treat Line 5 as a request for sentence completion and provides the response "tap", in overlap with the therapist's "f:ou:ntain". She does not seem to have picked up on the therapist's /f/ that very slightly precedes her turn as there is no /f/ element to her answer.

However, straight after her mistaken response, "tap" she meets the therapist's gaze and

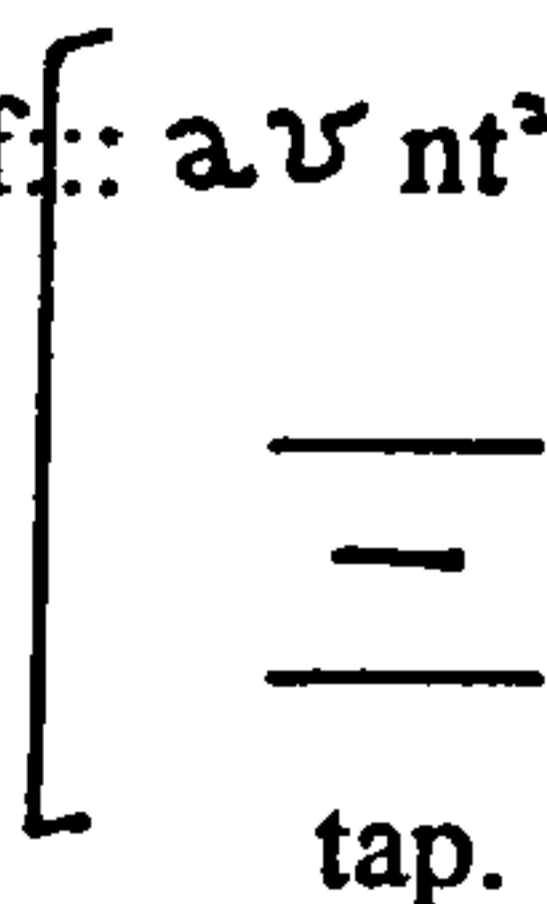
acknowledges the therapist's "f:ou:ntain" as the correct answer by repeating it. This provides an example of contrast between her production of a novel answer and an imitation. The repeat is more than just a replacement for her original answer as it differs from it prosodically, in speed of delivery and also in its vocal resonance. In fact it matches the pitch, sound prolongation and speed of the therapist's model unlike "tap". The pitch contour for instance is a fall starting from the middle of the register whereas 'tap' was produced on level pitch. Although the /f/ is not extended initially the vowel is prolonged and her articulation shows considerable effort to produce the target /f/, the labiodental stricture being overlaid onto the articulation of the final syllable.

#2.1.4.



5.Th. .h Water comes out of the, .h [f: : a u ntʰ ɪ n]

6.B.



7.B. * [f̃ərntɪn] ~ muffled
 ← e exolabiodental stricture

The change in vocal production from clear to slightly tense and more nasal adds weight to the idea that the child has recognised that this talk is no longer related to semantic content but is now to do with pronunciation. The /f/ element again is evidence that Bernice is aware of this as a target of therapy. This then is the first example of the setting up of a target word through the perturbation of the normal flow of speech. This alteration of rhythm is also accompanied by change of gaze direction towards the child and a nod of the head timed to coincide with the main stress. The child interprets the model as one for repetition though it will be seen in due course that this may be optional.

Looking at the gaze patterns it is noticeable that the first time that the therapist looks up at Bernice is timed precisely with her confirmation, with implicit phonetic correction, of "water"

at line 3. This is held briefly across a pause before she looks back to the book.

#2.1.5.

((to book + point)).....

1.Th. The lion is pointing to: (0.4).h w [-
 ((to book))....., X.....

2.B. [wɔ?ɔ]

....., X.....

3.Th. Yes water.
 (0.5)
 ,,,((to book)),....., X.....,((to book)).

4. The water's coming out isn't it!

 (1.0)((Bernice nods))

.....X.....

5.Th. .h Water comes out of the, .h [fɪ: ɔv nt'ɪ n]

6.B. tap.
,((to book))

7.B. ↑ [fɔvntɪŋ] * muffled resonance
 ← c ← exolabiodental stricture
,((to book))

The next point of interest is that at line 5 the therapist again looks up to Bernice, at the moment she pauses, to give the first model of "fountain", thus gaze shift is timed precisely with the presentation of the target. To this she receives a response in overlap as it is interpreted as requiring a sentence completion. The therapist's gaze is maintained until the imitation of 'fountain'

is eventually completed (7) when it returns to the book. This is unlike her control of gaze at line 4/5 with the tag question as here she does not wait for the answer before dropping her gaze. If gaze is taken as a marker of interest and an expectation of response then certainly more attention is paid to the imitation of the key word (line 7) than to the social nod (line 4/5).

The therapist at line 8 chooses to acknowledge the answer that Bernice gave in overlap and to use it as a point for revision of another sound /t/. During this 'aside' in line 8 the therapist drops her gaze down to the book again and Bernice follows suit, although the therapist soon looks up to the child again before asking her a test question about the sound the tap makes (line 9).

#2.1.6.

X.....,((to book)).....

8.Th. It comes out of a tap as well, doesn't it.

X.....

X.....

9.Th. What noise does it make when it drips out of a tap?

X.....

((gestures 'dripping'))

.....
10.Th. t, t, t, t, t. ((ends gesture))

.....
11.B. (those).

.....
12.B. >t, t, t,<

.....
.....

13.Th. That's right.
.....

The therapist actually answers this question herself very rapidly (10), responding to the child's apparent lack of response but the child then answers erroneously again in overlap. Bernice then chooses to acknowledge the therapist's answer by repeating the model with a minimal imitation of the accompanying gesture. Thus repetition of the therapist's prior seems to be used in both lines 7 and 12 as a means of correcting her own error. When the therapist gives the [t] sound in line 10 the delivery is voiceless, therefore having no pitch contours but the attributes that it shares with the previous target word 'fountain' at line 5 are slow, rhythmic delivery and the accompanying gaze towards the child which is held until Bernice has successfully imitated her. It would seem that pitch signals are not essential to prompt a response as there are obviously none here.

As regards gaze, in the span of lines 9-13, the therapist maintains gaze continuously while Bernice is given a model answer to the initial direct question and when she imitates it. The therapist in this case only drops her gaze as she confirms the response was correct. This episode supports the observation that where an important response is expected the therapist will maintain visual attention until it is completed. What is more in the next section gaze is maintained from the presentation of the target at 14 until the repair sequence is complete at line 18. It will be shown in due course that in similar circumstances, if the adult drops her gaze then an imitation may be aborted.

The therapist returns to the original topic at line 14 and repeats the target word as a model, set in context at the end of an utterance very similar to line 5. Like line 5 it is repeated by Bernice.

#2.1.7



X,,,,,X.....

14.Th. The water is coming out of a, f:ountain.

X.....



.....

15.B. [f eɪ n² t ɪ ŋ]
 c exolabiodental stricture .

.....

Line 14 is also similar to line 5 in that the key word is separated from the rest by a break in the pulmonic airstream which is then followed by a prolongation of the initial /f/. The adult looks up from the book to the child at the outset of the target word and it is accompanied by a slight nod with the primary stress. These actions delineate that part of the utterance as one of special note. The pitch is slightly different from line 5 in that there is a slight rise at the beginning of 'fountain' and then a fall, marking the special nature of 'water' in this instance coming out of a fountain and not a tap. The child interprets it as an imitable element. What is more the adult's prolongation of the /f/ is once again transmuted into an exolabiodental stricture but this time it appears throughout the second syllable. The diphthong which had been reasonably correct in her try at line 7 is this time distorted from [ɔw] to [eɪ].

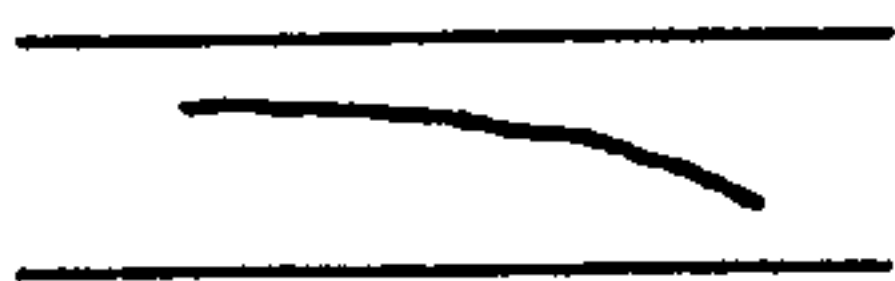
This time the therapist asks for a further repeat with an explicit "try again" with no other evaluation³, giving opportunity for further improvement. She also appends a model with no syntactic context. There is further augmentation of the /f/ and also a very open, lengthened diphthong articulation compared to line 14. Thus she highlights the labiodental posture that Bernice is already using excessively and also draws attention to the inappropriate diphthong. During this model her head is held rigid and turned to the child, drawing more attention to the visual aspect.

³ see more re. adult's use of this device in chap 5.

#2.1.8. ((Mutual gaze held throughout))



16.Th. >Try again< . f::ou:ntain.



17.B. [f:ar:ntɪŋ]
exolabiodental
stricture

18.Th. Good try.

The result of this augmented model is that the repairs Bernice makes magnify the distortions that the therapist has made. The diphthong is restored but the exolabiodental stricture becomes even more marked, extending throughout the word with a very close jaw posture that hardly moves. She also lengthens the /f/ as well as the diphthong as a reflection of the rhythm of the model (slower than her previous try), and ofcourse the pitch pattern is identical. She is rewarded by the measured "good try" and the therapist's gaze drops back to the book, marking the end of the episode.

a) Summary.

The above episode (16-18) would seem to confirm the finding that where an important response is expected the therapist will maintain visual attention until it is completed, as occurred at lines 9-13. Also in repair Bernice has altered a variety of parameters in order to reflect the adult's model. But she has also gone beyond what the therapist has done and this warrants further explanation. It is worth summarising the typical patterns found in the whole of #1 as regards pitch, gaze and other nonverbal behaviours as these are notable in establishing targets for special attention and imitation. It is apparent from the extract that extralinguistic behaviours, apart from simply highlighting a model, also in certain configurations project imitation in next turn. The extract in fact illustrates the two extremes where the expectation of imitation is clearly present or absent.

- i) It has been demonstrated that, in this extract, talk about phonetics is marked out from other pedagogic talk by changes in the speed, rhythm and pitch range to produce a more deliberate manner when it precedes the production of a model. The target is divided off from the prior syntactic context by a glottal stop or sharp intake of breath. As regards pitch range on the actual targets there is a wide fall on first presentation of the target word (their position at the end of an utterance means that a fall is a common marker). Also arising in this extract was an instance of a discourse 'error' in which the child interpreted the adult's utterance as requiring completion when in fact it was the build up to a model. In the corpus there are a number of instances where the obligation to imitate is not clearcut and a noncoordination between the child's response and adult's expectations can occur.
- ii) The syntactic context is omitted in the child's imitation of the key word. In turn the adult's repair-initiating redoing is presented in isolation in reflection of this omission. It will be demonstrated in due course that removal of syntactic context occurs routinely in the adult's presentation both in first position and in repair as well as in the child's imitation and spontaneous naming.
- iii) Redoings can act as models for imitation. The one clear example of a redoing in this extract (line 3) that does not project an imitation is preceded by a confirmatory marker 'yes' and followed by a further adult turn. It has a high-fall pitch compared to the child's and this is some evidence for Tarplee's (1993) position that repetitions plus confirmation marker after test questions may be non-pitchmatched. We will have to look further into the data to identify the role of pitch in the projection of imitation more clearly. As regards redoings there is evidence, where there are no confirmation markers, that contrasting pitch signals the need for repair whilst mimicking the child's pitch does the opposite, as Tarplee found.
- iv) It is also typical of the discourse that sequences where child attention is critical tend to be marked by adult gaze to the child. More finely still, the upward movement of gaze, for example from the stimulus picture, often signals the key word of the utterance. The therapist looks at the child most when she is expecting special attention or a reaction from her (e.g. with tag questions at lines 4 and 8) and secondly when she is giving an augmented version of the target. The switch of the gaze to the child is typically timed to coincide with the presentation of the model. Where the therapist requires an imitative response her visual attention is extended beyond her

own utterance (as at lines 3/5) when compared to the expected but less critical yes/no response to a tag question. The child does not necessarily return the gaze but this does not mean that the adult posture and attention are not noted. Also accompanying the target words in the original extract are other nonverbal behaviours e.g. nod of the head at lines 5 and 14. At 16, where two segments of the word are stressed, the head is held rigid and markedly turned towards Bernice. These too must help to highlight the critical target and these and similar behaviours will be demonstrated to co-occur with other routines.

v) Also apparent in this extract is the visible effort that children can display when imitating a model, with exaggerated articulatory postures. Here it particularly took the form of the extension of the critical labiodental articulation across the whole word. Whilst this topic is not taken up in this chapter it forms a major part of chapter 3 where the distorting affects of speech perturbation are clearly seen in the children's imitations.

2.III. BEHAVIOURS THAT HIGHLIGHT A MODEL.

Apparent regularities have been derived from the above description. I now intend to extend the discussion to see if this apparent orderliness applies throughout my data. In this extract, #2.1, target words have been seen to be defined for special attention through changes in the verbal and nonverbal style of the adult. These patterns involve contrasting configurations of stress, phonetics, pitch, gaze and other nonverbal behaviour as discussed above. Not all the models thus formed are set up requiring imitation nor are they interpreted as such. What needs to be discussed in greater depth is which particular parameters are crucial in prompting a response from the child. This question will occupy us in both this section and in section 2.IV.

The regularities to be discussed further in the numbered sections are:

- a) The nature of the marked perturbation of the normal flow of speech, both within the target word and external to it when a target word is highlighted.
- b) The disruption to the normal syntactic context of a modelled word.
- c) In contrast when a novel word is not being set up as a particular target then there may be little emphasis or phonetic distortion and the word is be less likely to be marked by gaze at the child or other nonverbal gesture.

2.IIIa) The nature of speech perturbation for target words and phones.

A number of characteristics were noted that distinguished the adult's presentation of the key word 'fountain' from that of 'water', which was not highlighted, and other such nouns in the sequence such as 'lion' (line 1). Some of these characteristics are shared by words presented in isolation whilst others are necessary where a target is presented as part of a sentence structure, seemingly to mark it off from the rest.

i) Distortion of the phonetic signal of the word itself.

Classically 'fountain', where the /f/ was the target sound within the word itself, had this fricative element considerably lengthened with concomitant tense, exaggerated labiodental articulation and increased amount of friction. This cluster of phenomena is seen quite commonly where an initial or final fricative is involved. In the next example, although the approach to the /f/ is quite smooth the /f/ is lengthened and has the articulation as above described.

#2.2 *Th/Bernice. Target /f-/*

1.Th. The flowers are on the f:an.

2.B. [f: æ n]

The fricative can be exaggerated finally in words such as 'face'. The initial consonant /f/, also a fricative is not lengthened or cut off from the prior speech but the final /s/ has both these attributes, a glottal stop being interposed between the vowel and the fricative.

#2.3 *Th/Stuart Target /-s/.*

3.Th. a [fɛɾ t] or a [fɛɾ's:].

(1.9)

4.St. [fɛɾ t]

((+smile/spread lips,))

Where plosives are concerned the increase in length of the sound can take place in either the hold or release phase of the phone and they may be combined. In the following example /k/ in line

l has an increased hold phase and is then ejective, therefore a glottal stop interposes between the vowel and the consonant. In line 3. the release stage is slow so that increased friction results.

#2.4. St/Th 1. Target /k/

1.Th. Okay let's try again, just the word. .h [k^xi2i]

2.St. [t^h i] ((with finger under chin))

3.Th. not [t^hi], not [t'2i] ((puts finger on teeth)) but [kx:i 2].

Sometimes the phasing of component phonetic parameters has shifted so significantly that it appears almost like an additional phone. In the following case it is extraordinary aspiration, where the articulators have moved apart fairly rapidly and the friction is more glottal.

#2.5. Th/Rachael Target /k-/.

3.Th. Nearly right, >good girl<, [k^h h^o v t]

More strikingly still the release phase may be followed by a glottal stop before the vowel commences, as occurs with 'key' above.

In final position in a word the release may be unusually audible, the voicing continuing post release. For example;

#2.6. Th/Elizabeth. Target /-g/ in 'dog'.

Th. It's a dog.

[d ɒ g^h]

With voiced plosives in initial position the approach to the hold phase may be voiced so that the movement of the articulators into contact is highlighted, or the hold phase may be slightly voiced.

#2.6.1 Target /d-/ in 'dog'.

Th. It's a dog.

[^vd ɒ g]

It is possible for more than one phone in the word to be highlighted as occurs with 'fountain' at line 17 where the diphthong 'ou' is also lengthened and said with a more open articulation on the second element.

#2.1.9.

17.Th >Try again< , f::ou:ntain.

18.B. [f^ʌntɪŋ]

ii)dividing the word off from the rest of the utterance.

A gap may be marked by a pause as in line 17 above. However it may also be marked by a sharp intake of breath, or if following a vowel a glottal closure. Both these features are seen in line 4.;

#2.1.10

4.Th. Water comes out of the, h f: :ou:ntain.

Alternatively, where the rest of the utterance is an important informational link then measured delivery is more notable as occurs at line 5 of #2.1 (contrasted to line 3/4 previously) and also line 14. These lines have been noted as signalling significant 'worktalk' as opposed to less directed conversation.

Target words may in fact be set apart from the surrounding talk when it is in the middle of a turn as can be seen from the example below with 'gun';

#2.7 St/Th 1. Target /g-/ in 'gun'

3.St. [d^ʌn]

4.Th. That's right it's [ɪ2 'g^ʌn], very good.

((+finger under chin + glance up to Stuart + head back))

Here the therapist is in a position where she has received a semantically appropriate answer "gun" which she can then use to lead into the target she actually wants. However though semantically

accurate the word has been mispronounced, involving a [d] substituting a /g/, the target of therapy. Thus in her confirmatory repeat she divides off the correct version "gun" from the preceding part of the utterance with a glottal stop and then prolongs the hold phase of the /g/. This is accompanied by a gesture which denotes the 'back' articulation, although the significance of this has not yet been made clear to the child. The critical word is also followed by further confirmatory praise which would seem to preclude any repetition/repair by the child at that juncture. Thus the word is of note but not set up as a model for repetition although it shares some features with the latter.

Thus it is possible for the adult to combine the giving of new information in a syntactically appropriate context with the presentation of that new information as a modelled target. This is achieved through the use of speech perturbation to divide the key word off from the prior syntax. The target is routinely placed in final position in the sentence. Here is another example;

#2.8 *Th/Chris Target /-m/ in 'gnomes'.*

- 1.Ch. What= ((points at card))
- 2.Th. =These [ɑ:ʔ n:əvm:z]. (What)
- 3.Ch. [nəvmz].

The critical line 2 shows the new word 'gnomes' as cut off from the "these are.." part of the structure by a decisive glottal stop and by then having a long initial /n/. The child interprets this as a model for imitation although his turn is in overlap with the therapist commencing another question. She did not expect immediate imitation. What is notable from these examples is that the child routinely imitates a single word rather than a phrase and this then influences the way any further repair is treated. The target is not restored to a syntactic frame until the repair is accomplished.

b) Removing words from syntactic domain.

The severance of the target word from the rest of the utterance is not just an instance of phonetic distortion; there is more to it than that. It is noticeable in the last two examples that the therapist is clearly keeping the target word in its syntactic frame marking it off by the means described.

Line 16 of the original extract also shows those features that divide the target word off from the rest of the therapist's utterance. The utterance starts with a rapid rate of delivery for "try again" and then a micropause occurs followed by the deliberately articulated 'fountain'. This speeding up of the less critical parts of the sentence is seen many times , for example

#2.1,11.

14.Th. The water is coming out of a, f:ountain.

15.B. [feɪntɪ ŋ]

16.Th. >Try again< . [f::aʊntɪn].

What is different here is that the word 'fountain' stands in isolation with no syntactic context, not even 'a' or 'the'. This style follows on from the child's imitation of the single word (projected by the therapist's division of the key word from its frame at 14) but more critically the therapist does not replace the word in its syntactic context at this time when there is more work to be done (warranted by 'try again').

The treatment is very different when the work has been satisfactorily completed. Here, for example, the isolated target 'fire', having been appropriately repaired is replaced in a full sentence.

#2.9 Th/Bernice. Target /f-/

3.B. f:ire.

4.Th. That's right it's a fire.

As part of the focus on phonetic features the target word will regularly be removed from the syntactic environment in which it would normally be found. This can serve a dual function of

simplifying the articulatory burden for the child but it also sets up the target word itself as the topic in hand and not its actual referent. There are a number of typical ploys that the adult utilises to mark out the target word from the rest of the utterance; perturbation of the speech signal to divide the target word from its syntactic environment, as described above, removing the definite/indefinite article and tailoring the initial eliciting question/statement to refer to the picture/word itself and not the semantic referent of that picture/word (through nonagreement of singular/plural syntactic markers or similar) are others.

The contrast between the presentation of the target for consideration of its semantic referent and as a model for imitation is shown clearly in the next passage. There are three presentations of the target 'sink' by the adult. Two are presented in isolation but the second which contradicts the child's inappropriate referent label is preceded by the indefinite article. The extract follows an attempt at the target by the child.

#2. 10 *St/M. Target /-k/ in 'sink'*

- 1.M k, remember your /k/ at t'end. Sink.
- 2.St. toilet.
- 3.M. NO, it's a sink. Say sink.
- 4.St. sink.

Thus at line 1 the word 'sink' is preceded by discussion about its phonetic content and is then presented clearly on its own. The child does not imitate this model but attempts to move the topic away from the target. That an imitation was being sought by the mother's prior model is clearly indicated by her reaction to this prevarication. Hence at line 3 she clearly rejects 'toilet' and restates the topic as 'a sink' including the indefinite article to reestablish the referent. Once this is done she can then isolate the target word as a model, without the article but preceded by the command "Say". Stuart complies and imitates this single word.

The presentation of new information where the referent has not been established regularly occasions the restatement of the target word as a model in isolation after the complete phrase, removing the syntax.

#2.11 Elizabeth/Th.3 Target /dʒ -/ in 'jeep'.

((Adult points to the next picture in array))

- 1.E. a (chap)
- 2.Th. It's called a jeep. Jeep. Ready?
(0.8)
- 3.Th. Can you say it again?
- 4.E. jeep.

Elizabeth isn't heard to label the picture appropriately and is put right by the therapist in line 2. She is clearly dealing with the semantic level as she says "it's called .." as well as using the indefinite article which the child had also used when labelling. After this the therapist clearly states the target word in isolation without 'a' and prompts the child to respond by using "ready?". When there is still no sign of an imitation she asks her to say it again. Thus the use of the target word in isolation is clearly meant to signal that it is set up as a model for imitation, once the referent is established.

Where there is no doubt that the semantic referent is established then the removal of the syntactic frame is regularly used in repair sequences in setting up the model for repair:

#2.9.1. Th/Bernice.

- 1.Th. He's warming his hands by a:
- 2 B. a fire.
[θaɪə]
- 3.Th. f:ire.
- 4.B. f:ire.
- 5.Th. That's right it's a fire.

There is no possible semantic confusion in the above example as no "thire" exists in English,

although this is what the child says. The child has used a complete phrase in describing the picture but in next turn the therapist drops the 'a' and prolongs the initial segment therefore clearly setting up the model as dealing with the phonetic context. The child imitates the model with an appropriate repair and the key word is then replaced in an appropriate syntactic context by the therapist's repair.

The above utterance at 2 resulted from a sentence completion task. Even where the child chooses to imitate a complete phrase but there remains an unresolved phonetic error then the adult may remove the syntax in a request for further repair.

#2.13 *St/M. 1 Target /-s/ in 'horse'.*

- 1M. What's this then?
→ 2.St. Horte,(and it got a gate on it to get out)
3..M. Yeh, but you said 'or' . It's hors:e.
→ 4.St. It horte
5.M. Do it again.
(0.3)
6. hors:e.
7.St. Hortse.

At first the child names the animal (line 2) with no syntactic context, although he goes on to expand on the theme. His mother acknowledges the semantic accuracy with "yeh" but then redoes his version of the word as "or". Her next utterance "it's horse" is not referring to the semantics as in such a case an adult would typically use the indefinite article. Instead her emphasis on the /s/ of horse draws attention to the phonetic content. Despite this Stuart imitates the whole phrase, with the same phonetic error as in line 2. In response to this the adult simplifies her modelling utterance to the target word "horse" and Stuart this time imitates it quite well.

In contrast where a simple confirmational redoing (as warranted by following praise) is involved

then the phrase used by the child is routinely preserved;

#2.14 *St/M. In play.*

1.St. a swing.

2.M. a swing. Good boy.

or even restored when the child has omitted it, in the form of an expansion of the child's prior turn. In the following case the child, Chris not only labels the picture accurately but also articulates the word "comb" appropriately. There is no question of the child repeating the expanded phrase as the adult finishes with the closing "good boy". Thus the following pause (lines 3/4) remains unfilled;

#2.15 *Chris/Th. (playing pelmanism, picture pairs)*

1.Th. You know what this is don't you.

→ 2.Ch. comb.

→ 3.Th. A comb, good boy.

(1.0)

4.Th. Are they the same? ((re. card pairs))

The next example shows a more complex usage of syntactic simplification. The adult is showing, through redoing of the child's inaccurate try (accompanied by an exhibit of a possible referent) that the child's version is open to misinterpretation. This discussion is obviously in the semantic arena. The redoing 'han' is then removed from its syntactic context and said in isolation. This allows it to stand directly adjacent to the correct version of the word 'fan' which is immediately set up as an emphasised model, with no syntactic context.

#2. 16 *Th/Bernice.Target /f-/ in 'fan'.*

1.B. Han.

2.Th. Not a han.

{ Han? f:an.

{ ((brings hand up to eye level and moves it about, directing gaze at it))

3.B. f:an:.

The target here is 'fan', which the child spontaneously labels but uses "han". The therapist then appears to interpret this as a mislabelling at the semantic level. She rejects it outright at this level with "not a han", inserting the indefinite article even though the child had not used it. To emphasise the possibility that there could be miscommunication at the informative level due to poor pronunciation she uses the word 'han?' in isolation as a query at the same time as showing her 'hand'. She then drops the gesture as she sets up the model of the appropriate "f:an" with emphasis on the /f/ target segment. (This cuts out any possibility that she could have been dealing with the missing final /d/ of 'hand'). This is interpreted as a model and imitated correctly by the child.

The target word can be further removed from its normal context through the structure in which it is initially presented. Much of the work that the child faces is in the form of pictures and there is frequently a lack of cohesion between the referent and the question/statement form pertaining to the picture. For instance in the next extract the therapist uses "what" instead of "who" although the picture is of a person and to direct the child to the semantic content would more typically done with the latter personal pronoun rather than object pronoun.

#2.17. St/M.

- 1.M. What's this then?
- 2.St. Nurse.

In turn the child displays that the context is not crucial by omitting any article and just saying "nurse" in isolation. (This child does not habitually omit articles as others with syntactic immaturity do).

In the same way statement structure can be distorted to refer to the picture/word itself as the entity in question rather than the referent. This is evidenced by the following type of mismatch between the pronoun 'it' and the plural 'cars' (rather than the cogent 'they're cars').

#2.18. Stuart/Mother. Target /-z/ in 'cars'.

- 1.M. It's 'cars'.
- 2.St. cars.

The child only imitates the key word not the phrase despite the structure having a smooth elided presentation. Similarly the mother here uses a question that points to a singular semantic referent and this is given in the shape of "toe" by the child. However the picture is of two things, the desired target being the irregular plural "feet". The mother then clearly shows that this is not the answer she was expecting through the long pause and maintained point. In fact the required word was a plural "feet" and this repair is accepted when the child selfcorrects following a pause but her first answer was understandable, being warranted by the question structure. .

#2.19.Eliz/Mother. Target /f/ in 'feet'.

- 1.M. What's that?
- 2.E. Toe.
(2.5)((M maintains point and gaze at E))
- 3.E. feet.
- 4.M. Good girl.

This is in contrast to the same mother's approach to novel information where phonetics is not the issue. Here the question is consistent with the expectation of a plural answer with "those" as the specifying pronoun in the test question.

#2. 20.

- 1.M. Do you know what those are?
- 2.E. ((shakes head))
- 3.M. BMX bikes. Look.

Thus the production of words as models is not only aided by the perturbation of the speech content of the word itself but also by the routine disruption of normal syntactic structures.

c) Novel words not set up for special attention.

We have already seen that new words that are not targets for therapy will normally be introduced in a coherent syntactic frame and possibly initiated with test questions that point up the number/case agreement to follow (see #2.20). The pitch is a fall over a wider range than the child's prior try, thus exaggerating its pattern rather than standing in contrast. This contrasts with the routine treatment of such words in a phonetic task. There are other differences in the handling of material that is extraneous to the phonetic task in hand. In the next few paragraphs I will proceed to describe how non-therapeutically oriented words are incorporated into the talk. Not all new words presented, or those that correct a prior informational error, have features such as a definite break before the new word, distortion of the phonetics and removal of syntactic context. Those that are incidental to the therapy in hand are routinely incorporated into the normal, smooth flow of speech. This is in some way exemplified by the example of the redoing "water" in extract #2.1, where the repeat is said with a clearly articulated /t/ in correction of the child's medial glottal stop but with no division from the prior word nor any distortion of the phones. I will now show through the next two examples how a redoing can simply act to close a topic and how features of this treatment differ to those where an informational correction of the child's prior is made. I will then go on to an example where a new word (non-target) is introduced by the adult in default of the child providing the answer to a test question. The phonetic assimilation described in that example is then contrasted to clear cases of phonetic nonassimilation in therapy talk.

Redoings may or may not be set up as models. Tarplee (1993) found that a child's spontaneous namings were typically followed by mimicking redoings, often with a songlike imitation of the prosody when no repeat was required. These mimicking redoings were distributionally equivalent to confirming redoings with "yes" but the latter tended to follow answers to test questions rather than spontaneous contributions. Redoings with "yes" were not necessarily pitchmatched. In the following case of a spontaneous naming found in my data the redoing is certainly playful in its manner, very like the examples cited by Tarplee. Here the therapist copies the steplike rise of the child but with a greater range and with a marked nod of the head in time to the accented beat.

By doing this she also accentuates the idea that this word is only one item in a list thus encouraging the move on to the next one. There has been a correction of the child's omitted medial /k/ but the flow of speech is not distorted in any way, there being no phonetic highlighting of any segment. There is also no visual attention to the child. The therapist moves on to the next item directly.

#2.21. *Th/Bernice.. Listing off animals in book.*

1.B. a monkey
[mʌŋ?i]

2.Th. a monkey.

In other examples where lexical error (as opposed to phonetic) is involved the pitch pattern stands in contrast to the child's try when the correct version is given. This again reflects a tendency found in Tarplee's data. Otherwise the word receives no special marking. As an example of this, in the next extract the therapist is correcting a lexical error by Bernice in which she has incorrectly identified the picture as a 'bear' rather than a 'goat'.

#2.22. *Bernice/Th. ((Th. and B. looking at book. Therapist pointing))*

1.B. a bear.

2.Th. >It's a goat.<
(.)

3.Th. What's that one?

Here line 2 is delivered in a rapid fashion with none of the features of distortion of the flow of

speech prior to or during the correction 'goat'. This type of delivery signals that the therapist is not particularly concerned with this subject matter and this is confirmed by her immediate concern with the next item at line 3. There is also a marked lack of visual attention to the child as the therapist busies herself with the book and the pitch pattern, whilst standing in contrast to the child's is not of the deliberate falling type most commonly seen with a model, despite its final position.

In nontherapy conversation between adult and child new words may often crop up and have to be set up for the child. In many cases this would not involve anything more than the use of 'normal' stress markers and not the gross type of exaggerated speech that the above examples involve. The following example is markedly different to the first presentation of "fountain".

#2.23. *Eliz/Mother, looking at book.*

1.M. Do you know what that is?

2.E. No.



3.M. That's called a rowing boat.

[əˈrɔɪm bɔ:t]

4.M. And what's that one?

The novel information in line 3. is presented at the same speed as the rest of the turn and the articulation is smooth with no glottal break between the /d/ or 'a' and the key words. There is also assimilation of / n / to / m/ due to the following bilabial /b/. The stress is also not exaggerated. There is no eye contact between the conversation participants as they are studying the picture. The child does not follow this case up with a repeat and the adult moves on directly to another item.

Thus there can be little doubt that adults are intentionally highlighting the phonetic aspects of

prior to the "fork" (where the /f/ is critical).

Thus novel words in adult/ child talk can be clearly differentiated as phonetic targets or nontargets by their delivery as well as through other accompanying nonverbal behaviours such as gaze.

2.IV.DIFFERENTIATING TARGETS AS MODELS FOR IMITATION.

In the previous discussion we have seen that key words and phones are clearly highlighted for the child's attention, both on first presentation and in redos. What must be addressed now is the range of behaviours that induce the child to repeat a model because clearly they are not all set up for imitation.

a) A start will be made with the obvious example of a **clearly understood request for repeat** in order to consolidate the picture of the features that accompany this. This will include a section on **multiple word models** that also clearly show features that encourage imitation.

b) In contrast **redos that act as closings** are then presented to show instances that are clearly different to the imitables.

c) The discussion will then move on to cover those cases where the requirements are not so clear, there being a **nondistinctive set of markers** compared with the two extremes. The outcome in these nondistinctive cases may be unexpected for one of the conversational partners, for example an unelicited repeat by the child.

a) Clearly understood repeat requests.

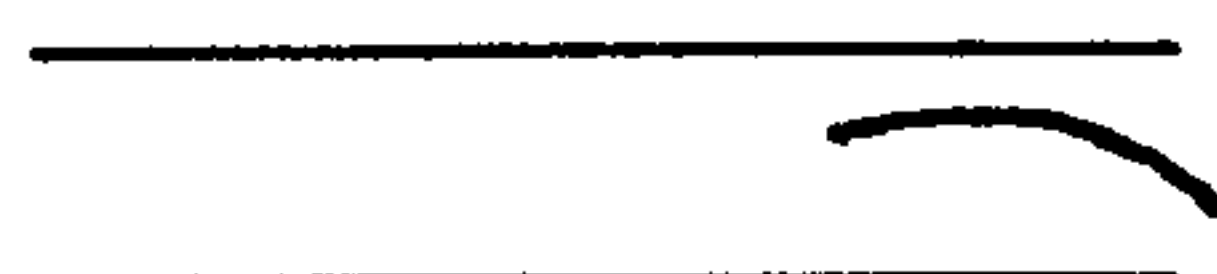
Single words.

Whilst therapists tend to show dispreference for overt demands for repetition in first presentation of a target this is not so apparent in repair sequences. Thus third position requests for repetition which are combined with an accentuated model provide clear cases for examination. The models in such instances constitute redos of the child utterance, i.e. adult repeats of the child's prior

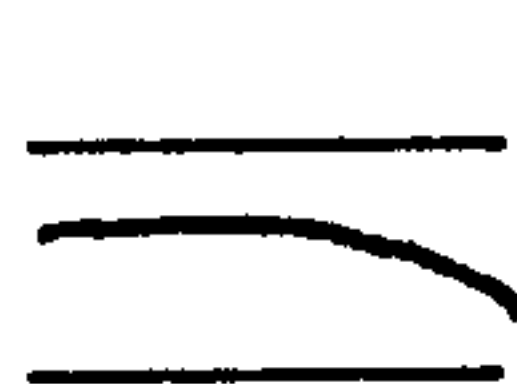
turn⁴. What such redos can do is to confirm the lexical content of the child try but at the same time display the phonetic inadequacy through highlighting a target version.

In the original extract, #2.1, the model in line 16 is obviously set up for repetition as it has an introductory 'try again'. The pitch is then similar to those models positioned before the child's try, being a fall from the middle of the range whereas the child's prior try had a marked rise-fall. The /f/ is also highlighted by the prolongation of the friction and the "ou" is also lengthened. The therapist accompanies the request with constant gaze, this having been established at the outset of the target sequence (line 13). She also keeps her head still, turned towards Bernice, thus enhancing access to perceptual information.

#2.1,16.



16.Th. >Try again< f:ou:ntain.



((very open articulatory posture. Keeps head still, turned to child))

17. B. f:ou:ntain.

Bernice follows this clear request with the desired repeat which builds on the positive work on the /f/ that she had already displayed in line 14⁵.

The demand for a repair may not always be so direct as can be seen from the next extract, where there is no such phrase as "try again" but instead a silent cued /f/ in the pause following the error on this phone (lines 2/3). The request for repetition is understood as the child makes the repeat (line 4) but only after the accented model. The same pitch features as are found in the above

⁴In this chapter they involve a correct version rather than a rendition of the child's erroneous try as in chapter 4.

⁵In chapter 5 it will be made clear that structures with 'again' routinely follow tries that show some positive work on articulation.

example are found here, there being a fall rather than an echo of the child's risefall pattern. The critical /f/ is prolonged and the syntactic context ('a') is removed. The child corrects appropriately and there follows a confirmatory repeat in a syntactic frame.

#2.9.2 *Th/Bernice Target /f-/ in 'fire'.*

1.Th. By the: what's this?



2.B. a [θaɪ]

(2.0)((Th.points to own mouth in /f/ position))



3.Th. [f::aɪ].


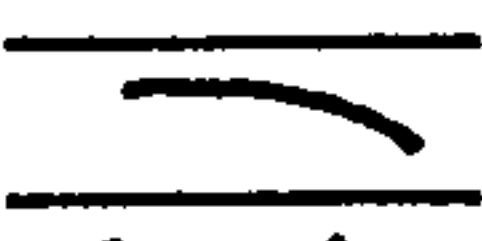



4.B. [f: aɪ].

5.Th. Very good, yes it's a fire.

Both of the preceding examples have an indication that a response was expected from the child either in the shape of an overt request ("try again") or as a cued initial phone during a lengthy pause as above. However the redoing may follow straight on with no invitation for repair preceding it, as in the next example. Critically, the redoing shares enough of the above mentioned features for the child to comply with a repeat. The therapist's redoing at line 2 is said emphatically with a lengthened target /s/ (not /sl:/) and the pitch pattern stands clearly in contrast to the child's being a midfall compared to a slight step rise by the child at line 1.

#2.26. Leon/Therapist. Target /s/ in 'sleeping'.

- 1.L.  sdog geeping.
- 2.Th.  s:leeping.
- 3.L.  s:leeping.
- 4.Th. ((nods)) That's right. Well done.

The therapist only repeats the part of the utterance that should contain the target /s/, therefore simplifying the task of imitation for the child. She does not seem to expect the complete /s/ cluster and in line 4 confirms his repair as acceptable with no further model. The same continuous gaze is seen throughout this extended repair sequence and in this case eye contact is established between adult and child, the adult being assured that attention is on her model. Here the therapist's gaze is not dropped until she nods after the completed repair at line 3.

With the redos described in #2.9,2 and #2.26 above (with no explicit repetition request) there is no model prior to the child's try. Where a model does occur as the initiator the redoing pitch pattern tends to reiterate that of this adult prior model. The initial level of a fall remains at the same height even if the child's intervening imitation has altered it. It is as if the adult were reinitiating the task, much as found with restarts (Local 1992). It is actually quite hard to find clearcut examples like this except later on in an extended repair sequence. Therapists tend to follow first imitations with some other type of repair request rather than a simple redoing. In this example the therapist clearly restates her midfall pitch with a slightly lengthened [ɪ], although the child's intervening try has had a flatter high pitch.

#2.27 E/Th. 2. Target /ʃ/ in 'ship'.

1.Th. $\overline{\text{ship}}$.

2.E. $\overline{[\theta \text{ɪ} p]}$.

3.Th. $\overline{[\text{ʃ} \text{ɪ} p]}$.

Multiple word models.

Multiple word redos are an important source of evidence for the specialised marking of words for imitation. They exhibit not only the skill the child has in extracting individual words from a phrase without the adult doing it for them but also that of repeating a whole phrase where it has been marked accordingly.

There is a tendency in the data for the target model to appear as near to the end of the therapist's utterance as possible. This minimises the interference from other speech, allowing the model to be heard in the clear and to be matched to the child's own try in next response. It is also true to say that there is a tendency to produce the models as single words, at least in the early stages of therapy, for each therapy target. Working with single words has the bonus of reducing the strain on the child's input/output systems so that they may focus on the target until such a stage as they are ready to cope with phrases.

Most of the data filmed deals with single word practice but in the rare instances where 2/3 word phrases are involved the therapist tends to put the key word at the end of the phrase. Also in a redoing the phrase may be cut to a single word in the first repair request, building up to the full phrase again in later stages of the repair sequence. An example of this occurs with #2.25 where the therapist chooses only to deal with the key error on the target /s/ in the second word of the phrase.

#2.25.1. *Leon/Th Target /s/ in 'sleeping'.*

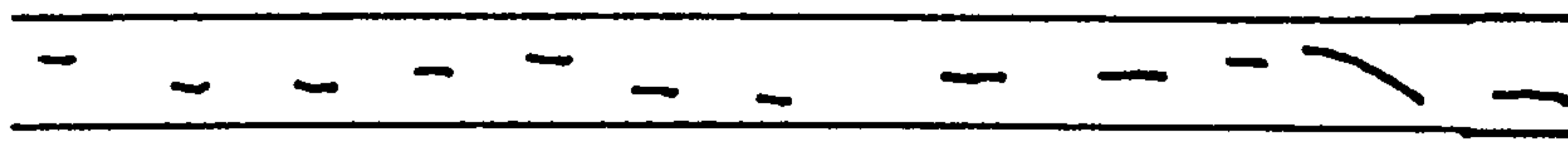
1.L. [sdog g i ptɪ].

2.Th. [s:l i ptɪ].

In the above example the target redoing is presented with minimal interference from other material and in this way gets rid of the problem of the child putting the /s/ at the beginning of the utterance rather than at the beginning of the target word. Of course this tactic does not actually address any misunderstanding of what 's/ in initial position' means to the child but possibly enhances his chances of getting the repair right.

However, strong evidence of the role of speech perturbation and prosody in the role of highlighting words as models comes from the few examples of multiple word models and redoings that are found where the target is not last in the phrase. Here the child is able to pick out a target even when it is embedded in a phrase and may in fact choose to repeat only that word. In the following example the child is presented with two words that begin with the target sound /w/. One word "worm" has already been presented several times with stress but this time a novel word, "wiggly", is introduced and has more emphasis in this utterance than 'worm' (although this /w/ too receives exaggerated forceful articulation, but to a lesser degree). "Wiggly" is also marked by a high falling pitch pattern. Significantly he chooses to repeat the emphasised "wiggly" and not the final word in the sentence, 'worm', which is treated as a given. Thus he can be seen to be responding not only to the speech perturbation that has been described but, when there are two possible candidates, is influenced by the prosody.

#2.28. Th/Leon.



((looking down to book)).....X.....,X.....

8.Th. That worm he can w:iggle. So (0.5) he's called a w:iggly w:orm

((L. looking at drawing)).....



.....X....

9. L. w:iggy.

.....

The fact that the adult's quick glance at the child is repeated precisely in time with "worm" as well as "wiggly" does not alter the child's decision to repeat just the one word. Thus eye contact may spark off a repeat but is not taken as a key marker of a possible target in the absence of other equally strong speech perturbation on each word of the phrase. This contrasts to #2.24,1 below.

What happens when more than one word is required to be repeated is different again. The child does not have the choice to omit parts of the phrase and the highlighting of the key segments is rather different in terms of pitch pattern and speech perturbation, each word receiving similar levels of stress. Here I will examine one such complex case. The following is one where the therapist is requiring the child (Leon) to put all the initial phones correctly in a phrase but is also expecting the complete phrase to be imitated from a syntactic point of view (this has been made clear from her description of the task). As Leon has quite considerable syntactic and semantic language difficulties they have gone through the components separately and are now at the stage of putting the sentence together. The therapist draws it altogether for him in a modelled telegraphic utterance (i.e. omitting function words).

#2.24.1. Th/Leon

((Th. looks at child & turns ear to him. Child looks down at picture.))

1.Th. L:ady ea:ting } br:ead =

2. L. [eatin'] ((child looks up))=bread

3.Th. And again. ((turns ear to him))

4.L. Lady eatin' bread

[\ eɪ i ʔ eɪ n ɹ eɪ g]

5.Th. You've forgotten the ber on bread!

As can be seen from the transcript the pitch pattern on line 1 is unusual for a simple statement. In fact the separate low rises on 'lady eating' are very like those that would be used when issuing a list to be completed. The final item in such a case is generally given with a falling tone. This occurs on 'bread' here. The stress pattern is rhythmic with three equal stresses falling on the initial syllables of each word. This highlights them all equally in importance and then the initial consonants are also lengthened. The weight of the stress in 'bread' falls on the vowel and this means that the /br/ does not sound syllabic.

At first the unusual 'listlike' pitch pattern may be linked with Leon speaking in overlap (line 2) as he appears to interpret the activity as one of sentence completion, the raised pitch of 'lady' being heard as a cue, and the /i/ of the therapist's 'eating' possibly being heard as a prompt. The therapist carries on with her model despite his overlapping try and he then waits for her to finish before imitating the final word. Leon finally successfully completes the task at line 4 with no

further model but omitting the initial closure for /b/ in 'bread', as the therapist points out. Significantly he repeats the whole phrase on request, the pitch pattern reflecting that of the adult in line 1, although rather flatter in execution. He has thus adjusted his initial interpretation of line 1 as projecting a sentence completion to one of imitation. Thus the differential delivery of multiple word phrases determines whether they are imitated as a whole or whether the child will extract one key target from a complete phrase.

b) Redoings as part of therapist closing utterances.

Whilst some adult repeats following child tries clearly stand as models that project imitation there are others that are designed as closing statements. Often the target word will still bear some marked emphasis but other words in the utterance (and/or possible nonverbal behaviour) combine to give a finality to the structure that precludes the option of further repetition. In all the following examples in this section some verbal evaluation is made by the adult and the child understands that the redoing does not oblige a repeat, making no move to do so. These are the clear cut cases that stand in contrast to the imitable redoings. Greyer areas with a less conclusive configuration of markers will be discussed in the light of these two extremes. Tarplee (1993) also makes detailed descriptions of these closing structures and my findings reflect hers in this matter.


In straightforward cases the target word is repeated by the adult and followed up immediately with verbal praise/confirmation. This position may also be reversed with the praise coming first and in these cases the redoing may be signalled as final by means that will emphasise its contiguity with the rest of the utterance. In certain cases a closing redoing may stand in isolation and it has been illustrated that where the pitch closely mimics the child's pattern it is not usually interpreted as projecting repetition. Additional 'closing' nonverbal behaviour by the adult may include lowering of gaze and moving fingerpoint to the next picture etc. However the similarity of these models to those that do require repetition results in some unexpected repeats by the children.


i) Redoings with overt evaluation/confirmation.


In the following case the closing evaluation, "shoot, lovely", is simple and follows the target. The child makes no attempt at a further repeat although her own version (line 3.) could have been improved upon.


#2.29. Th/Eliz. Target / / in 'shoot' and 'shop'.

((looking at book.....,X....

1.Th.  Right and you can say, shoot with a gun, can't you.
(0.5)((E.looking down)).....

2.Th.  shoot.
.....

3.E.  X.....
[gut']
.....

4.Th.  shoot, lovely.((turns to book))
,,X,,,((down)).....



5.Th. Where do you buy sweets? From a:

The therapist looks down as soon as she has heard the repeat. Elizabeth only glanced back at her at 4 as the confirming redoing took place and therefore can see that the adult's interest has returned to the book. The pitch pattern of the adult's redoing reflects that of the child and her own model at 2 (but lower initially unlike some redoings for repetition). The pitch pattern does not have the close mimicry that closing redoings standing alone typically have.

not have the close mimicry that closing redosings standing alone typically have.

Another straightforward case occurs in the next extract where the child gives a correct answer (phonetically and lexically) with no prior model. The following redoing starts slightly lower in pitch than the child's but otherwise matches it and then is followed by unambiguous praise. The /f/ is only slightly intensified and lengthened and the rest of the word echoes the child's emphatic style.


#2.30. Th/Bernice. Target /f/ in 'four'.

- 1.Th. This one tells you how old you are.
- 2.B.  four:.
< >
- 3.Th.  f:our:, that was very good.
< >
(0.4)
4.Th. And what's this coat made of?


It would seem that every opportunity is given for the child to hear the target repeatedly. The use of "that was.." determines that the praise relates to the phonetic target not the lexical choice as it would be an unusual phrase to use to refer to the informational correctness of the answer. The therapist moves on to the next item after the closing.


That the adult may clearly only be interested in the target sound is apparent when the confirming repeat cuts across the rest of the word once the target phone has been uttered. Such an overlapping repeat is unlikely to be set up for a repetition and is followed by praise, again using "that" to relate to the try. It should be noted that in this case it is a mother interacting with the child although at least one example with therapist/child exists as well.

#2.31 *Eliz/M.1 Target /f/ in 'food'.*


 ..((at pic)).....
 1.E. [du:d̥]
 ((M. looking at pic))...

....X....
 2.M. Try again.
,X..


,((back to book))
 3.E. f:oo:ɸ


,((back to book))..
 4.M. foo:d, that's good.

(0.5)

.....
 5.M. Right.
,
 ((moving her index finger across book))

Once again the pitch reflects the fall of the child's try but with a lower starting point. The mother then moves directly on to the next item with clear nonverbal signals of her shifted focus (point and gaze).

This following example is one where the redoing confirms lexical choice following a prior lexical error as much as modelling phonetic content. The use of redos as closing statements is made clear when they are seen in quick list drills where the adult rarely makes any comment on a correct answer before moving on to the next item. An expanded confirmation becomes usable where there is an error which is not to do with the target phone as occurs in the next two cases. The first example is part of a list where the therapist has not been using redos automatically. It is not until the child makes a selection error at line 3 (albeit a lexical one) and

self corrects it that the therapist confirms her second selection with a repeat. Thus the redoing carefully confirms part of her answer only.

#2.31.Eliz/Therapist, 4. Target /tʃ/ in 'church' and 'chip'.



1.E. church.

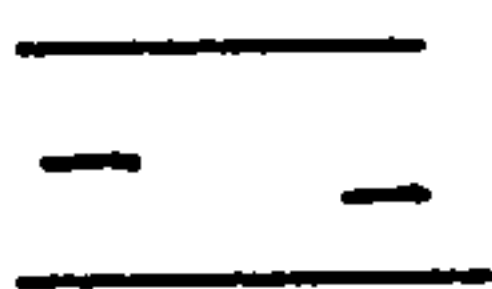
2.Th. That's it.



3.E. food-chip.



4.Th. chip, good girl.



5.E. monkey.

The repeat does not have any particular phonetic perturbation, thus not drawing attention to this aspect particularly. It has the mid/low fall pattern that the child used on her first answer "food" rather than the flat tone of the repair.


The second redoing which occurs during a list drill is given below, this time with the parent. Here too the mother has very rarely used a redoing or even any verbal response at all, moving to the next picture with a point. At line 1 the child has got the target /f/ correct but distorts the vowel incidentally. The redoing attends to that as well as confirming the answer as correct.


#2.33. *Elizabeth/Mother. Target /f/ in 'farm'.*


- 1.E. [fɔm]
- 2.M. Farm, good girl.
- 3.M. And this one?

Whilst redos following a child's try are commonly followed by closing remarks as in the above examples, there are rather fewer where the praise precedes the redoing. This position may act to give the model more weight, to be attended to, but they also are not interpreted by the child as requiring repetition. The following two examples where this occurs are ones where the child's answer articulates the target but where the rest of the word falls a long way short of correct. These therefore differ from the above extracts where the child responses have been for the most part correct.

#2.34. *Th/Bernice. Target /f-/ in 'feather'.*


1.Th. .hh f:eather.


2.B. .h f f:ae


3.Th. ((nods)) Good try. F:eather.

4.Th. Oh and here's another hard word.

It is interesting that the /f/ is still made prominent through length in the closing repeat (3) even though this phone was correct. Other mistakes are glossed over although the whole word is said clearly with marked secondary stress put on the second syllable which was elided in the child's

attempt. The pitch is a stepping low fall starting and finishing at a point lower than the preceding utterance and her own model. The therapist also looks back to the book, nodding at this point, not gazing expectantly at the child although she had the child's visual attention.

#2.34,1.

X.....

1.Th. .hh f:eather.

X.....

.....

2.B. .h [f f:ae]

.....

(.)

..... ,,((to book))...

3.Th. ((nods)) Good try. F:eather.

.....,,,,,,,,,


(1.0)

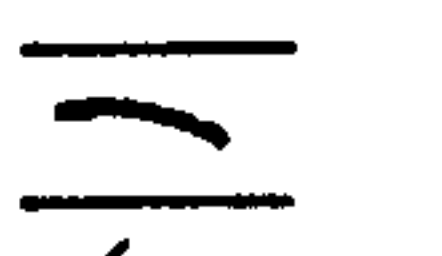
.....

4.Th. Oh and here's another hard word.

This is different to the example below. In #2.34 the praise once more precedes the remodelling at line 5 below. The circumstances are slightly different here in that the child has said the final /s/ in isolation following the request for this sound. The therapist at line 5 accepts this as completion of the initial try and rewards him for it. However she qualifies this by giving the complete word again for his attention.

#2.35. *Stuart/Th. 3 Target /-s/ in 'purse'.*

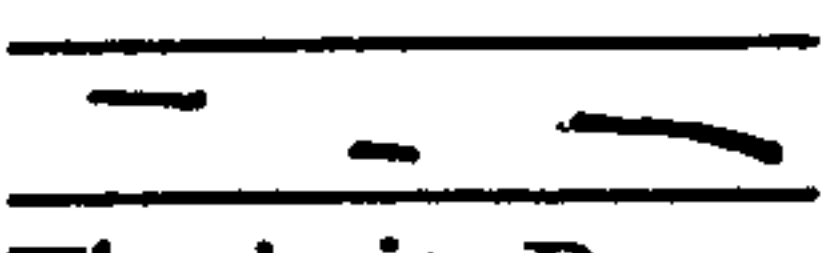

 ((book))X.....
 1.Th. purs:e.
 X.....


 ,,((to mum)),...X...
 2.St. purt.
 X.....,,((at book)).

.....X..
 3.Th. snakey sound?

.....X.....((looks down to book)).
 4.St. m:. ssss.

.....,,((back to book))..


 5.Th. That's it. Purs:e.
 ,,X.....((Th. nods.Child looks to book)),...

6.Th. And who's this? She helps you when you're in hospital.

The prosodic features of the redoing in 5 are very similar to #2.33 (line 3) above where the falling pattern starts lower than the previous praise or first model, so that it does not sound like a reinitiation. The therapist also moves her attention to the next case immediately.

Redoings following an evaluation have, therefore, been noted to have pitch patterns that reflect

that of the prior try and the preceding model but with a lower and/or narrower range.⁶ The absence of phonetic and suprasegmental perturbation in redos coming prior to any evaluation therefore contrast with these postpositioned redos where some perturbation does take place. The confirming nod, the fall of child-directed gaze and cessation of other nonverbal attention holders dictate that the postpositioned redos are not imitated typically.

ii) Redos as closings in isolation.

Not all redos are accompanied by overt confirmatory praise or other comment. When occurring in isolation we have seen already that they can prompt a repeat but they can also be seen to perform the action of closing a sequence. In some such sequences there appear to be clear and consistent markers that differentiate the options for the participants. However whilst there are these cases at either extreme there lies an area in the middle where the markers are not so distinct and either one of the participants may give a response that the following discourse treats as unexpected. Although the two parties may be more weakly coordinated in their sequential expectations these examples still provide strong supporting evidence for a configuration of distinctive markers, whether there be an obligation or simply an option to repeat or no expectation of a repeat at all. The clearcut cases of isolated redos being treated as closings will be considered first.

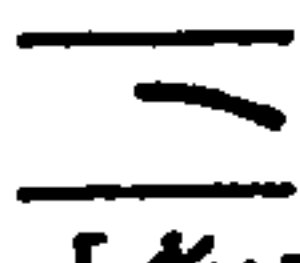
So far we have evidence, analagous to that of Tarplee (1993), that redos in isolation following a spontaneous naming have a mimicking prosodic pattern if they are to be interpreted as final. A shift in the adult's focus (gaze and gesture) has also been cited as significant in closing utterances. The following isolated repetition of 'ler' [lɚ] shows both these prosodic and nonverbal features at work. The therapist is modelling the phone /l/ with the simplest schwa vowel attached, as is necessary for the perception of the lateral release. The therapist's redoing at 3 is

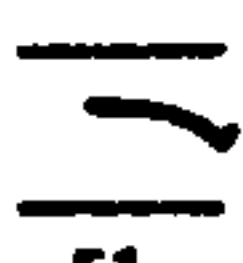
⁶ In chapter 5 the adult (mother) will be seen to use redoing/models in this position following praise as requests for repetition. These have a pitch range that more closely matches that of any prior model. In addition there are other differences in the prosody and phasing of the speech signal compared to any prior utterance when a repeat is not expected. Distributionally these post-positioned redos occur more commonly in sequences with initiating adult models than with test questions.


similar to the falling prosodic shape of the child's (and her own model) but with a lower starting point, as has been seen to occur on redos with evaluation affixed. The 'l' is slightly lengthened (velarised articulation) but not as much as in the original model. The therapist moves her head down and her hand into writing position as she reaches the close of her redoing.

#2.36. St/Th.3 Target /l-/ in 'ler'

((mutual gaze established))

1.Th. 
[ɹ:ɹ].

2.St. 
[lɹ].

3.Th. 
[ɹ:ɹ].

((moves hand back to write))

(6.0)((Th. writes))

4.Th. Okay.

To all intents and purposes these behaviours echo those accompanying redos with overt positive evaluation (#s2.29-2.33) And likewise the child makes no attempt to repeat in what is a long pause, following the redoing.

A case of an overlapping confirmatory repeat was given before at #2.31 and another example is given below, this time in isolation without any added verbal praise.

#2.19,1. *Eliz/Mother 1. target /f/ in 'feet'.*

((mother looking at child and E. at book throughout))

1.M. What's that?

—
—
—

2.E. Toe.

(2.5)((mother maintains point at pic. + gaze at child))

3.E. Feet.

—
—
—

4.M. fee:t.

—
—
—

((looks down))

5.M. And that one is?


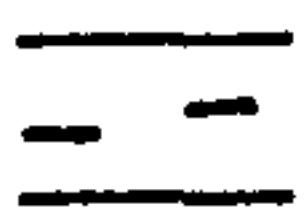
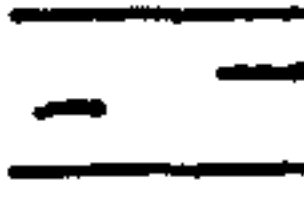

Line 4 is still understood as a closing that confirms either the semantic and/or phonetic content despite the absence of any comment. It shares the features of having a falling pitch that reflects the child's but starts lower than previous turns (there is no prior model in this case.). There is no lengthening of the target sound, only slight lengthening of the stressed vowel. The adult also drops her gaze as she confirms the utterance. Thus this example shares the characteristics of the redos that occurred with an evaluation as did #2.36 above.

The features of a redoing alone, set up as a closing and not repeated by the child, are clearly contrasted to those where repetition occurs. In the latter the body language of the therapist is very different in that eyecontact remains on the child and no other moves are made until the repair has been completed. The pitch of the redoing is used contrastively as, where a child repetition occurs, the pitch pattern of the adult redoing typically reiterates that of their own prior model in initiating pitch and range of fall rather than using the lower fall of a confirmatory, closing redoing. Redos overlapping the very end of a try have also not been found where child repetition follows.

Where there are no overt verbal markers the line between what is considered a request for repeat

and what is not is very finely drawn, a minimal difference in adult behaviour prompting a different child response. This is clearly seen in #2.37 where the child is initially prepared to make an imitation of a repair model but then drops her preformation of the initial phone as the sequence develops. This decision would seem to be based primarily on the adult's nonverbal behaviour as this is what distinguishes it from other similar sequences where repetition occurs. In this sequence Elizabeth mispronounces 'finger' following a cue for a semantic alternative (line 2). The adult then gives an augmented model in next turn (line 4). This adult model at line 4 shares many attributes with other key words set up as models, having a prolonged target phone and a midfall pitch in contrast to the child's stepped rise pattern. Like #2.9 and #2.26 (where a repeat followed) the redoing has contrastive pitch and lengthening of the target sound where the error occurred in the child's prior.

#2.37. Elizabeth/Th. Target /f-/ in 'finger'

- 1.E.  X.....
hand
..((M at book)).
- 2.M.  X.....
or a: ((wiggles finger in air))
.....
- 3.E.  ..
hinger.
.....
- 4.M. ((to book))
f:inger.
..,,X....
(E. puts mouth into /f/ position)
(.)
- 5.M. ((mother moves her point from one picture to the next.)) What's that?
[Child drops /f/ artic & looks to book])
- 6.E. Toe.

However although the mother looks at Elizabeth while the latter makes the semantic repair she drops her gaze whilst giving her the corrective model (line 4) and follows this swiftly with the move of her finger to the next picture. Elizabeth meanwhile has looked away very briefly whilst holding an /f/ posture, in preparation for a repeat. This glance away is initiated as the mother gives the model but as she turns back her mother is moving on so she drops the /f/. In this example then the two participant's expectations become co-ordinated and the interaction continues unproblematically.

2.V. TO REPEAT OR NOT TO REPEAT? NONCOORDINATION OF EXPECTATION.

The following discussion hinges on whether or not the child decides to take up the next turn following an augmented model of the target. Whilst many of the signals that betoken the take up of next turn may be there it does not necessarily follow that the adult requires such a repeat. Conversely when the child does not take up the option, having treated the situation as 'optional' rather than 'obliged', he/she may find that proves unacceptable. The subtle signals that define the adult's intentions are thus not always entirely transparent for the child. Whilst the child's response seems entirely appropriate taken in sequence, the adult's follow up can reveal that it was not quite what was expected or required. This section will start by noting that models that are not designed for imitation can occur on first presentation not just as a response to a child's try. This is important in that it shows that the children can read the signals appropriately when they are clear without them being in a possible 'closing' position.

It is not just redos that occur as augmented models with no expectation of repetition. This also occurs with key words on first presentation. Aspects of speech perturbation can be present but other signals are absent. Obviously, as in any conversation there is some degree of choice as to the take up of next turn. It will be seen in later instances that a child may be led into repeating a model when it was not required or, conversely, into remaining silent when repetition is expected due to the presence of some but not all of the features discussed in previous extracts. The degree of option as opposed to obligation becomes clear through the adult's reaction to the child. The presence of such a reaction is crucial to warrant argument in support of certain behaviours being critical in engendering imitation.

There are straightforward cases of a new target word being presented and not being repeated by the child. The context of new work being prepared and discussed is slightly different to that where 'practice' with established materials is the obvious point of any talk. Thus in therapy talk exaggerated perturbation of speech flow may well occur but sometimes this is only a sign that a word is of note, not that there is an obligation to imitate. The therapist in the next extract is seen to use models highlighted with speech perturbation on a number of occasions. The adult is

aiming to present a number of /w/ initial words. In this example she uses the type of simple structure that would often be used to present a new word for imitation; "It's a worm". This is followed by a micropause which could have provided the child the opportunity to take up next turn, perhaps in the form of imitation of the highlighted model. This does not happen and at line 3 the therapist asks him to verify that he knows what a worm looks like, which he does. She does not seek a repetition.

#2.28.1. Leon/Th. Target /w-/

1.Th. ((selecting pens from case)) I know that you'll have seen lots of them in the garden.
((1.0 starts drawing and child looks to page as she does so.))

2.Th. {((looking at book))....
It's a w:orm.

(.)

X.....

3.Th. Have you seen a worm?

X.....

.....

4.L. Yes.

.....

,,,,,,,,,(to book),,.....

5.Th. >There we are<. And they're brown aren't they like that.

.....,,,,,,,,,,,,,,,,,(to book)

.....

6.Th. > That's a w:orm<

.....

(0.5)

.....

7.Th. a worm.

.....

.....X,,,,,,,,,X,,,,,

8.Th. That worm he can w:iggle. So (0.5) he's called a w:iggly w:orm.

X.....

.....

9. L. w:iggy.

,,,,,,,,.....

10.Th. herherher.

Another augmented model is then proffered at line 6 followed by another pause and another repeat at line 7. Although the child could have filled the pauses with an imitation of the model he does not do so and the therapist seems quite content with this as she makes no follow up that insists that he does so. Her only response from him thus far has been to a direct question during which she glanced up at him quickly from her drawing. It is not till she actually combines an extended /w/ with another quick glance at the child that she gets a repeat of the model "w:iggly" (line 9). At the end of the utterance she looks down to continue drawing immediately, so that unlike the times when gaze has been continuous there does not seem to be any sense that a careful imitation is expected⁸.

The therapist does not seem particularly interested in his repeat giving only a minimal acknowledgement through her laugh and not evaluating it in any way. The child seems to have taken up the turn transition option but it would seem it was not obliged by the therapist's prior. The turn was accepted as appropriate by the adult but not as obliged. This lack of obligation is not always extant as is revealed by cases where a lack of response on the part of the child receives further prompting. Cases are also to be found where the unexpected nature of the child's repeat results in it being ignored by the adult. It would seem that the adult's intentions are not always made transparent in their use of models.

The key factor which sparks off a repeat here (#2.27) would seem to be the glance from the workbook drawing to the child. However this extract was previously discussed as an interesting example of a multiple word model as it is of note that he does not repeat the whole phrase which would include other novel material just presented at line 8. A glance up occurs precisely timed with each of the two words "wiggly worm" but does not engender a repeat of the whole phrase, the prolongation and stress on the initial phone occurring more predominantly on 'wiggly' must therefore be the key factor here. Thus we can see that there is no one verbal or nonverbal feature, such as augmented modelling, stress or directed gaze that engenders a repeat but rather

⁸For details of pitch in lines 8/9 see #2.28. The models at lines 1,6,8 have similar mid/high fall pitch. pp 96.

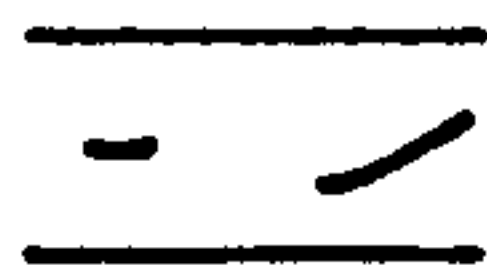
a configuration of behaviours that is interpreted with regards to the prior discourse. In the following discussion I will show how certain behavioural configurations may lead to a child not repeating when it is expected or, vice versa, giving a repeat when not obliged to do so.


a) A case of repetition obliged but not given.

As can be seen from prior examples pitch and nonverbal behaviours such as gaze play a critical part in setting up a target word as a model to be imitated, whether on first presentation or in a repair sequence. To some degree repetition or repair may be optional as in #2.28,1 above. In other instances a failure to provide the repeat will be followed by further prompts, showing that in that case the imitation/repair was expected. This situation is illustrated in the next extract. The signals that imitation should follow the redoing seem particularly strong in this extract being a combination of speech perturbation, fixed gaze, cessation of body movement and contrasting pitch. This is supported by the strength of the adult's reaction to the child's nonparticipation.


#2.38. Elizabeth/M.3. Answering a test question. Target /f-/ in 'fish.'

((Mother looks at E. and E looks down throughout))

1.E.  One [fiθ].

2.M.  fish::
(0.8)

3.M. >Say it again<.

4.E.  [f:fεθ]

Here, at line 1 Elizabeth misarticulates the final fricative. She has otherwise answered the test question "How many are there here?" correctly and has used a slight rise on the final word as

has been noted on first tries before. Her mother repeats the target with a prolonged final segment and with midfall pitch, in contrast to the child's rise. Elizabeth's mother has thus given a classic model with an extended target final segment and has then left a pause to be filled. She has looked at Elizabeth throughout since the initial question and answer and ceased other movement. There is no move from either party to do anything else, Elizabeth continues to look down and pick the glue off her hands. When the mother appears to be getting no response from the child, even in the shape of eyecontact she prompts Elizabeth to have another go (line 3). Thus her expectations were clearly that the child should repeat the model, there is no option to remain silent.

The pause could arise due to Elizabeth's choice not to imitate as much as an inability to do so. There is little likelihood that she did not notice the adult repeat with so little else going on but as she was looking down it is possible she was not aware of the adult's fixed gaze and cessation of movement which add to the strength of the repeat request. Elizabeth replies in overlap once an overt verbal request has been started. Here repetition was certainly not optional and the repair sequence continues until a satisfactory conclusion is wrought. Thus the signals may not always be clearcut for the child and the decision to repeat or not may not always tally with the expectations of the adult, as will also be seen in the following examples.



b) Cases of unexpected repeats. Whatever next?

There are occasions when the child gives an unexpected imitation of the adult's prior. Obviously since so much of the task work involves imitation it is a safe option for response. However there must be some local factors that spark off such a response in each case. From the examples set out below it would seem that such instances often share many features with those where models are definitely set up for imitation.

In the following rather bizarre extract there is clear evidence that the adult did not want an imitation of the model. Imitation is however projected by the configuration of speech perturbation, constant gaze at the recipient and unusual pitch which overrides the syntactic


structure in this context. The task is one of auditory perception and the therapist is actually posing a yes/no type question regarding whether she is saying the target word accurately. However the child unnecessarily imitates the final target word in next turn and then nods. That the imitation is not the expected response is shown by the therapist's next query (line 3) which ignores the phonetically correct imitation and tries again with "Is it right?" to get a straight confirmation. This does not attend to the fact that Bernice has nodded appropriately. (It should perhaps be noted here that the imitation does not sound like a form of rumination that might occur in such a position but has all the attributes of a carefully delivered imitation for the adult's evaluation.)

#2.39. Th/Bernice. Target /-f/ in 'fur'.

- 
- X...(th. looks at child throughout from here))
- 1.Th. Is this .h{f:ur?
 [((nod))
- 
- X..((looks at adult from now on))
- 2.B. f:ur. ((nods after repeat))
- 3.Th. Is it right?

The adult has marked the target word for attention by accentuating the /f/ with an intake of breath prior to it and a lengthening of the first segment. She has also looked towards the child as she takes the inbreath and this gaze is maintained throughout the extract. These factors in themselves are common to most of the models for imitation. Added to that, although the structure is a question the pitch pattern imposed on the final word is a marked fall and this has not been the pattern used with all the examples within that task. For instance only seconds earlier the therapist had asked;

#2.40. Th/Bernice.

- 
- Th. Is it the, .h hair?

A rising pitch had been used as would be common with his type of question. In this case the child answers appropriately with a nod. Therefore the child could be justified in imitating "f:ur" when it had been posed with unusual pitch and other features attributed to a model. She realises that a confirmatory response is actually required and nods as well.

In the next extract the child (Leon) imitates the target word but the overlap of this with the therapist's comment (following on from her introduction of the new model) displays clearly that the imitation was not expected. The circumstances will be shown to make the imitation appropriate and although the therapist could still have chosen to respond to it (responses in overlap are still capable of being attended to) she prefers not to. She thus makes no comment on the repeat's correctness but continues to discuss the word itself, pointing to her face to accentuate the articulatory information (lip rounding for /w/) of which he has already displayed knowledge.

#2.41 Th/Leon.



((looks & points to window)).....X.....

1.Th Now then, if we turn round we can see the w:indow

.....X.....((eye contact established throughout))



2.L. w:indow

3.Th { Look Leon.
((pointing to her own face))

4.Th. That's a wer word isn't it?

((nodding))

((Leon nods))









Again the key word 'window' has been stressed and has an extended initial phone. The pitch on the target word is a rise-fall which has been built up to with deliberate 'worktalk' delivery. In addition to these the adult's gaze was initially at the window as she pointed to it but she turns to Leon just before she says the target word. This configuration of behaviours was enough for the child to assume that imitation was required. It would seem that the therapist's body movement was not simply to highlight the model through direct gaze but also to display the visual aspects of the articulation with added gesture in next turn (3).

In the above cases there has been little doubt that the therapist was setting up a word for special attention as a target although no repeat was required. However this is not the only type of interactional dilemma that can arise for a child in the realms of modelling and imitation. In one such instance the child interprets the target model as a cue for phrase completion. This happens twice before he correctly imitates the first word of the phrase as given. Attributes of the adult

turn obviously resemble those of a cue as much as a model for imitation.

#2.41. Th/Stuart.3. Target /k/ in 'take care'.

((mutual eye contact throughout))

- 1.Th.  Take care.
- 2.St.  [tʰeɪə tʰɛə].
- 3.Th.  Oh. Watch me, [tʰeɪkʰ]
- 4.St.  [tʰeɪə].
- 5.Th. ((shakes head))  say [tʰeɪkʰ].
- 6.St.  [tʰɛə].
- 7.Th.  Say [tʰeɪkʰ]
- 8.St.  take.

There has been a model of the entire phrase "take care" for Stuart at line 1 and he complies with this appropriately except for the incorrect pronunciation of the second word as 'tare'. In response to his poor pronunciation the therapist decides to break the phrase down into two components, giving the first half "take" as a model (3). The utterance is said carefully with wide movement of the articulators and is divided off from the prior talk by a glottal stop. However there is no real distortion of the articulation. The pitch pattern is the same rise as occurred when the word was part of the whole phrase in line 1. The unusual rising pitch is explicable if the phrase is to be imitated in a listlike manner as occurred in #2.24 but is also commensurate with a phrase

completion task. Stuart's completion of this phrase with 'care' ('tare') does not sound out of place but it was not what the adult wanted as she rejects it and more explicitly uses "say" in next turn to prompt the imitation of the first part of the phrase. As "take" is said identically in terms of stress and prosody however it is treated the same by Stuart. In summary there is little evidence to warrant a repeat as being more appropriate than a completion except in terms of the overt instruction, "say".

2.VI. CONCLUSION.

This chapter has sought to describe how target words are set up both as models for special attention and additionally for imitation. There is a dispreference on therapists' part for the use of "Say X" in the presentation of new material; instead other ways of signalling key words within a meaningful context are used. Whilst this dispreference is not so strong in repair, redos are routinely set up for special note without any overt verbal marking. Modelled words are routinely responded to by the child listener through a shift in behaviours such as gaze and other displays of attention and sometimes through imitation. Imitables are usually clearly delineated phenomena, separate to other targets. Imitation is only one option from a number of possibilities for the child in next turn and it is the adult response to that turn that denotes whether imitation was expected.

Target words and phones are made to stand out from their context through a series of verbal and nonverbal markers. Any immediately preceding talk is typically delivered in a rhythmic way that prepares for work to come. The target word itself is divided physically from the surrounding utterance by a glottal stop or intake of breath and then perturbation of the normal flow of speech occurs within the key word in order to differentiate any individual target phone. Any syntactic framework is routinely given special treatment with test questions that do not have verb/number agreement with the target's lexical referent and the removal of all syntactic context from both novel words and redos, the context only being restored in confirmation. Any body movement accompanying the presentation of a keyword is minimised and gaze is typically either already on the child or its movement to the listener timed to coincide with the target word. In contrast to these features novel words and redos that are not set up as of special note typically show no

disturbance of syntax nor any marked division from the surrounding context by phonetic or supralinguistic means.

Not all clearly differentiated target words and phones are intended for repetition. When models are being set up for imitation they display a number of modified and additional behaviours. The clearest examples of models for repetition are those that constitute redos of the child's prior utterance with a request for repeat (there being few if any cases of request for repetition with a first presentation of a model in therapist data). In such cases the adult's redoing commonly displays a pitch pattern different to the child's try, the syntactic context is reduced and the redoing is accompanied by child orientated gaze extended until a response is forthcoming. Where there is no overt repeat request a redoing in isolation can still be responded to with imitation where the extralinguistic behaviours reflect the above configuration. Where there has been a prior model the adult's pitch will commonly echo this, as if making a reinitiation. Multiple word redos have provided valuable evidence that children can extract a single word from a phrase when it is differentiated through stress over and above other markers such as gaze. Whole phrases are repeated where the words receive even marking.

In contrast to the above there are redos that clearly function as closings, whether overtly marked with an evaluation or not. The nonverbal behaviour of the adult generally marks a shift in focus. Where a redoing appears in isolation the perturbation of the speech pattern and the pitch mimics that of the child's spontaneous naming and commonly uses a lower pitch range in confirmation of an imitation post model. Interestingly overlapping redos have only been found in the therapy work data and not in that of talk during other activities, the target phone being left in the clear in such cases.

There are clear cases of isolated models and redos being interpreted as imitables and closings in line with the speakers' expectations. However cases also arise where there is a noncoordination of expectation for the conversational partners. The child interprets certain behaviours (for instance prosody overriding syntactic content) as signalling the need for imitation when there is none, giving ample evidence of the illocutionary force of gaze, gesture and prosody. The acceptability

of an imitative response may depend on the context. Where new work is being prepared and the therapist's attention is between the child and the book then the contribution may be welcome but not essential. When repair is involved then all attention may be on the child until a correct imitation is established.

Imitation is a popular and useful component of the early stages of therapy. However as will be illustrated in the next chapter the phonetic distortion that the therapist produces in order to highlight the detail of a target word can result in some weird and wonderful child versions. The child does not put the same gloss on the dissected phones as an adult with considerable theoretical knowledge. In the first extract of this chapter the child was seen, in the final stages, to go further than the adult model and extend the initial labiodental posture throughout the entire word. Phonetic matters can become completely removed from the context of 'real' speech and any verbal and nonverbal behaviour reach unexpected prominence as the child seeks to imitate what appear to be the significant components of therapist action.

CHAPTER THREE.

INTERACTIONAL SOURCES OF PHONETIC ERROR

In the last chapter the interactional mechanics of modelling and imitation were described in some detail. In this chapter the subject will be broadened to encompass the subject of possible interactional sources of phonetic and phonological error¹ that occur while the child is engaged in this type of activity.

3.1 SOURCES OF PHONETIC ERROR IN CHILD SPEECH.

As was outlined in Chapter 1, therapy assessment and treatment is predominantly taken up with deriving the individual child's phonological system. These regularities are obvious in their connected speech and the aim of therapy is to increase intelligibility by bringing the system into line with that appropriate for their age. Therapy research based on cognitive views of phonological development emphasise the child's role as an active learner. The incorporation of an adult target sound into the child's system is not an all or nothing occurrence but is reached through a number of experimental stages (Ingram 1986). Grunwell (1992) describes four basic processes of phonological change; those of stabilisation, destabilization, innovation and generalisation. The aim of therapy is to initiate and guide the child through these changes and the way error and repair is handled is a fundamental part of this process. The speech errors which the children make during therapy are often predominantly seen in phonological terms. The therapist is aware that various internal (cognitive) and external (contextual) factors affect the likelihood that a child will make a phonological error, including the complexity of the task context (not only in phonological terms), overloading of the phonological system (Crystal 1987) and limits of concentration and memory etc (for an overview of such topics see Van Kleeck and Richardson(1986)). These are taken into account in task design. However she/he may be less aware of the interactional consequences of her turns at talk on the child's local phonetic output and subsequently the possible effects on longterm learning..

¹The definition of 'error' is one that is warranted by the adult's treatment of the child's try in next turn, for instance being followed by further modelling or other repair initiator. The acceptability of the try is dependant on the therapist's evaluation and is not judged against the adult phonologically correct target version.

In this chapter I am predominantly concerned with error arising during model/imitation and similar repair sequences. Various authors have rightly investigated failure to imitate accurately in cognitive terms. Stackhouse and Wells (1993) state how modelling/imitation tests the child's ability to articulate accurately without necessarily having to retrieve a stored phonological representation. Failure to imitate can therefore reveal a lower output problem, although additional discrimination tests can link imitation problems to a deficit of encoding of phonological representations. Whilst it is clear that underlying cognitive mechanisms are affected in speech disorders it is how much the underlying deficit may or may not be made explicit through a child's interactional behaviour that is of interest here. The roots of some phonetic and phonological error may actually lie in the way therapy talk has been constructed.

Not all the speech errors produced are those derived from the child's phonological system. Individual phonetic realisations of the target phone may be part of the experimentation and transitional destabilization mentioned above. Leonard(1985) noted a broad range of subtle (and sometimes imperceptible) phonetic behaviours in phonologically disordered children across various bodies of data. Some had readily detectable systematicity and some did not. Explanations were given which included contextual factors as well as the child's own creativity in tackling phonological problems. In this chapter evidence is given that the derivation of some errors, including additional segments, is an interactional one. The children, despite their difficulties with phonetic material are seen paradoxically to make finely tuned imitations of certain features of the model but not necessarily those that are crucial to an accurate execution of the target. This chapter will focus on interactional factors that contribute to the production of one cluster of features rather than another.

Considerable evidence comes from the child's responses following augmented models (with exaggerated stress, extended segments and other marked prosodic features). It will be argued that the multiple target versions the therapist uses are influenced by her theoretical knowledge, something that the child does not have access to (including that of spoken/written equivalence). Therefore the extraneous phonetic features of the model, created through speech perturbation, of a chunk of speech isolated from normal linguistic and interactional context, can be as salient for the child as those more crucial to accurate execution.

3.II. THE ANALYSIS OF AN INCIDENT; PRACTISING A SINGLE PHONE.

a) the data

Most of the material used will come from one of the subjects, Stuart, aged 4.0, attending nursery and due to start in reception class at 4.6 years. This is a factor worth noting as it is unlikely that he will have received any systematic teaching of reading, letter names or the idea of phoneme/grapheme correspondence in general, a subject that arises in the course of the session and becomes a possible source of error. This is the first session and the therapist had only seen him once before for assessment. Therefore this is the first real exposure to therapy talk.

Stuart had three predominating phonological simplification processes in his speech that the therapist felt it necessary to tackle.

i) Problem with placement of the articulators. He 'fronted' most back sounds i.e. sounds produced with the back of the tongue in adult speech e.g. /k,g/,(these are velar plosives, where the air flow is stopped) These were instead produced with the front of the tongue against the alveolar ridge, behind the front teeth e.g. as /t,d/. Therefore words such as 'key' would be pronounced like 'tee', 'go' like 'dow'. Actually in final position in words many velars were produced appropriately.

ii) Problem with manner of articulation. Most fricative sounds (those produced with the airflow constricted to produce friction) were 'stopped' and treated as plosives. Therefore 's' was pronounced like 't', 'z' became 'd'. Words such as 'sea' were pronounced like 'tea', 'horse' as 'hort' and 'zoo' like 'doo', 'buzz' like 'bud'.

iii) Problem with reduction of the number of phones represented in the word when compared to the adult form e.g. 's' clusters reduced to one element. Therefore words such as 'star' → [t^har], 'spoon' → [p^hoon] etc.

The main extract around which much of this chapter will revolve, is taken from the first treatment session that Stuart undergoes following assessment some weeks previously. The therapist's main aims in this session were:

a) Establish the child's ability to auditorily discriminate between /t/ and /k/ using single phones, thus not in the context of any 'real' word that might lead the child to filter through

their own rule system, as well as monosyllables, where word meaning and the child's established lexicon may be a complicating factor.

- b) Establish his ability to imitate and produce spontaneously models of the above single phones (again at the simplest level where their own version of words should not interfere); and monosyllables (predominantly consonant followed by vowel e.g. 'car' to minimise articulatory interference from any other consonant).
- c) She later moves on to work on /s/ but this does not affect the main extract.

b) Analysis of the main extract.

This is an interesting lengthy extract that covers a number of bouts focussed on an isolated phone, /k/. Looking at therapist turn designs there are multiple variable models from the therapist that are followed by a variety of imitative responses, matched on at least one phonetic feature. This passage illustrates that modelling is not always the therapist's first choice of stimulus as she often uses requests and prompts that give only minimal cues before resorting to a full model. Also the attention of the reader is drawn to the consistent use of visual information as an adjunct to articulation. This involves the use of gesture and exaggerated articulatory and physical postures. The child will be seen to achieve acceptable versions of the target almost immediately but then the trajectory of his tries moves away from these acceptable tokens. Also of interest are contrasting episodes where the child is clearly 'doing phonetic talk' with obvious displays of effort and those where a naming task is performed with no apparent explicit phonetic work being done.

The extract has been divided into three contiguous sections, indicated by the dotted lines. The initial description and discussion will centre on contrasting sections one (lines 1-13) and the middle section (lines 14-26), which will be described most fully. To set the scene, line 1 comes only a few minutes into the session following non-therapy talk about school. After introducing the workbook the therapist draws a picture of a gun and describes it as making a "special sound" (line 7).

²the definition of a bout is crucial to analysis in chapter 5. Examples of division of task bouts is given in the appendix 2.

#3.1. Stuart/Th. First session. Target sound isolated /k/.

1.Th. Now let's see if you can tell me what this is.

((draws)) (1.5)

2.Th. Do you know what it is?

3.St. [v d v n]

4.Th. That's right it's a, g:un, very good.

((+finger under chin + glance up to Stuart + head back))
((Stuart looks from book to her face))

5.Th. .hh now <do you know why> I've drawn a picture of a gun?

6.St. No.

(.)

7.Th. Because it makes a very special sound when it shoots.

(.)

8.Th. It makes a sound a little bit like this. Watch me.

((taps finger on lips))
((St. gaze to finger & up to face))

9.Th. *h [k^h] (.) *h [k^h] *h [k^h]
[((finger under throat and holds head up, eye contact held))
*swallow movements

10.Th. Can you do that?

11.St. [k^x]

((finger under chin))

12.Th. Well done, good try. Can you try it again? = ((=open mouth + finger under chin
chin+smile))

13.St. [k^s']
↔ ((held either side of talk))

14.Th. Good boy. So: this $\left[\begin{array}{l} \text{is what the 'ker' looks like.} \\ \text{((draws the letter))} \end{array} \right.$

(.)

15. Now every time you see me draw one of those, $\left[\begin{array}{l} \text{((looks to St.))} \\ \text{se, can you say} \\ \text{that very funny sound? ((looks back to book))} \end{array} \right.$

16.St. ((nods and glances back to book))

17.Th. Yes. Okay. ((draws another k)).

(2.1)

18.Th. There you go. $\left[\begin{array}{l} \text{What sound is it?} \\ \text{((immediate open mouth posture))} \\ \text{((Th looks up & puts finger under chin. St's gaze between face & finger))} \end{array} \right.$
(0.8)

19.Th. $\left[\begin{array}{l} \text{((nod))}^p [k']^p \\ \text{((+ finger under chin))} \end{array} \right.$

20.St. .h [t^hə]

21.Th. .h [k^h]^f

22.St. .h [t^h]

23.Th. put your $\left[\begin{array}{l} \text{finger underneath there.} \\ \text{((gestures on herself + head back))} \end{array} \right.$

24.Th. .h $\left[\begin{array}{l} \text{ff} [k^h] \text{ff} \\ \text{w} \end{array} \right.$

25.St. $\left[\begin{array}{l} [t^h \partial] \\ \text{w} \\ \text{exolabiodental stricture} \\ < \\ \text{((+ finger under chin gesture))} \end{array} \right.$

26.Th. Okay:
(1.0)

.....

Goodwin (1981) and here it is adapted to special circumstances . This production is in contrast to the production of "gun" at line 5 where it remains unmarked and integrated into the utterance.

At lines 8-9 the therapist gives three distinct models of the 'gun sound', each an aspirated /k/ with no vowel attached and each separated from each other by an intake of breath. The examples are each accompanied by a gesture implicitly emphasising a 'back/velar' articulation, namely touching the finger to the throat and tipping the head back, without loss of eye contact. The need for visual attention to accompany the auditory had been stated by the therapist at line 8 through "watch me", actually drawing attention specifically to her mouth by tapping her lips. The child complies by focusing his gaze on her face and no further reference is made to draw him back to the book until line 14. Stuart, on request to "do that" produces a velar plosive (line 11) with the accompanying gesture but one that differs from the adult model in being 'ejective' (i.e. using only a glottally initiated airstream rather than the pulmonic which is generally used for plosives in initial position in English) with some affrication.

At line 12 the therapist praises his effort specifically as being "good" and then requests another attempt, without producing a further model, using a direct "Can you try it again?". However she does cue him *silently* immediately following her request by taking on a posture that she has used herself when uttering the target; holding her head up, placing her finger under her chin, lips tensed and open and slightly spread in a smile. He repeats his ejective with more widely spread lips (line 13) and, possibly as a result of this posture, the attempt is slightly more palatalised (body of tongue higher and forward in the mouth). The lip posture could be attributable to imitation and this factor will be discussed later in the chapter.

Thus at line 14 the therapist brings the first bout of the task to a close with unspecified but animated praise "Good boy" and goes on to a further related topic, the name of the 'letter' (grapheme) 'k'. The presentation of 'k' here stands in contrast to the marked models of line 9. As will become clear through the description it is not set up as a model, there being no perturbation of the speech flow and no attempt to get Stuart's visual attention. Whilst extending the word "so" the therapist looks rapidly at the child and then down to the page

where she is about to draw. Thus she is no longer directing the child's attention to her face and he maintains gaze at the picture throughout until 18. The letter is written (but described as 'drawn' at line 15) under the picture of the gun and Stuart is told this is what "the ker" looks like. When looked at in detail the auditory model for the letter differs from the original environmental "gun" sound by being only lightly aspirated and attached to a vowel [k^hə] as opposed to [k^h](+open posture). The link between these exemplars (notably that linked to the gun picture and that with the letter) is made by drawing them on the same page and by the therapist's use of "the ker" rather than the indefinite article 'a', the former more commonly used in this position to denote something of previous mention rather than new information. No further reference is made to the gun and the child is asked to make "that very funny sound" whenever he sees a letter 'k' ("one of those") being drawn. The use of the word "sound" emphasises the auditory quality of the target and nowhere is the link to the written word explicitly stated. Indeed the 'ker' is described as 'drawn' rather than written (line 15), highlighting it as an object picture rather than symbol. Thus although the topic has been extended into what, for the adult, is the linguistic area of the written symbol system, this link is not emphasised for the child at this stage.

The parameters of the next task are laid out by the therapist at line 15 and gain immediate assent from Stuart.

#3.1,1.

15.Th. Now every time you see me draw one of those, can you say that very funny sound?

16.St. ((nods))

There is no repetition of the phone in question but the anaphoric reference of "those" is linked clearly to the symbol 'k' through proximity in sequence and the therapist's gaze. She looks up to him at this point from the book and takes her writing hand away from the book. He in turn looks up as she pauses and then checks back to the book before responding. In turn "that...sound" must be the phone that is linked to the written symbol, 'k' But which version of velar plosive that sound might be is equivocal. Until now though the description "sound" has been used entirely in relation to the gun at this point i.e. [k^h] and not directly with the 'k' [k^hə] letter symbol. The latter "ker" is used more in the form of a name for this drawn symbol. Already therefore the therapist has used two tokens [k^h] and [k^hə] and made a link

through her use of language. The child has also added his own particular version of the gun sound, namely an ejective velar plosive [k'] and this has also been confirmed as acceptable by the therapist. Thus there are three versions extant at this stage. This is an important point for later discussion regarding the salience of phonetic features.

Certainly, although having given his assent to the task, implying understanding (line 16) he then fails to attempt any appropriate next response once another 'k' has been drawn. The therapist's brisk "there you go" puts the onus on the child to respond simply to the drawing. She then reemphasises the connection with prior talk by reusing the word "sound" in "What sound is it?" rather than any more oblique, nonspecific reference such as 'what is it?'. He receives very similar non-verbal clues to those at line 12 which was followed by a successful attempt at /k/. Here at line 18 the therapist initiates the finger cue before she finishes speaking. She also opens her mouth as before, then slightly extrudes her lips and nods firmly at him as the turn transition space lengthens.

#3.1,2.

- 18.Th. There you go. { What sound is it? (= (immediate open mouth posture))
} ((Th looks up & puts finger under chin. St's gaze between face & finger))
 (0.8)
- 19.Th. ((nod)) [k']
 ((+ finger under chin))
- 20.St. .h [t^hɔ]

This slightly lengthened pause is interpreted by the therapist as signalling a problem for Stuart and she responds for him, giving a model. Non-verbal information seems to suggest that Stuart is aware of the significance of the picture and the cueing as prompts to an answer; he looks at the picture for some time and then from the therapist's face to her finger and back again. Yet it is not until after the therapist's nod and auditory prompt at line 19 that he produces an answer and this differs from the version given in the therapist's prior utterance on several counts. In addition to an initial plosive [t] he attaches a vowel [ɔ], thus the plosive is produced on a pulmonic airstream rather than the (ejective) oral one that the therapist has used and which he himself did at line 11 and 13. He fails to achieve the velar articulation

for /k/ although he has successfully produced this in his first tries. He also does not place his finger under his chin as the therapist has done, and he did before in his successful attempts at lines 11 and 13. Indeed his tries at 11 and 13 seem to correspond more closely with the therapist's immediate prior output in each case than does his try here. This is also true of the following tries where he again embarks on repair following clear models (22,25,29,32).

In response to his try at 20 the therapist produces a full model, louder than the try at 19 and with full aspiration. Stuart then, at line 22 repairs his try of 20 by dropping the vowel, interpreting the model as displaying inadequacy in his last attempt. The same pattern happens again in 23-25. Increasingly explicit in her requirements, the therapist adds a verbal description of the manual gesture to accompany articulation and then gives an even louder model with exaggerated lip postures (round and open). Stuart then, at line 25, produces a try with the vowel and gesture reinstated and exaggerated lip postures which evolve throughout the try, from exolabiodental stricture to open and rounded, like the therapist's prior.

#3.1,3.

23.Th. put you finger underneath there.

((gestures on herself + head back))

24.Th. .h ^{ff}[k^h]_ω^{ff}

25.St. ^f[_ωt^hə]_ω^f

axolabiodental stricture.

<

((+ finger under chin gesture))

26.Th. Okay:

In the final lines 28-33 the therapist gives a further ejective model which Stuart imitates but with continued alveolar rather than velar articulation. The therapists final model, preceded by the instruction to "feel it at the back here" and a touch on his throat, is slightly affricated. Eventually Stuart, at line 32, gets a double alveolar and velar articulation on the closure for the plosive (which is also affricated) and this is accepted.

#3.1,4.

28.Th. * .h[k'] You do it.

((+ finger, + nod of head to child))

29.St. .h[t']

((+ finger on throat))

30.Th.	Féel it	{ at the back here.	[k']
		{ (touches child's thfoat))	{ ((taps own throat + head back))

((St. opens mouth)) (.) ((St draws head away))

31.Th. [k^x ']

32.St. [tkx']

33.Th. OKAY.

The task therefore finishes on a positive note at this point.

c) Summary: two types of child error on the therapy target.

In the above analysis a series of models of a single phone have been described. These have included those that are augmented through speech perturbation, those accompanied by gesture and phonetic description as well as one with a wordlike quality. The child responses have routinely shown detectable features of the prior model. The discussion will now turn to an explication of particular therapist turn designs and child response types that have occurred in the above extract and that appear to differ from the routine model/imitation that was described in the last chapter. Firstly a series of augmented models and their sequiturs will be considered, not only those that concern the isolated phone /k/ above but also those involving words. A series of errors will be seen to arise from these presentations that are not predictable from the child's own phonological system but are contingent on the prior model, the adult preceding turn design and the conceptual framework within which the task is set. It is argued that the therapist's theoretical knowledge affects the way she produces the target phone and the fact the child does not share this knowledge has consequences for the task outcome. The therapist's presentation of a phone (in isolation or within a word) as

a series of allophones with extraneous articulatory features assumes that the child will be able to pick out the common critical features. This is not necessarily the case as will be seen in the following examples where features of adult augmented models become more prominent still in the child's rendition, through changes in phasing and prosody..



After the discussion on errors arising from adult speech perturbation during modelling a second type of error will be considered, namely one where the child reverts to his own phonological rules after having displayed some display of working on the phonetics through a novel production. In certain circumstances this error can be traced to the design of the therapist's prior turn, in this case interpreted as a cue for completion rather than as a model. Again the theoretical notions lying behind the target versions preceding the child's turn will be discussed, here being related to the link made between the written and auditory forms.

3.III ERRORS OF IMITATION.

a) *The imitation of critical & noncritical phonetic features.*

In the literature review it was made clear that there is a strong theoretical basis to speech therapy which is used in assessment and treatment. This has implications for their treatment of modelling, imitation and repair. In the world of the therapist brought up on phonetic theory, each phone consists of a set of allophones, i.e. a set of permissible productions that share a predominance of common features but differ in detail according to their position in a word, the adjacent phonetic segments and additionally the interactional context (Kelly and Local 1989). The allophones of /k/ may, for a given variety for instance, include; [k^h] = aspirated, [k'] = ejective, [k̄] = unaspirated, [k̃] = nonaudible release, [kⁿ] = nasal release, [k^x] = affricated, etc. To produce minor variations in the models set up for the child is of no consequence to the adult speaker; the critical features e.g. velar + plosive are still obvious to them. However, isolating the phone from connected speech may put a different perspective on these variants for the child.

Great demands are put on the child's metalinguistic and social observation skills in therapy. They are being asked to focus on unnatural productions in the way phones are produced and

to untangle the common denominator that links the exemplars in a context so different from connected speech. When his/her try is praised they must extract what made it good and what aspect should be repaired when in error. That a young child can become quite skilled in this in a short time is remarkable in itself. Evidence will now be presented from the data to illustrate the argument that a child may focus on a variety of phonetic and nonphonetic features of a model in the search for the 'correct' version.

To reiterate the point, an adult, in trying to isolate a critical feature for a child, e.g. place of articulation (as the therapist was endeavouring to do for Stuart), may produce and accept from the child a set of variants that to her are basically the same phone. In this text the therapist produces various tokens of the phoneme /k/. At lines 9 [k^h], 19 [k'], 31 [k^x]. The complexity of the picture is increased by differences in volume, pitch, the addition of the vowel ('ker'/[kə]) and facial expression affecting the articulators (e.g. a smile during the mouthed cue at line 12). However for the child the critical 'place' feature may not be the one that it is obviously common to all, other features may appear equally salient. Once involved in a repair sequence the child may be seen to alter a variety of features and some of these are extraneous to the phonetic content. The detail of Stuart's tries at matching the velar plosive /k/ will now be considered as evidence for this argument.

In the first instance (line 11) Stuart's attempt results in a velar plosive with ejective airstream and affrication, due to a tense, slowly released articulation. He accompanies this with imitation of the therapists gesture (finger under chin). He is praised for his attempt although this is qualified by the therapist when she asks for another "try". His second attempt, with little further help from the therapist, is similarly ejective and fricated with extra spread lip position. The therapist's original model had shared the characteristic of being velar but was heavily aspirated rather than fricated and mouth position was more open. Her request for him to try again had been immediately followed by a mouthed, silent cue accompanied by a smile (i.e. horizontal spread). This was followed by Stuart's spread lip version.

#3.1,5.

9.Th. *.h [k^h] . (.) *h [k^h] *h [k^h]
((finger under throat and holds head up, eye contact held))
*swallow movements

10.Th. Can you do that?

11.St. [k^x]
((finger under chin))

12.Th. Well done, good try. Can you try it again? (=open mouth + finger under chin + smile)

13.St. [k^s]
↔ ((held either side of talk))

14.Th. Good boy. So: this is what the 'ker' looks like.
((draws the letter))

Already two slightly differing tries have been confirmed as acceptable although containing a number of extraneous features as well as the critical velar articulation. In the next section, after line 14, the velar articulation is lost, as discussed above and becomes /t/ based i.e. alveolar. The velar element does not immediately reappear in repair but other elements are altered. Therefore the child certainly shows that he is aware of the need for change in his utterance but does not reproduce the critical velar factor.

#3.1,6.

18.Th. There you go. What sound is it? ((immediate open mouth posture))
((Th looks up & puts finger under chin. St's gaze between face & finger))
(0.8)

19.Th. ((nod))^o[k']^p
((+ finger under chin))

20.St. .h [t^h ə]

21.Th. .h [k^h]^f

22.St. .h [t^h]

23.Th. put your [finger underneath there.
((gestures on herself + head back))

24.Th. .h [k^h]^{ff}
w

25.St. [t^h ə]
w
exoleabidental structure

((+ finger under chin gesture))

26.Th. Okay:
(1.0)

The first repair in this section occurs at line 22. The therapist has, at line 21, put forward a redoing model that omits the vowel that Stuart had added and is aspirated, unlike her prior minimal cue. Stuart in turn drops the vowel and aspirates the plosive he produces which is, however, alveolar [t] not velar [k]. He retains the relaxed articulatory posture so noticeable in line 20; dropping the vowel requires very little effort and he does not overtly attempt a [k]. Despite his gaze having passed between the therapist's face and her gesture he does not reproduce the latter. Thus his attempt has focussed on different aspects to those the therapist considers critical, not the velar feature or gesture; furthermore no articulatory effort is displayed. That this is unsatisfactory is evidenced by the therapist's implicit request for further repair couched in the instruction and model at 23/24.

At this point (line 25) Stuart loses the relaxed posture and displays articulatory effort in that

tension returns to the articulators and there are more exaggerated mouth movements. The repair occurring here shows that any aspect of the therapist's model may be a candidate for revision. In this case the lower jaw drops further down and back producing a more open vowel. This matching of the therapist's exaggerated lip and jaw movement, in line 24, is similar to that described at lines 12/13 following a smile.

That these exaggerated movements should become so prominent a part of the repair is not unusual when a child is making effortful tries, as many of the children involved in this data collection exhibit such behaviour. In the following case, taken from later in the same session, Stuart (line 3) produces a very open vowel compared to his first try and he follows this up with spread lips when saying [t]. Thus he has revised two aspects of his first try in answer to the presented model. Both aspects match the therapist's prior turn but, in the case of the spread lips, without the necessary fricative that such a posture was meant to emphasise. He has the place (alveolar) correct, unlike with /k/, but is now meant to concentrate on manner (fricative v. plosive).

#3.2. St./Th. 1st session. (*Looking at picture of target 'house'*).

1.St. [ʔaʋ tʰ].

2.Th. Hou,s::e

[hauʔ s:]

3.St. [ʔaʋ_l tʰ_ɛ]

Thus the critical feature of friction, so augmented by the therapist has not been incorporated. Lip posture has taken on a significance of its own even though it was only intended as an adjunct to the actual target. The child's articulation reflects the break (made by a glottal stop) between the main body of the word and the final phone as it is marked with a silent schwa as the lips move from one posture to the other. We will see later that a model that breaks the natural rhythm of the word may have strange consequences in the form of extra phones etc.

Extraneous features may be reintroduced as one of a set of features available to a child to

vary their tries. Returning to the original #2.1 it has been noted that at line 25 the vowel has been reintroduced i.e. "ter". The reasons for this will now be considered. Line 24 does not have the same features as the cue at line 19 had done, being well aspirated and at louder rather than quieter volume. There is a deliberateness involved in Stuart's vowel sound itself that makes any notion of it as an adjunct to effortful production unlikely, especially as the falling pitch, on a normally phased vowel, matches that produced at line 20. What seems more plausible at this point, is that the vowel has been reinstated as one of a set of features that the child has available to vary his tries. Certainly at no point in the text does Stuart repeat a try without the variation of a feature.

#3.1,7.

20.St. .h [t^hə]

21.Th. .h [k^h]^f

22.St. h. [t^h]

23.Th. Put you {finger underneath there.
((gestures on herself + head back))

24.Th. .h [k^h]^{ff}

25.St. ^f[t^h ə]^f
_{exolabiodental structure}
 <
 ((+ finger under chin gesture))

26.Th. Okay:

One aspect of this section that may be linked to this vowel reinstatement is the one of *volume*. It is noticeable that the therapist's turn at line 21 is louder than her prior, and then line 24 is louder still. This crescendo may well be audible to the child. That the vowel is replaced at a point following this volume gradient may well be due to the child analysing line 24 as identifying a volume deficiency in his previous try. He also makes line 25 louder in itself but the vowel adds another dimension. That volume is a possible repairable also is made clear in the following examples.

In the following illustration the child (Elizabeth) immediately orients to volume (at line 4) without any phonetic revision. She has after all been praised for her first answer, although it was accompanied by a corrective model (line 2). When repair is requested through a further model, in the therapist's line 5, Elizabeth then actually increases the volume to a shout but imitates the omission of the final fricative (plural) as well. Thus increase in volume can be seen to be combined with phonetic revision.

#3.3. Elizabeth/Th. 3rd session . Naming picture. Target word 'sock'.

1.E. [θ o t θ] ((chewing fingers))

2.Th. Sock. Good girl.
(.)

3.Th. Can you say it again? ((takes E's hand from her face))

4.E. ^f[θ o t θ]^f

5.Th. ^f Sock.^f ((louder than 2))

6.E. .h ^f[θ o t θ]^f

In another example where Elizabeth is being asked to repair the word "fish" she follows her mother's slight increase in volume (line 5) but also uses it (line 10 and 12) where no such crescendo has issued from the adult. The move towards higher volume here, typical in being used in the absence of any phonetic revision, displays that the child is unable or unwilling to attend to phonetic matters at this point. In fact the only phonetic repair has occurred at 4, where extra friction is added at the end as [f], rather than lengthening the [θ] "th".

#3.4. Elizabeth/Mother. 3rd session. Target "fish".

- 1.E. One [fɪθ].
2.M. fish:
(0.8)
3.M. Say it again.=
4.E. =[fɪθ f:] ((quiet, creaky voice))
5.M. No, fish ((slightly louder))
6.E. ' [fɪθ]'
(0.9)
7.M. fish:
8.E. ' [fɪθ]'
9.M. Elizabeth, you're saying fith
10.E. '' [fɪθ]''
((direct gaze at adult))
11.M. No fish.

Finally, to return to Stuart's tries, in the latter part of the main extract, line 25 is interesting for another non articulatory revision of his output. The response at 20/22 omits the gesture the therapist has just used, but at 25 this is reinstated as part of the try but is not accompanied by the velar articulation it is supposed to promote. In fact the child only produces a successful velar articulation, albeit a tense, tight one with alveolar coarticulation once the 'back' (velar) feature has been directly described at line 30. This description (30) at last gives a reason as to why the finger should be placed on the throat at all, the anaphoric "it" having to refer to something other than the gesture itself. Before this the gesture had been referred to directly e.g. at 28, "put your finger underneath there" with the child left to draw his own conclusions as to its relevance. There is ample evidence of this gesture taking on a life of its own, especially where Stuart's mother starts associating it with all target phones, having no articulatory significance.

#3.1,8.

- 30.Th. Feel $\left[\begin{array}{l} \text{it} \\ \text{at} \end{array} \right]$ the back here. $\left[\begin{array}{l} [k'] \\ \text{(((taps own throat + head back))} \end{array} \right]$
 $\left. \begin{array}{l} \text{(((touches child's throat))} \\ \text{((St. opens mouth))} \end{array} \right\} \left[\begin{array}{l} \text{.} \\ \text{.} \end{array} \right] \left(\text{((St draws head away))} \right)$
- 31.Th. $[k^x ']$
- 32.St. $[\tilde{t}kx']$
- 33.Th. OKAY.

b) Augmented imitations and their antecedents.

So far it has been shown that there is considerable phonetic variability within the therapist's repetitions of the target phone, the repetitions of /k/ varying from aspirated to ejective and in force of articulation etc. The child is exposed to a variety of phonetic and non phonetic features (including gestures and mouth posture) that become part of a library of responses that may be used to find a version acceptable to the therapist. The features that are repaired may not be those that the therapist sought to display as critical but are frequently traceable to aspects of the prior model. The concurrent argument is that the adult may unconsciously or consciously vary the tokens of a phone that the child is exposed to and assume that he/she will view them as a single entity. However the subtle changes of emphasis on the components of a phone that the therapist employs in order, supposedly, to highlight a critical feature may in fact result in novel child error. For the child all features may appear as candidates for revision and the extraneous effects of distorting the phone's production bring certain features into unusual prominence.

There are convincing examples of such phenomena in the wider body of data. In this section I will start with a simple case where the child incorporates one (visible) phonetic feature into their try but applies it whilst a number of other features remain inappropriate. In this case repair is simply executed. I will then move on to others where the transition to an acceptable form is not so smooth and a variety of phonetic features are imitated in the child's subsequent tries whilst the basic error remains unchanged. The final extracts of this section show extreme examples where the adult's model is imitated but further distorted by the child, the results of which cannot be considered allophones (acceptable variants) of the target phone.

The first extract shows how partial imitation may at least be a step in the right direction that is easily repaired;

#3.5. *Th/Bernice*

1.Th. It's a f:urcoat

2.B. a [f k ɔ :] coat.
exolabiodental stricture

3.Th. f:ur:

4.B. f:ur.

Thus, at line 2, the child produces a strictured labiodental articulation coincident with a voiceless velar plosive. The therapist had, at line 1, made exaggerated labiodental articulation and extended the [f] phone. The phoneme /f/ is a labiodental fricative and it would seem only the obvious visual articulation has registered as a repairable. The child has followed suit with only the place of articulation and length features imitated; manner remains plosive. However a second attempt (4) rectifies the matter.

The transition to an acceptable form is not always so smooth. It is noteworthy that in the original extract the mode of release of the consonant is that most consistently matched by the child (e.g. ejective, aspirated or fricated). This aspect is very open to distortion. In the next example the child (Stuart again) predominantly picks up on the friction produced from the therapist's emphatic release of the /k/ plosive, really only incidental to the target velar, producing hardly any audible plosion at all.

#3.6. *Th/Stuart 1st session. Establishing minimal pair pictures tea/key.*

1.Th. [k^hʔ i]

((+ finger under chin))

2.St. [t^hi].

((+ finger under chin))

3.Th. ooh not tea, [k^xʔ i].
((points to teeth))

4.St. [k^x i^o].
+ palatal friction.

5.Th. Right at the back. [k'] ((no gesture))

6.St. [tʃʔ] ((+ gesture))

7.Th. Remember the gun sou- ((to mother)). He said it so nicely at the beginning,
didn't he.

At 3 the adult has used heavy friction to link the /k/ to the vowel, with little or no audible break but a slow release; this is unlike her first model where there is some friction on release but a definite glottal stop follows after. This feature of line 3 could be a factor in increasing the salience of the fricative feature for Stuart who then produces an affricated fricative at 4, in his repeat. The therapist, at line 5, makes no comment as to the overabundance of friction but seeks to rectify the place of articulation through description. However all friction is removed from her next /k/ and it is ejective. Stuart's next turn (6) is slightly improved on a number of counts following the statement and the ejective model. It is interesting that at line 4 there is no voicing of the vowel although the heavy palatal friction is accompanied by spread lips appropriate to /i/. By line 6 Stuart loses the vowel altogether, going back to an isolated phone following the model. He does reinstate the gesture even though the therapist has not used it, thus suggesting that for him this is another candidate feature for repair on the same level as phonetic revisions. The therapist's exhortation for him to use the "back" is very similar to the original extract, referring only to the /k/ and leads further away from the original target "key". As the therapist rightly points out Stuart was having as much if not

greater success at the beginning of the session than he is now, after all this input!

There are even more extreme examples of the child's augmentation of the adult model. In the above example the rhythm of the model was at least preserved (at line 4), although the vowel was replaced by friction. In the following cases the adult's model is followed by a child turn with even further distortion, actually an extension of what the therapist has portrayed. The result is an extra phone in the target word.

#3.7. Th/Rachael. Target word "coat".

1.Th. Listen.

2.R. [k' t^h ɔv t']

3.Th. Nearly right, >good girl<, [k^h ɔv t^h]

4.R. [k^h h ɔv t]

<

In line 3 of #3.7 the therapist has heavily aspirated the /k/ phone therefore emphasising the initial velar sound but keeping it as an intrinsic part of the word. The main stress still falls on the vowel following this aspiration. The child in her turn actually shifts the dominant prominence onto the latter part of the aspiration and in this way the /k/ is perceived as subdivided from the word and the aspiration sounds like a separate [h] phone.

With another child the therapist's efforts to emphasise the form of a phone actually results in the formation of additional syllables. The child's own system would lead him to say /n/ for /m/ and pairs of contrasting words have been presented for differentiation e.g. mummy/money ram/ran, comb/cone. In line 1 it is difficult to know whether the error on the final /m/ is produced through lexical error, harmonisation of consonants across words (cream-comb) or a genuine effort to incorporate the target sound /m/. However, it is the therapist prompt at line 2 and the following repair that I will focus on (line 3). In an attempt to highlight the final /n/ the therapist actually releases the alveolar articulation (i.e. moves her tongue away from behind her teeth) but voicing continues with open lips, therefore producing a vowel-like end. This is actually an odd thing to happen in interactional terms as routinely in a turn closing position in an utterance the nasal could well have lip closure finally.

In response to this model Chris effects a repair by adding a schwa vowel but the bilabial /m/ remains unchanged.

#3.8. *Th/Chris. Naming pictures in game. Target word 'cone'.*

1.Ch. [aɪsim k^həvm]

2.Th. [k^həvn^ə]

3.Ch. [k^həvm əʔ]

4.Th. Look at me. .hh [kəvn^ə]
((therapist turns head to child))

5.Ch. .h [k^h_ωvm^ə] ((gaze fleetingly at adult))

6.Th. <No, other one., [k^həʔnə]
((therapist holds child's head, gets eye contact))
(0.5)

7.Ch. com- [k^həvŋə]

Having established this extra syllable it does not disappear immediately, although it is reduced in the overlapped repair at line 5. The therapist redoing-model has remained ostensibly the same and the child still exhibits the open mouth, vowel-like finish as a critical feature rather than the unreleased /n/ articulation. The therapist utterance at line 6 directs the child to the "other one" of the pair comb/cone and she then gives a model where the epenthetic /ə/ is actually stressed even more. Chris in turn restores some emphasis to the final vowel but also alters the articulation and self corrects with a labiodental [ŋ]. Thus it can be seen that a slight distortion of a word's phonetic makeup can lead to further gross distortion by the child and detract attention from the critical feature that is needed.

In fact this therapist actually compounds the issue further on in the session with another word "same". Chris, by adding a vowel-like release seems to syllabalise the final phone heavily following a model with open release. It is accepted by the therapist and he continues to do this version throughout the game (10 minutes). The fact that the bilabial element is present seems to be sufficient for the therapist at the present.

#3.9. Chris/Th. Target phrase 'They're not the same'.

1.Th. Can you say:

(0.3)

2.Th. they're not the [seim^{ɔ̃}].

3.Ch. not [seim^{ɔ̃}].

4.Th. Good boy, well done.

This example concludes this section on children's imitation and augmentation of noncritical features of the adult's prior model. As can be seen from this last example the acceptability of such productions lies in the hands of the therapist. In this case the child went on to incorporate this [ɔ̃] feature into his phonological system for some months before it dropped out again. This is not true of all cases as such augmentation may only be a 'one off' or one of several versions available to the child. Leonard (1985) has pointed out that such phonetic manipulations reveal the child's creativity in handling constraints on production.

An apparent exception to the above examples comes at line 19/20 of #3.1 in that the try at target does *not* have the same release features as the adult prior. I will now turn the discussion to this error that apparently is one where the child has reverted to his own phonological system. Although the try may be one of a catalogue of versions available to the child there are crucial interactional reasons why this particular one occurs at this juncture. Firstly I will present evidence that shows that the child is not attempting to produce an effortful try which would suggest he is not working on the phonetics. Secondly the design of the prior therapist turn will be shown to be very different to other clear models.

3.IV A REVERSION TO HIS OWN PHONOLOGICAL SYSTEM.

a) *Working at word level.*

At the very outset of therapy wordlike structures were avoided by the therapist. Instead she used imitation of the gun 'environmental' sound, precisely to stop the child filtering his replies through his own lexico-phonological rules. As explained in the therapeutic aims, it is considered a common response for children to use their own phonological system when

presented with lexical material at an early stage of therapy, especially where no imitation is involved. However, following Stuart's early success with initial /k/, the therapist introduces the wordlike 'ker' as a name for the grapheme /k/. In the original extract #3.1, Stuart, at line 20 gives a wordlike reply 'ter', similar to the last version of the target that the therapist used in naming the grapheme 'k' (at 16).

#3.1,9.

18.Th. There you go. What sound is it? ((immediate open mouth posture))
 ((Th finger gesture. St's gaze between face & finger))

(0.8)

19.Th. ((nod))^p[k']^p
 ((+ finger under chin))

- 20.St. .h [t^hɔ]

There is evidence to support the argument that Stuart is not working at the phonetic content of his speech at this point (line 20), such as lack of effortful production and use of gesture, behaviours typically associated with the child 'doing imitation'. The result is that Stuart works at a word level and therefore reverts to producing /k/ as /t/, adding the vowel to form the 'word' "ter". Particularly significant is the *lack of effortful production*. There is no tension evident in the articulators (as occurred at 11- producing friction, at 13- with exaggerated lip spread posture or at 25- where the vowel becomes retracted and open mouth posture is held). He also fails to reproduce the therapist's finger gesture or head movement. There are a number of examples of children producing 'easy' relaxed speech when responding to the request to name an item, using their own phonological system and only showing effort once in a repair sequence. These differ markedly from those where the child is immediately aware of the phonic or articulatory significance of the word in question (or indeed the single phone), when even first responses may be characterised by, for example, preformation of the articulatory posture³.

³An example of preformation of the anticipated articulation is one where the initial phone is held prior to the task word even throughout the prior speaker's turn. It may then be dropped when a word occurs that does not apparently fit the pattern.

#2.12. Th/Bernice. Target 'fur' & four (apples in picture).

1.Th. [And is this one her or fur?
 2.B. ((//f/ started)) Fur. ((//f/ posture again...))

In these ways line 20 is in contrast to his later effortful version of the same "ter" at line 25, well into the following repair sequence when the vowel is reintroduced as a candidate repair even though the therapist has not modelled it.

#3.1,10.

20.St. .h [t^hə]

21.Th. .h^f[k^h]^f

22.St. .h [t^h]

23.Th. put your $\left\{ \begin{array}{l} \text{finger underneath there.} \\ \text{((gestures on herself + head back))} \end{array} \right.$

24.Th. .h ^{ff}[k^h]^{ff}_ω

25.St. ^f[t^h ə]^f _ω _t ((+ finger under chin gesture))
<

26.Th. Okay:
(1.0)

At 25 he shows signs of making effort to repair his output but does not come up with the 'correct' answer as is evidenced by the therapist's neutral closing. Stuart in fact enacts several changes here and the results of his effortful production are that there is initial labial colouring, a more open mouth posture and an increase in volume. He also complies by imitating the finger gesture. These changes match the therapist's output and have been added to his original try at 20 ("ter"). The increase in volume may indeed be in response to the therapist's crescendo and it may well follow that the vowel is also added in order to improve the loudness of this try. It has been seen on other occasions that an increase in volume may be used in a repair sequence, when the child has effected other repairs and his/her output still

3.Th. .hh very good.
(.)

4.Th. $\left\{ \begin{array}{l} \text{And is this one, hor or f:our?} \\ \text{((/f/ posture held throughout by B.))} \end{array} \right.$

5.B. a-, f-
(.)

6. apples.

does not meet the requirements.

Other effortful tries occur in the early stages of the task at 11 & 13. He places his finger under his chin as the therapist has done and in these cases there is marked tension in the articulators with close matching of mouth shape to the therapist's model at (9/11) and silent cue at (12/13). No vowel is produced as happens in the word-like structure at 20.

#3.1,11.

9.Th. *h[k_h] (.) *h [k_h] *h [k_h]
((finger under throat and holds head up) *swallowmovements

10.Th. Can you do that?

11.St. [k^x]
((finger under chin))

12.Th. Well done, good try. Can you try it again? ((open mouth + finger under chin + smile))

13.St. [k^j]
↔ ((held either side of talk))

The different type of response given by Stuart at line 20, to the clearly imitative ones (11,13 & 25), in terms of lack of visible effort and accompanying gesture, has raised various questions as to why such a response should have occurred at this place in the talk. Here it is possible that the introduction of the lexical level of reference and the preceding turn design (lines 18-19) lead the child to make the error he does. The interactional argument as to why the child is not attending to the phonetic aspects of the target is that the child interprets line 19 as a cue rather than a model which in some way needs additional material. This argument is discussed further in the next section. The prior adult turn design leads Stuart into error, into reverting to his own phonological system due to the wordlike structure ("ker") of the last example of the target he has heard. This adult version was presented in the context of supplying a name for a lexical object, the letter 'k'. For the child the nature of the task in this case becomes that of lexical completion rather than velar articulation.

b) A case of 'cued response' rather than imitation.

In trying to clarify these arguments it is necessary to expand more on certain aspects of the interaction that I have already touched upon. I will look particularly at how the task at this point has been presented to him, over several turns, in a way that contrasts with the presentations that produced his successful responses. Consideration will also be given to the details of the therapist's minimal utterance at line 19 in comparison to a silent cue and models available in this sequence. I will then give examples of cued responses taken from the body of data.

Firstly to consider the nature of this and other tasks within the sequence: previously at line 11, Stuart has been requested to reproduce a phone that the therapist has just modelled whilst at 12/13 he is requested to reproduce his own successful attempt with no further modelling. In both cases producing an acceptable velar plosive has been no problem, even though not directly following a model in the prior turn. The position of line 19 in the discourse imposes a less straightforward task for the child. Stuart has been posed a question, "What sound is it?" following a long preamble involving the letter "ker", an unmarked lexical version of the target /k/. There is some delay following the request and line 19 therefore appears as assisting the child in making his answer.

#3.1,12

15.Th. Now every time you see me draw one of those, can you say
that very funny sou:nd? ((looks back to book))

((looks to St))

16.St. ((nods and glances at book))

17.Th. Yes. Okay. ((draws another k)).

(2.1)

18.Th. There you go. What sound is it? (=immediate open mouth posture)
(0.8) ((St's gaze between face & finger))
((Th. looks up & puts finger under chin))

19.Th. ((nod))^p[k']^p
((+ finger under chin))

20.St. .h [t^hə]

It has been mentioned previously that by this stage there have been several versions of the basic velar plosive target; the therapist's original /k/, his own /k'/ and then the name "ker" at line 14. The fact that at line 20 the child produces "ter" /tə/, so similar to "ker" /kə/ (i.e. having a vowel attached) must be seen as evidence that he is aware of this as the version appropriate for the letter (grapheme) 'k' to which the therapist has just alluded.

Does Stuart have a basis for treating the therapist's /k/ at line 19 as a minimal cue, which requires some addition rather than as the actual item he is supposed to produce? We have already seen a clear example of a silent cue at line 12 with open mouth plus nod leading to a child try. At 19, in contrast, a minimal plosion of air comes after the therapist has assumed and held the articulatory posture for /k/ during a pause of 0.8 second. She does not take another breath before producing this very quiet token. This is different to the models at line 9, ".h[k^h]"), which were aspirated, well defined by an intake of breath plus swallow movements and are produced at full volume. These are followed by an effortful attempt at imitation by the child, including gesture.

Her models that follow at line 21, 24, 28 and 31 are also all well defined by intake of breath (and a swallow at 28) with fuller volume and plosion which results in an ejective ([k'] at 24, 28) and even heavy frication as at line 31. [k^x]. These tokens that are responded to as full models in this extract have also been introduced by some instruction e.g. "put your finger underneath there" (23), "watch me" (8, 27). Thus his attention has been directed to reproducing at least one aspect of what he is being demonstrated and one that may differ in detail from his last try. These responses will be dealt with in detail in due course. At the present time the conclusion can be drawn that the turn (19) that produced the child's attempt " [t^h ə]" appears systematically different to others in the text.

That the therapist could orient to the child's apparent difficulty by giving a partial cue is warranted by his two previous successes at producing the critical velar articulation, one of which followed a silent cue. In therapy similar silent and voiced cues occur routinely when a 'test' question has been posed on familiar material, but where the child response is delayed or fails to fulfill all requirements. In the next example the semantic content is obvious (the child's own name) but there are certain phonetic expectations attached to the production, even

though the context is ostensibly one of writing his name. That the therapist had phonetic expectations is obvious from the specific request for "that sound we did a lot of work on". The child says his name, 'Leon'(at line 2), with no initial consonant as is predictable from his phonological system . His production is rapid and shows no articulatory effort. By contrast, once involved in repair his utterances become deliberate and show perturbation of the normal flow of speech.

#3.10. Leon/Th. About to write his name on workbook.

1.Th. What's your name?

2.L. >'eon<
(1.7)

3.Th. I can't quite hear that sound we did a lot of work on. Tell me one more time.

4.L. sss:=

5.Th. = ((Therapist shakes her head and looks directly at him, with the /l/ articulation held))

6.L. =Li:, L:e:on.

Here it is significant that whilst the child goes on to immediately produce a consonant vowel structure at line 6, once given the voiceless cue by the therapist (at line 5), having only produced a single phone in his initial repair at line 4. The vowel is the one that is contained in his name. After a false start he correctly connects the sound to the complete word and slows down his articulation of the /l/.

In the following example the child is aware that a whole word and not a single sound repetition is required even though he goes on to join the given cue to a word which does not have the appropriate initial phone /n/ but /l/ instead.

#3.11. Chris/Th . Playing pairs, naming two cards Target word 'lamb'.

1.Th. comb and a n :::

2.Ch. n:lamb

In these cases it is significant that with the initial sound the alveolar articulation is unreleased

(/n/ is not 'ner') or minimally so as occurs with the /k/ cue in line 19 of #3.1. (Wordlike versions of phones are also normally avoided by therapists for the reason that they do not attach easily to the following vowel of the word being cued e.g. 'ner- umber!'). It is also interesting that this cueing is most commonly used to prompt whole words.⁴

These last points are set out to illustrate that the child can be led into giving a response that is not necessarily a straight attempt at imitating the prior therapist utterance. What now needs to be considered is the possible derivation for the content of Stuart's answer. It is argued that Stuart is not attending to the phonetic aspect of his speech at this point due to the turn designs prior to his response.

c) Letternames and isolated sounds, are they equivalent?

It has already been stated that a 'word like' structure was first introduced by the therapist, with no augmentation of the articulatory or prosodic aspects. At line 14 the therapist introduces a lexical context by using "ker" to name the letter she is drawing. This she produces with no particular emphasis on the production on the initial velar plosive and it was embedded in general informative talk.

#3.1,13.

14. Good boy. So this is what the 'ker' looks like. ((draws the letter))

(0.6)

15. Now every time you see me draw one of those,

⁴When working on what is considered mutually familiar territory the use of voiced cueing is a common phenomena in adult child interaction. Below is an example from mother/child talk; see line 3. What does become clear however, in later analysis of the data, is that Stuart's mother does not use silent cues at all when working on his speech whereas the therapist does. (See chapter 5).

#3.12. From Deuchar P.74. ...M=mother, Ch=child. (Wootton, unpublished data)

1.M. =What do you say?
(1.9)

2.Ch. Ta.
(.)

3.M. No- p(1)-
(1.0)

4.Ch. Plea:::se

Stuart's word-like response "ter" at 20, closely resembles the therapist's label "ker" at line 14, which is the token that most closely precedes the aforementioned try. It has been argued that the type of 'cue' given by the therapist at line 19 encourages such a wordlike response. So whilst the therapist may assume that the child appreciates that the 'gun sound' /k/ and the 'letter sound' "ker" are part of a whole, this may not in fact be the case. The target of the first part of the extract (/k/) could well bear no relation to the talk about "ker" for a child who has very little experience of the written medium or indeed of therapy talk with isolated phones and 'environmental' (object linked) sounds. Thus there is no reason for him to focus on the velar articulation at line 20, only on giving a label for the grapheme, hence "ter".

There are other instances of this phenomenon. In #3.13 a child produces a wordlike response following a single phone from the therapist. Here the link between the child's output and a recently named letter is even more compelling. Letternames and environmental sounds occur in both these cases but here the child (Thomas) displays careful articulation as part of the word like response. In contrast to Stuart, Thomas (5 years) has had greater experience of letternames from school and is reminded of this in the preamble to a task involving general sound imitation. Thomas actually makes the link between sounds and letternames where the therapist does not require it. He is first shown the picture of a lollipop with the letter /l/ underneath and told it is a "ler" phone. When asked to repeat it he does so successfully, following precisely the therapist's lengthening of the lateral articulation. With the second sound at line 11 something different happens in that he does not imitate the therapist's model exactly.

#3.13. Thomas/Th.

- 1.Th. Now, what we're going to do first is have a go at saying some sounds.
(.)
- 2.Th. .hh And some of them you'll probably know because you know some of your letters at school, don't you? ((child nods))
- 3.Th. .hh That's a lolly ((points to picture above letter symbol))
- 4.T. a lolly
- 5.Th. An' can you see that letter there? ((transfers point to symbol))
(.)
- 6.T. It's a, l:er sound.
- 7.Th. And can you do that for me?
(.)
- 8.Th. l:er like that.
- 9.T. l:er
- 10.Th. Beau:tiful.
- 11.Th. Now all the pictures have got sounds that go with it, and this one's an aeroplane ((points to picture and then removes finger))
- 12.T. ai:l:aplane.
- 13.Th. 'nd it goes .h v:: -
- 14.T. v:er
- 15.Th. Can you do it like me? .h v::, really long.
- 16.T. v::
- 17.Th. Beautiful.

Unlike the example with Stuart the child actually gets the consonant place and manner of articulation correct (line 14) but like Stuart he produces an extra vowel on the end. The case for linking this output to a prior modelled lettername is stronger in this example than it was

for Stuart. That the child interprets line 13 [v:] as having a link with "l:er" at line 9, is reinforced by his delivery. The responses to the therapist's prior turns (8 & 13) are said with carefully exaggerated articulatory movements both for consonant and the following vowel. These mirror the therapist's own exaggerated articulation. Neither /v/ or /l/ present as problems for him in connected speech and do not require effort per se.

The therapist has been very general in her non-verbal reference to the stimulus material, having not pointed directly to picture or letter but rather giving a sweeping motion covering the whole page of material which contains both forms. The "v:" could refer to the aeroplane or the letter symbol, hence giving scope for a lettername response such as the child gives. That this is not what is wanted is obvious from her next turn.

#3.13,1.

14.J. v:er.

15.Th. Can you do it like me. .hv: really long.

It could be that here the child, at line 14, once again takes the therapist's utterance, at line 13, to be an incomplete cue rather than a model for straight imitation. There are arguments against this. The token [vv:] does not share the same environment (following a question) or any of the characteristics of the minimal cue that was produced for Stuart (produced quietly as an ejective), and seems well set up to be a clear model eg. divided off from the rest of the utterance by an intake of breath and prolonged. However, the child does interpret this [v:] as needing a vowel and there is evidence that 'v:.' is shaped like other cue-like turns interpreted as requiring word completion taken from the data. The evidence outlined below is that of suprasegmental design and the type of cutoff at the end of the utterance.

Modelling lengthened continuant phones for imitation and the use of prolonged phones as cues for word completion are both very common in this body of data. Where these two uses seem to differ is in the prosodic shape of the model. This is more easily distinguishable in voiced phones but occurs with voiceless ones too. The delivery of the "v:." (line 13) on a monotone (perhaps to resemble a plane sound) makes it different to most models.

Looking at the example of the model /l:er/ above there is a slight rise on the sustained first sound and then a more marked fall towards word completion. The child copies this pattern in his/her next turn.

#3.13,2. Target phone 'l'.

- 8.Th. l:er like that.
 9.J. l:er

This patterning may be extended over a phrase, here with another child;

#3.14. Chris/Th. target 'lamb'.

- 1.Th. They're not hamsters, they're l:ambs.
 2.Ch. lambs.

Although the prosodic lead in to the cues may be very similar to that of a model, the extended sound is then marked by a monotone.

#3.15. Chris/Th. Target 'lamb'.

- 1.Th. Can you remember a l: } °lamb°
 (((mouthed, devoiced, no airstream)))
 2.Ch. lamb.

Although in some instances (e.g.#3.4. Ch/Th. n...lamb,,) the prolonged cue may not come to an end before the child takes up his turn, this is not true of the example above. Here the therapist stops voicing the /l/, although maintaining the articulation. Then the child comes in with the response and it is shadowed by the adult. The clear break does not preclude the child assuming it is a cue for completion rather than model. This is a similar occurrence to vv: then, where a clear cutoff is also perceptible between the turns.

#3.13,3

- 13.Th. And it goes, .hvv:::-
 14.J. ver.

To conclude this section of the discussion on derivation of child error, I have presented a case of a child reverting to his own phonological system and shown that it did not happen by accident or obvious 'internal mechanisms'. Instead I have shown that the adult turn design immediately preceding the error and the conceptual basis of the therapy task, as displayed through the content of the utterances, both contributed to the context that allowed this to happen.

3.V. SUMMARY.

To conclude this chapter it is reiterated that the examples above have been used to argue that the child's errors in imitation and repair are interactionally led, strongly influenced by the content of the preceding turns at talk. The revisions made are rarely arbitrary and the child may be led into making certain phonetic or phonological efforts due to the type and shape of the prior turn. For instance adult perturbation of the normal flow of speech has been seen to result in various extraneous features of the therapist's production being imitated and even augmented by the child. Secondly, where the error is discernible as a relapse into the child's own phonological system it cannot be assumed that this is due to factors such as lapsed attention on the part of the child but, as in the case presented above, can be due to the prior turn being interpretable as a lexical cue rather than a model for imitation.

The adult may have a clear understanding of what constitutes the critical features which make a /k/ a /k/ and not something else (i.e. must be velar, voiceless and plosive). However a child faced with having to imitate phones presented in an unusual way can exhibit difficulty sorting out the critical and superfluous by-products of slow, careful production (e.g. friction, secondary lip shape, aspiration, volume). Where the errors are due to child imitation and augmentation of an inappropriate selection of phonetic features the prior model can often be seen to highlight both factors that are critical to the correct production and those that are extraneous. As regards some of the creative 'spontaneous' variants that are described as arising whilst children develop their phonological systems (normally) it might prove possible to trace some of these to a source in the interaction.

The process described above is one that most children in therapy go through and emerge, for the most part, with greater intelligibility. Certain authors have injected a word of caution

regarding the sort of linguistic experiences a child is being exposed to in therapy. There may be broader implications in terms of how the child views phonology as being outside of interactional talk and this may have far reaching effects on their generalisation of practised sounds into connected speech. In Chapter 1 a paper by Jimenez and Brasseur (1988) was presented which discussed details of a case where a child's connected speech became increasingly unintelligible after years of therapy, due to unusual prosodic features rather than phonological error. This pattern, the researchers suggested, was due to therapy being based on isolated fragments of talk rather than connected speech. Whether the type of therapy dialogue presented in this thesis should be changed to minimise this possible effect will be a subject for further discussion in the conclusions to this thesis.

Certain other problematic areas have been touched upon in this discussion and are taken up again in ensuing chapters. In this chapter Stuart was shown to be functioning at a lexical level, and reverting to his own phonological system in so doing, following an unusual therapist turn. To repair an utterance phonetically is not the first option a child of four would choose in normal conversation, as is evidenced in the work of Gallagher (1977) and Langford (1981). The therapist has to create an environment that encourages the child to respond at a phonetic level where appropriate and much of this opportunity is created through the use of modelling and imitation. Where the therapist desires that the child should begin to self-correct then alternative repair initiators come into play, such as cueing (addressed partly in this chapter) and various queries. In the next chapter the overlap between lexical and phonetic repair and the possible ambiguity of repair initiating turns is discussed.

CHAPTER 4.

ADULT REDOINGS OF CHILD ERROR IN REPAIR SEQUENCES.

4.1 INTRODUCTION

In the previous chapter the child was shown to work on the phonetic content of his output, both in first try and repair with remarkable consistency. Some child phonetic errors in the data were shown to be related closely to the content of the prior talk and did not automatically stem from the child's own phonological system. Mostly, in the last chapter, I was concerned with errors following models for imitation where the phonetic character of the task (or necessary repair) was clear. In this chapter the link between child error and the surrounding adult talk will be further investigated with attention paid to cases where the necessity for phonetic (as opposed to lexical) repair is not always recognised. Of particular interest is the therapist line of response in next turn following an error, particularly *adult redoings of child error* situated in turns designed as requests for self-repair. The fact that there is such a low incidence of phonetic repair following such requests (as opposed to models for imitation for instance) will be explored in this chapter. A strand of thought that is continued from the previous chapter is how theory affects the therapist's approach, this time in relation to such redoings and repair sequences. It will be argued that a combination of structure of turn design and mismatch between the adult redoing and the original child version blur distinctions between repair on a lexical and phonological level.

From here on in this chapter I will briefly describe prior research into some repair initiators and the type of repair found to occur. Then, through the analysis of one extract, I will show how requests for self-repair involving redoings of problematic speech can occur in therapy talk and what the consequences can be. From this springs an exploration of the types of turn structure that incorporate redoings and the nature of the redoings themselves in the light of evidence that shows these factors to be of consequence to the repair outcome.

a) *Prior research into repair initiators and their outcome.*

Models predominate in this data and in those of prior research into speech therapy/child interaction (McCartney 1989). They are both a direct method of gaining an initial try at a target and as a means of *other-correction* which stimulate repair following an error. Models are also the most successful strategy at engendering phonetic repair when compared to less direct strategies. This chapter will move on from looking at direct modelling to investigate some instances of invitation to self-repair, including the use of redos in queries such as those traditionally described as clarification requests and others such as incomplete sentences used as cues for completion. The majority of examples of repair initiation found in the data are not followed by phonetic repair although the way the therapist pursues such a repair in the ensuing sequence warrants the interpretation that this is what she desires.

Going by previous research we should perhaps not be surprised to find such a low proportion of phonetic repair in children who have well established syntax and semantics. Looking at normal child development Gallagher (1981) touched on the types of revision that follow turns such as *clarification requests*¹ (queries that refer back to the content of the prior turn) which signal that the listener is having problems in understanding the speaker's message. She found that children aged 1.11-3.0 responded appropriately to all forms of clarification requests but that whilst very young children (at approx. one word level) made 45% phonetic revisions this dropped to 19% at two word stage and 16% at three words. The predominating revisions then were lexical or syntactic in nature. Even taking into account the special nature of phonologically disordered children's language Gardner (1989), looking at parents/child talk, found phonetic revision a rare event following such clarification requests.

However speech therapy talk is ostensibly about phonetics so it will be interesting to analyse why phonetic revision does not occur more frequently without other-correction occurring in the sequence. Instead we find responses that simply confirm or deny the therapist's version of the child prior or repeat the child's original try.

¹ In this thesis I am not using the traditional coding and categorisation of clarification requests due to the theoretical connotations of the term that preempts description of their function. The term in its broadest sense remains useful and widely understood in relation to other research but the term understanding check, after Schegloff 1987, has less functional connotation in terms of designating a request for a type of response and is therefore the preferred term in the context of this study, and will be used from hereon.

Answers as to why phonetic repair does not occur more frequently may lie in the structural qualities of understanding checks as repair initiators. Researchers have looked to differentiate between the types of repair initiators that instigate *phonetic* as opposed to *lexical* repair and this is of interest to this chapter where I am suggesting that there may be some overlap between the two in these special circumstances. Tarplee (1993) in her mother/child data found that lexical repair was generally very direct e.g. 'It's not x it's y' and was not typically initiated by a repeat of the child's label, even in the form of an understanding check e.g. 'Ch: X , Mo: X?'. This is just the sort of structure that is found in the therapy/child data and is used to address both lexical and phonetic error with varying results. Tarplee also did not find mothers contrasting two phonetic versions of one word e.g. 'It's not X it's x.' This also occurs in the therapy/child data though most typically couched as a question; 'Is it X or x?'. Analysis of the deployment of such strategies will feature strongly in this chapter, there being marked differences between mundane and therapy talk.

This chapter contains many understanding checks and other repair initiators that engender responses that are not as the therapist requires, as marked by her pursuance of an alternative through reformulation of her query or by more direct means. In this chapter the child involved gives some unexpected answers to understanding checks that include inaccurate redos (a type of reformulation) of their prior tries. Shatz and O'Reilly (1989) looked at adult reformulations of the child's prior utterance which were based on second guessing at the content. Such reformulations resulted in a tendency for the children (at 2 yrs) to blame the listener for the communication failure. This is pertinent to children in therapy who could blame the adult in such a circumstance rather than look to their own poor speech patterns for the source of the problem and could be an explanation for some of the responses presented in this chapter that fail to address the phonetic content where the adult redoing does not match the child output.

Strands of research have sought to show how children make sense of the interaction they are involved in when the aims of the adult speaker are equivocal. Schegloff, Jefferson and Sacks (1977) describe the nature of certain understanding checks as drawing the speaker's attention to an error even when he/she knows how to correct the problem, in order to initiate self-repair. Trouble arises when the structural equivalence of legitimate understanding checks

and feigned misunderstandings lead to conversational ambiguities, (Schegloff 1987). Such feigned misunderstandings occur in therapy and may be one source of trouble for the child. Indeed one such occurrence features in the initial extract for this chapter.

Some insight into other complexities involved lie in consideration of the differing goals of therapist and child in therapy. Unexpected responses may arise due to a child's interpretation of what is required by the understanding check. The motivation of the adult in requiring phonetic revision in particular, rather than any other sort of clarification, may not be obvious to them. Some researchers have set up experimental conversational situations in which the aims of the adult interlocutor are made deliberately opaque to see what the children's reactions are. Beal (1988) found that children under 5 years overestimate the quality of messages they receive and may not realise there may be a discrepancy between the literal and intended meaning. Certainly some of the child responses in my data seem to take the adult literally in simply agreeing or disagreeing with the adult's query rather than taking it further. Speer (1984) stated that children had two strategies to cope with "vague" instructions; to rely on overall context including any gestures and to guess and conclude they were correct if unchallenged. He describes the danger here of the child imputing significance to accidental saliencies (as is suggested by the errors illustrated in chapter 2). Applying CA techniques may produce alternative and additional explanations to this body of knowledge.

I will now move on to the analysis of an extract that involves a therapist's use of requests for self repair in the shape of misunderstanding checks (with structures unlike that typically found in mundane talk). The resultant child responses do not address the phonetic error appropriately. The therapist moves on to direct modelling and verbal direction in the pursuit of an acceptable child version of the target word. Through the ensuing discussion I will seek to explain how and why ambiguities arise in the interaction and what consequences they have for the interactants due to the structure of the prior adult turn, including the form the redoing takes.

4.II. SPOTS OR POTS? PRIMARY ANALYSIS OF A REPAIR SEQUENCE.

The discussion will initially be based upon a key extract and various points of contention will be taken up from this. The whole episode is presented, although only the first four lines will be dealt with in detail. The data again comes from the videos of the therapist and Stuart (aged 4 years). Later on the chapter takes examples from other child/adult dyads. The situation of the first extract is a routine one where the therapist models a new word exemplifying a new phone cluster and the child imitates it inaccurately. There then follows a repair sequence in which the therapist tries to initiate self repair on the part of the child through the use of an understanding check which displays her interpretation of the child's prior. No repair takes place and it is argued that the child displays an implicit rejection of the adult's version of his try. Discussion will primarily centre on lines 3 & 4; I shall try to establish that the therapist's query is based on a redoing of the child's try which is influenced by her therapeutic aims and that the child's repeat of the target word (line 4) is actually a restatement of his first try with no phonetic work being done on it. The therapist displays her wish for such revision to take place in pursuing repair with increasing explicitness.

#4.1. *Stuart and therapist, 2nd session. First presentation of /sp/ in 'spot' (picture of spotty face).*

- 1.Th. s:pots.
((spread lips on /s/))
- 2.St. [p̄ɔt̄]
((looking at picture))
- 3.Th. [p^hɔts]?
- 4.St. [p̄ɔt̄].
((looking at therapist, then away))
- 5.Th. Are they pots? ((St. looks to therapist again))
- 6.St. ((shakes))
- 7.Th. Lets hear the Sammy snake sound at the beginning then.
(.)
- 8.Th. .h s:pot.
- 9.St. [p^hɔt̄].
- 10.Th. Let's see the 'es' sound first. ((draws s))
(2.0)
- 11.Th. There it is. ss(m)
- 12.St. s:
- 13.Th. [p̄ ɔt̄^h]
- 14.St. [p̄ɔt̄]
- 15.Th. That's it, Well done

This extract comes at a time when the therapist has just introduced the idea of /s/ blends, in this case /sp/ and has started on an illustrated wordlist. The cluster itself has been presented in isolation as the amalgamation of two phones which are known to Stuart, /s/+p/, and not as a unit (as 'ch' is a unit with a plosive and fricative element). A conversation on the topic of measles is initiated by the therapist, to set a reference and in the hope that Stuart will eventually say the word "spots" spontaneously. However in the end the therapist has to give him the word herself (line 1). The naming is set up as an augmented model (see chapter 2) with an exaggeratedly lengthened /s/ and low-fall pitch. The child's response is to repeat it. But no /s/ element is forthcoming even though the therapist has emphasised the initial /s/, through the increased duration, very spread lips and intensified friction [s:].

At line 2 Stuart substitutes [p̄] for /sp/ initially. This error is one that could be derived from his own phonological system and there does not appear to be any significant articulatory effort attached to this repetition, there being no preformation of the initial sound nor any distortion of the word's rhythm, although the model had incorporated these features. Therefore Stuart gives no sign of aiming to match the therapist's phonetic output closely at this juncture, and his gaze remains on the picture rather than turning to the therapist as routinely occurs with effortful tries in the body of data.

#4.1;1.

- 1.Th. $\overline{\overline{[s:p^h\text{ɔ}ts]}}$
 ((very spread lips on /s/))
- 2.St. $\overline{\overline{[p̄\text{ɔ}t^s]}}$
 ((looking at picture))
- 3.Th. $\overline{\overline{[p^h\text{ɔ}ts]}}$?
- 4.St. $\overline{\overline{[p̄\text{ɔ}t^s]}}$
 ((looking at therapist, then away))

As has been briefly described, the child is substituting /sp/ with [p̄], generally perceived as /b/. This fits a consistent pattern of reduction of s blends to a single element. In the majority

of cases Stuart reduces an s blend to one element by omitting the /s/ but also the second element remains unaspirated, as occurs with the second segment of a blend, whereas it would normally be aspirated in initial position. As this is not a permissible allophone of the phoneme /p/ in initial position in the word it tends to be perceived by the native speaker as voiced. Hence the child is apparently saying 'spots' as 'bots'.²

What the therapist does at line 3 in response to this [p⁻] is to say 'pots' with a heavily aspirated initial [p^h] which is not perceived as voiced. This version [p^hots] would usually be modified if the /s/ element were to be reincorporated, with the [p^h] becoming [p⁻]. Her version has put a wordlike gloss with English phonemic structure onto the child's try. How a trained listener such as a therapist could redo the child's [p⁻]/"b" as a definite voiceless and aspirated [p^h] will be discussed in detail later on in this chapter, as part of a preference for producing 'wordlike' utterances which fit into the pattern of therapy aims, glossing over the child's actual output but providing contrasting minimal pairs³. The therapist's turn (line 3) does not confirm the child's prior. Instead, in response to this phonetically erroneous production, the therapist feigns surprise with a marked rising pitch on this understanding check. Such queries in mundane conversation routinely display the listener's interpretation of the speaker's prior and thus the word "pots" is readable as a redoing of the child's [p⁻ot], one which deliberately includes a version of the child's own error for comparison and repair. Numerous examples of this ploy will be illustrated in the text in due course.

By repeating back a version of what the child has said as a query the therapist appears to be questioning the content at some level and requiring some form of clarification. Since she knows what word the child should be aiming for, having initiated the topic herself, it would

²Produced in a similar fashion in his phonological system are; target blend 'st' pronounced as [t⁻] in 'star', 'stick', 'steps' etc, heard as /d/. The exceptions to this rule are /sn/ and /sm/ where the second element is the same as if it were in initial position and hence the reduction is a simpler one to trace (Stuart pronouncing 'snake' as 'nake'). This phenomenon is well documented (Catts and Kamhi 1984, Leonard 1985) and shows that the child has some phonological knowledge not clearly discernible from his speech.

³Macken & Barton (1980) found VOT which was gradually differentiated for words with initial voiced and voiceless stop consonants were judged by transcribers to have been produced with the same voiced stop.

seem unlikely she would be checking out the semantic reference, except to assure herself that the child has understood. However it is not out of the question and it will be argued that the intentions of the query are ambiguous, it by no means being explicit that the query requires phonetic self-repair. This is partly due to the fact that such question frames are often used to check on semantic reference in similar circumstances in mundane talk (Tarplee 1993). In addition, what the therapist has said is not an accurate redoing of the child's utterance but an interpretation of it and this unusual feature warrants further investigation.

At line 4 the child responds to the understanding check by repeating exactly, phonetically and prosodically, his version of line 2 (which is different to the therapist prior version [p^hɒts]). He shows no hesitation before doing this, there is no perturbation of the normal speech flow, nor is eye contact held for an assessment at the end of his turn, as would routinely be associated with an effortful try where phonetic work is being done. He has not explicitly denied or confirmed her version but it will be argued later that his repeat does reject her version and reestablish his own⁴. That the therapist has not received an acceptable response to her understanding check is displayed by her reformulation of the initial query, this time as "Are they pots?" which this time he denies with a shake of his head (5). The therapist then explicitly brings in the phonetic description of the repair that is required "Let's hear the Sammy snake sound at the beginning then" and gives him an augmented model (8). The phonetic talk continues from then on until a satisfactory, but discontinuous version (spread over two turns, lines 12-14) is produced by Stuart which is then positively evaluated.

This extract has some interesting features that in the ensuing discussion will be shown to be typical of therapist/child talk. There is the nature of the adult's redoing which is used as an understanding check. It is inaccurate when compared to the child's version and forms a word 'pots' that could function as an alternative lexical interpretation. As will be seen in later

⁴It could be argued that in this and similar cases which feature /s/, a high frequency sound, that Stuart may have imperfect perception (or representation in his input lexicon) due to his fluctuating hearing problems. However there is clear evidence he has phonological knowledge of the distinction between /s/ clusters and initial single consonants displayed in his [p^h]/[p^h] contrast. It is more important that the therapeutic interaction rarely leads him to initiate repair on any basis when the therapist has highlighted a possible misunderstanding, whether he is actually perceiving the distinction in each case or not.

examples it is a common feature of the therapist's response to an error to repeat the key word almost exactly as the child has said it. This latter type of redoing of child error was a phenomenon that was conspicuously absent from Tarplee's mundane adult/child talk. However with the above /s/ blend the adult's version does not closely match that of the child and this fails to achieve a repair in next or ensuing turns until other-correction in the form of an obvious model, is given. Whether this mishearing is deliberately done or is how the therapist actually perceives it is not derivable from this extract but there is ample evidence from other examples that the therapist's version is influenced by the contrastive minimal pair that the therapy programme has been built round, which reflects the therapist's view of phonology theory and the child's phonological rules in particular.

We know that redoings are a common phenomenon in mundane and pedagogic talk from the breadth of examples given in Tarplee (1993) where they are intrinsic to the disguised nature of phonetic correction. That they are a common but rather different phenomenon as a therapy strategy will now be illustrated from the body of data. It was stated earlier that line 3 "pots?" was somewhat equivocal in its motivation. The wordlike and inaccurate redoing "pots" could be taken to be querying the semantic content of the prior, a feigned misunderstanding checking the child wasn't referring to cooking receptacles! Alternatively, the therapist could be querying the phonetic content though there is nothing to signal this in the way of perturbation of the normal speech signal. It needs line 5 "are they pots?" to exhibit that the therapist had not received the answer/repair that she was seeking. Initially a descriptive account will be given of the redoing of child error in adult next turn and the type of turn in which these redoings are embedded. The nature of the redoing itself in light of therapeutic aims will be analysed, especially looking at whether the redoings are accurate or inaccurate and form nonsense or real words. I will then look at the interaction between turn structure and redoing type in the instigation of self and other-repair. The redoings appear in a variety of question and statement frames some of which closely resemble lexical repair. Following this descriptive account the data will be considered for evidence as to why certain *child response types* routinely follow certain of these queries and why phonetic repair should occur so infrequently when it is the ultimate aim of the therapist.

4.III. REDOINGS OF PROBLEMATIC SPEECH IN MUNDANE TALK.

In naturally occurring conversation that takes place outside 'therapy talk' there are a number of adult understanding checks of the child's prior utterance that contain a redoing. These form an interpretation in the shape of real words for the child to confirm or deny, in the latter circumstance by routinely repeating or repairing their original utterance. The type of repair which would be most efficacious is for the child to choose. Redoings outside therapy talk often involve inaccurate lexical versions of the child prior and, in therapy talk, phonetic rather than lexical inaccuracy may be queried by such inaccurate redoings.

An important distinction between the following extracts and #4.1 is that the topic is usually child initiated so that the therapist is unlikely to actually know the target. However they are important in illustrating how alternative semantic referents arise quite naturally in the listener's turn, the redoings in these data all being real words. This natural tendency to interpret problematic output as 'words' thus routinely occurs in conversation and is utilised in a stylised manner in therapy. It will be illustrated in due course how similar the therapy talk is in its construction to these examples from mundane talk and what implications this has for the child's potential response.

I will illustrate these inaccurate redoings occurring in two structures; redoings outside therapy as *queries involving single word/phrase repeat* (similar to #4.1) and redoings outside therapy talk embedded in *forced choice questions in which the adult offers two choices*, although she has no prior knowledge of the topic.

In the following extracts the adult uses a device very similar to that in #(1), being a simple query with a redoing. In these cases below the child appropriately interprets the adult as having some lexically based problem with the prior turn and clarifies accordingly. In the first of two examples the therapist turns the final syllable of the child's utterance 'yor' into the name of a nearby city 'York' and voices it as a query with rising pitch. It is corrected by denial plus an expansion on the child's part, adding the word 'house' .

#4.2. Bernice/Th. 2.00 *Discussing place of birthday party (no props).*

- 1.B. Near yor'.
- 2.Th. Near York?
- 3.B. No, near your house.

In the following extract the adult's interpretation of the child's utterance is a long way from what he intended and the reference to 'Tarzan' possibly lay outside of the child's experience. It is rejected through a child repeat of part of his initial utterance without explicit denial. This is important as it is a response that is structurally similar to that of the child in #4.1 (lines 3/4).





#4.3. St/Th. 2nd session. *Talking about home, no props.*

- 1.Th. What sort of toys have you got?
(4.0)
- 2.St. cars and stuff.
[t^hɑ d ə n t^h ə p^f]
- 3.Th. ↑ Tarzan?
(2.0)((Stuart looks away, down and then up))
- 4.St. ((looks down)) [t^hɑ d]
- 5.Th. Cars, I see.

In this extract, at line 3, the therapist makes an attempt at interpreting only a portion of the child's utterance, running two words into one with an exaggerated rising pitch range. In response the child contracts his repair further still down to the key word 'cars', a repeat of the first portion of his initial utterance with no significant phonetic change. The therapist makes another repeat of the child's repair at line 5 with unexaggerated falling pitch and confirms mutual comprehension through "I see". This repeat ignores the phonetic shortcomings of the child utterance (/kɑz/ → [tɑd]), the matter not being taken further. The contrast between these two redos clearly illustrates how the query at line 3 is used to exhibit the listener as having problems with the prior utterance. The level of this problem is conveyed by the attempt at interpretation. Redos can thus be used to elicit moderate refinement of the initial utterance to establish mutual comprehension.

Forced choice questions are also found to incorporate redoings of the child prior turn. In the following example, at lines 2-3, the therapist actually makes two attempts at interpreting the child's word, the hesitancy at the beginning of the line intimating a lack of confidence- after all one shoe would be an unlikely present! She thus presents the child with a forced choice, although the word "shoe" had initially been framed as an isolated query with rising pitch. The presentation of a second option comes after a micropause in which Stuart has made no move to take up next turn. That her second interpretation is more definite is marked by the falling, conclusive pitch and the question frame that limits the child's options. How the child's answer is interpretable as rejecting both these attempts will be discussed in section 4(V) but it is the mother's interpretation that confirms he is saying something different to either of the therapist's versions.

#4.4. St/Th 3. Discussing birthday presents.(no props)

- 1.St.  And a [ʃuə2]
- 2.Th.  a,a sh-, a shoe?
(.)
- 3.Th.  or a shoot.
- 4.St.  A [ʃuə2]
- 5.M. A suit!
- 6.St . What my Aunty Kath brought me.

The similarity of these redoings and turn structures which are querying the lexical content of the child's prior to those that appear in stylised therapy talk will now become apparent. That the adult is aware of the answer they require is routinely displayed, for example when they reject the redoing they have just voiced as an understanding check, even in the same turn. The child must be aware that the adult knows the topic matter in therapy and querying what has just been said may therefore have very different connotations. In some of the following cases the child is clearly not moving towards repair but taking the query more

literally, simply confirming or rejecting the adult version and leaving the therapist space to continue, something that could not happen where only the child knows the topic. Where the adult understanding checks may differ from those in child led conversation is that they are not to be interpreted as 'Am I understanding you correctly?' as much as 'If this is what you said, is it an appropriate answer?'. This expects the child to go one step further, consider the nature of the error itself and effect a repair (but not a lexical one). Turn designs that routinely only display the error but not the correct version therefore necessitate self-repair.⁵ The ensuing discussion will show how the interaction of type of redoing and structure is critical to the outcome.

4.IV STRUCTURES INCORPORATING REDOINGS IN THERAPY AND THE NATURE OF THE REDOINGS.

This descriptive account will look at some of the structures in which redoings occur, starting with those that most closely resemble the original single word query in #4.1(line 3) but including other forms of *invitation to self-repair* as well as forced choice questions that supply the correct version (*other-correction*). Taken into account within the classification is whether the redoing is interpretable as a *real word* or not as has been seen to occur routinely in mundane talk above. Redoings that form nonsense words are more widespread in their use in various turn designs in therapy and can be found to be both inaccurate and accurate versions of the child's prior try. Particular attention is drawn to the examples of accurate redoings which, unlike any of the other redoings, are followed by phonetic repair .

The discussion will centre on the following turn designs:

- a) queries that consist of a repeat of the single word or phrase that the child has uttered with rising intonation imposed on it, featuring *real word* and *nonsense versions* of the child try.
- b) queries that take the form of a forced choice between the original child error and the target word or that provide the redoing embedded in incomplete structures that require completion with a contrasting version .

⁵Gardner (1989) with mother/child mundane talk, and McCartney (1989) with therapist/child dyads, both found clarification requests were rarely followed immediately by phonetic repair whilst in normal circumstances lexical or syntactic repair often do come directly after such understanding checks.

A point that has arisen from the previous discussion is that, in therapy talk, the redoing of the child error may not always be completely accurate (lexically or phonetically) and this parallels what can be found in mundane talk. Nevertheless, although phonetically dissimilar in parts they can be considered redoings as they are designed as versions of the word the child has used. They are not simply repetitions/remodels of the target word. The examples tend to fall into 2 distinct groups; in the first the therapist gives a version similar, but different, to both the child's try and the target word; in the second the redoing matches the child's original error.

Queries which involve an accurate rendition or remodelling of the target word are not included in this analysis. The main discussion concerns the first group as these are more routinely used, but examples from the matching group also prove to be significant even though few in number. Within these groups it will also be pertinent to the discussion to take into account those redoings that take the form of possible real words (e.g. "pots" or "tick") rather than nonsense forms (such as "thampoo" or "gourteen").

a) Queries involving single word/phrase redoing.

i) Inaccurate redoings in therapy talk that form real words;

It is worth reproducing the original extract at this point to show how the redoing "pots" is interpretable as a real word. The second full query at line 5 clearly makes the link to an alternative lexical referent quite explicit, using the plural "are they..." referring to the actual objects, not 'is it pots?' with the singular verb and pronoun which can only refer to the word itself, not the plural referent. Such constructions routinely occur elsewhere in therapy when the adult wants to make it clear that the topic is the word itself.

- #4.1 1.Th. s:pots.
 2.St. [p^hɒt^s]
 3.Th. pots?
 4.St. [p^hɒt^s]
 5.Th. Are they pots?

Apart from the original "pots" there is one other wordlike redoing that occurs with this

's blend' word set. It is with 'walking stick' which is interpreted as the unlikely "walking tick" after the child's first try [wɔʔn tɪk]. The oddness of the latter half of the label is emphasised by the stress being placed heavily on 'tick' rather than on 'walking' as the child did.

#4.5. St/Th 3. Target; stick. second presentation (picture).

- 1.Th. And this one?
- 2.St. dem, a [wɔʔn tɪk].
- 3.Th. a walking tick?
- 4.St. ((shakes and smiles))
- 5.Th. heh heh. What should it be?
(.)
- 6.Th. A walking::
- 7.St. [tɪk].

The query receives an appropriate denial and a smile, at line 4, acknowledging the humour involved in the error. That the therapist sees the humour and would like a repair is indicated by the next question at line 5 where she laughs and then prompts such self-repair, using "should" as an indication that she has prior knowledge of what the answer is. The intention that it should be self-repair is continued in line 6 where an incomplete prompt isolates the erroneous word.

In this and other cases the motivation of the therapists becomes clearer further into the repair sequence, that the anomaly must be acknowledged and repaired. By redoing the child error as a real word the therapist illustrates the lexical confusion that can result from the child's unclear speech. To do this they may go to considerable lengths to impose a wordlike construction on the child's version. Another therapist makes a very similar redoing a little further on in a repair sequence involving 'fur'.

#4.6. Bernice/Th. Target; fur coat, (picture).

1.B. a [h̥ɔ̃] coat.

2.Th. a which coat?
exolabiodental structure (open)

3.B. ^P[h̥ɔ̃]^P coat.

exolabiodental structure.

4.Th. a [h̥ɔ̃:] coat?

(0.8) ((child smiles and looks at Th.))

5.Th. I don't think so!

(1.0) ((child smiles more broadly and looks around room))

6.Th. What sound have we got at the beginning?

(4.0)

7.Th. It's not a [h̥ɔ̃:] coat. [That's [h̥ɔ̃::]]

((tousles her hair)).

The child uses very weak labiodental friction initially and the therapist redoes it as 'hɔ̃:', where a completely open lip shape is substituted for the /h/. At line 4 she reiterates the child's "her coat?", the first nonstandard phone [h̥ɔ̃] being uttered without the labiodental articulation. What is interesting here is that the therapist, later on still, invokes an alternative semantically based interpretation, at line 7. Here she indicates her own hair, well after the first redoing at line 4, but still interpretable as showing that the use of real words in redoing-queries is clearly meant to highlight possible lexical misunderstanding. Interestingly too the therapist indicates that she has prior knowledge of what the response to her own query at line 4, should be as she goes on at line 5 to provide the denial herself.

These examples show that redoings may take the form of *real words* other than the target and that a therapist can use this strategy quite deliberately to illustrate the possibility of listener misunderstanding due to the child's error. The use of a simple query here does not result in repair but in minimal confirmation/denial although such queries did result in repair in the examples from mundane talk. The fact that, in this kind of therapy talk, the

adult displays that they have access to the correct answer may mean that the child has warrant for providing no more than a minimal response and for proceeding no further without more adult input.

ii) Inaccurate redos in therapy talk that form nonsense words;

Sometimes, imposing a wordlike structure on the child's original output is only carried out to the extent that it produces a *nonsense word* i.e. one which follows English phonological patterns but has no possible referent. Again the phonetic errors that are not crucial to the therapy programme are glossed over but the absurdity focusses on the target segment.

There are numerous examples of Stuart's therapist repeating back a version of his try that forms a nonsense word, both within the /s/ blend word set and additional to it. In the next examples the redos do not match the child's output nor do they form an alternative possible referent. Many are produced in the same frame as "pots? i.e. as a simple understanding check which allows confirmation, denial or repair in next turn.

This next extract shows a query "A pade?" (line 3) that is almost identical to that in the original text. However the therapist goes on immediately to elucidate her intentions, answering the query herself with "It's not a pade", and thus showing that she knows "pade" to be incorrect. She then requests an alternative to "pade" with "What is it?" Stuart provides an alternative to the therapist's "pade" [p^heɪd] in the shape of [p^hɛɪd], in other words the child's original try. Stuart does not repeat the indefinite article that the therapist had attached at line 3 therefore the word appears in the same frame as his original answer, a clear reiteration.

#4.7.St/Th 3. Target; spade (Second presentation, picture).

1.Th. You dig the garden with a:

2.St. [p^heɪd].

3.Th. a pade?

[p^hɛɪd]

(.)

4. Th. It's not a pade, what is it?

5.St. [p^hɛɪd].

That a phonetic repair is the therapist's primary aim when using an inaccurate redoing of the child's error in a follow up query is revealed in the next extract, as it has been in others, by the therapist's use of speech perturbation later in the repair sequence. This time it is used to augment the error on the target (4) and the solution (6).

#4.8.St./Th.3. *Target, snake sound (drawn letter 's')*

- 1.St. The nakey sound.
- 2.Th. The naked sound?
- 3.St. ((nods)).
- 4.Th. The n:ake sound?
- 5.St. ((nods))
- 6.Th. Or the s::nake sound?

In the above example the therapist repeats the whole phrase that the child has said with an accurate repeat of the reduced initial s blend "nake". However the final syllable /i/ is omitted so that it does differ in this way to the child's original. An alteration such as this could warrant the child to regard the query as checking that the two (snakey/snake) are equivalent, with the former babyism removed. Whatever the alteration the child confirms the therapist's version as correct. This is not an adequate response, as the therapist reveals by repeating her query with a lengthy /n/ phone. When this is still confirmed as correct by Stuart she says the so far implicit alternative of "s:nake", the target version. This is similar to the original extract in that the child's answer (line 3) is not rejected directly but rather the question is reiterated for further consideration. Here the repeat is exact "the naked sound?" whereas in the original it was rephrased as "Are they pots?" It is interesting that in this case the child confidently repeats his confirmation and this fact is dealt with in section 4.VI.

None of the examples above have produced a phonetic repair nor any attempt to address phonetic matters at all. There are examples where the repair sequence is brought to a rapid, successful conclusion following a simple query with a redoing of the child's error. These share one feature that does not occur in the examples above in that all such redoings are accurate versions of the child's prior. These are illustrated next.

iii) Nonsense words that are exact redos of the child try .

The next two extracts, where **phonetic repair** occurs following a simple query, share a common feature in that they both involve *exact redos* of the child error. This must be significant when so many inaccurate redos have been shown to engender less appropriate responses. However it can not be the only contributory factor as there are examples where an exact redoing simply produces a lexical repair and therefore I will also consider the part turn design and sequence plays in eliciting phonetic repair. A simple query involving a possible real word (as in "pots?") can be rather ambiguous in nature, perhaps referring to the semantic content. Or, as with "nake sound" (#4.8), the phonetically accurate redoing can receive an inappropriate confirmation where it is perceived as being a legitimate version of the target. Yet next we have two examples where phonetic repair follows quickly after a simple query with an exact redoing. One way in which these two extracts differ from #4.1 and #4.8 is in their position in the repair sequence, coming after other types of understanding check. In one case it is a repeat of the original try which is queried so that this response option is less likely to be repeated.

In this first example the simple query "two deet?" follows an initial model and then a slot filler query ("Two what?") when Elizabeth fails to repeat the model as the therapist expected. Thus it comes later in the repair sequence, following a turn which prompts additional lexical content. Of course with the child's [dit], as repeated by the therapist, no alternative referent exists.

#4.9. Elizabeth/Therapist.1. Target 'feet' (picture)

- 1.Th. Feet.
- 2.E. erf (.) two.
- 3.Th. Yeh. Two what?
- 4.E. two [dit].
- 5.Th two deet?
- 6.E. feet.
- 7.Th. oh yeh, nearly thought you said it wrong then!

This is also true of the next sequence where the therapist repeats back the child's

"thampoo". The sequence also shares the feature of the simple redoing as understanding check following a less specific query, in this case (line 2) a neutral "pardon?" which the child interprets as requiring a direct repeat. There are no pictures involved here and Elizabeth had initiated the topic so the therapist did not obviously have shared knowledge.

#4.10 Elizabeth/Therapist 2.(no props) Target "shampoo"

- 1.E. [θæmpu]
- 2.Th. Pardon?
- 3.E. [θæmpu]
- 4.Th. Thampoo?
- (0.5)
- 5.E. [ʃæmpu].

The first query here receives no repair but is treated as a failure to hear with a straight repeat. The second query "thampoo?" is less ambiguous for the child than 'pots?' (#4.1) because the wordlike structure that the therapist repeats back is not a known word in English and certainly would be unlikely to be recognisable to the child as a potential alternative referent. The child, who initiated the topic, therefore isolates the area of trouble for the listener more accurately, having realised that some further clarification was necessary. A straight repeat of the original answer has already been shown to be inadequate as far as the listener is concerned.

b)Offering the alternative or not: forced choice question form.

Other forms of query can follow in first position after the child's first try, as well as further on in the repair sequence. It is notable that two of the rare examples of phonetic repair occurring after redoings as queries (in my body of data) actually follow forced choice structures and these are illustrated first below. They both clearly juxtapose an accurate redoing (as a nonsense word) and the correct version. It has already been stated that the therapist usually has knowledge of the target word but that redoings such as "pots" in a single word query do not clearly display that the therapist interpreted the child's utterance as a version of the actual target word ('spots'). By contrast the following

examples from the same therapist, working with Stuart show her as having the correct version clearly in mind as an alternative to the error.

The therapist initiates spontaneous labelling of a picture through the use of an incomplete sentence, thus avoiding giving a model and the child complies with the word 'house', pronounced as [ʔavʰtʰ]. The therapist's query regarding the child's prior utterance starts in the same fashion as the original, a single word repeat but is closely followed by the target word to make a forced choice question for the child (line 3/4). If the first query had stood on its own the child could have simply acknowledged it with a nod or a shake of the head but he made no visible move to make a response.

#4.11. *St/Th 3. Target; house (picture)*

1.Th. You live in a:

2.St. [ʔavʰtʰ]

3.Th. A hout?

((St looks to th. and smiles))
(.)

4.Th. or a hou,s;e.

5.St. ((Mouths house))

(1.8).

6.St. [ʔavʰtʰ]

7.Th. Snakey sound?

The adult repeat of the child error in this case matches it closely but glosses over the child's use of the initial glottal stop (replacing it with the /h/) and forms a nonsense word 'hout'.

Stuart appeared to be making no immediate move to respond to the initial query, simply smiling and at 4 the therapist says the correct version with a pitch structure that continues on from the prior utterance and makes it a forced choice issue. The structure is very similar to the one that occurred in #4.4 ("a shoe, (.) or a shoot?"). The therapist definitely reveals in this case that her motive is to get the child to consider the articulation of the word by augmenting the correct version and making it clear that it is a model. There is mounting evidence then, that the therapist is using the redoing of the child error in question form primarily to engender a phonetic repair from the child without the benefit of a correct model. A model will be offered when no self repair is forthcoming. She has reason to expect he might repair after such turns as this has occurred routinely in mundane talk.

A forced choice question may then provide a model later in the sequence or be used as the initial understanding check. It is only a short step from a single word query, as with "a hout(.)", to a straight forced choice question "or a hous:e?" that offers the child the correct model immediately. In a similar example again the child's first try is queried by the therapist by offering a version of his own try, "fate", and the 'correct' version, "face" which is augmented as a model (line 3). Stuart is seen to watch the therapist intently and in this extract his next try is delayed by nearly 2 seconds. The version at line 4 differs from the original only in that once again it is accompanied by spread lips which are held in position for a time that could be seen as an attempt to mirror the visual effect of the prolonged /s/ of the therapist.

#4.12. *St/Th. 3. Target face (picture)*

1.Th. And this is a: ((gestures round face + /f/ cue))

2.St. [fɛɪt].

3.Th. a fate or a fa-c:e?
 ((St. watches Th. throughout))
 (1.9)

4.St. [fɛɪt]
 ↗
 ↘

Thus it can be seen that simple queries may be more ambiguous for the child than forced choice questions as in the latter it is clear that the therapist has the target word in mind. In addition, whereas simple queries do not provide a correct model for the child to select, a forced choice question does and can result in an appropriate repair attempt.

Incomplete forced choice structures as invitations to self repair.

It has been stated in the previous section that forced choice questions obliged the child to respond with one of the versions laid out for them as models within the question. The help is there in the form of the 'correct' version, usually in second position of the two on offer and marked phonetically as the imitable version. The therapist working with Stuart uses yet another device to encourage self repair which closely resembles a forced choice question, except that the correct model is absent. In the #4.13 the redoing of the child error (line 3) is in first position, "a tar", and the choice question continues with "or a "; but the sentence is unfinished. The prolongation of the 'a:.' with static prosody has been used on numerous occasions to signal the need for the listener to close the sentence appropriately, here with an alternative to 'tar'.

#4.13 St/Th. 2. Target; star (picture).

1.Th. Now what twinkles in the sky at night?

2.St. [t̄ a].

- 3.Th. Now, a tar or a:

4.St. [t̄a]

Unlike the original query form "pots?" there is no opportunity for a simple denial/confirmation but the similarity exists in that the redoing does not exactly match the child's utterance and it will be argued that it makes it possible for the child to treat line 3 as containing a contrasting version to their own and the choice completion can be made with a repeat of the child's original try in next turn (see section 4.VI). What is interesting here is that although 'tar' is interpretable as a word, probably within the child's experience, the therapist seems to remove the possibility of this type of misunderstanding by placing 'a' in front of it. 'Tar' as in 'tarmacadam' is a collective noun that does not take an indefinite article as 'star' does. (it is unlikely that the child of 4 years would know the interpretation of 'a tar' as a sailor). This

signals that the query is not questioning the lexical reference.

There are other factors that could dissociate the therapist's inaccurate "a tar" from the child's [t̥ɑ]. It is worth noting that by using "Now is it a ..." has no strong link to the child's prior utterance. "It" in this sentence could be the child's "dar" but equally well it could refer to the picture on the page with no acknowledgement of the child's try. This is especially true as 'now' is frequently used to introduce fresh information when placed in this position. A prime example is the first sentence in this extract; "Now what twinkles in the sky...?" A query such as 'pots?' offers little help as to what type of repair is needed but does offer a strong link to the child's prior.

The link to the child's prior can be made more strongly. In the following extract the therapist uses the same kind of incomplete sentence for completion (at line 3) but it is preceded by a clear rejection of the child's prior, involving a redoing of the error as "poon". This redoing is clearly rejected as an acceptable version before it is offered as a forced choice and the child certainly does not choose to repeat it although the type of repair begs to be discussed further.

#4.14. S1/Th 3 Target 'spoon', second presentation (picture)

1.St. [p̥um].

2.Th. not a poon.

(.)

3.Th. Was it a poon or a;?

4.St. nee:=

5.Th. =spoon.

Certainly the inclusion of a straight rejection with an embedded redoing does not guarantee that the type of repair required will be obvious to the child.

c) In conclusion to this section;

It has been shown in this section that the redoing of a child error, whether accurate or not, may appear in a number of utterance forms and structures. The therapists aim in the majority

of cases is to encourage change in the child's phonetic output through invitation to self repair or more direct means as is revealed later in the sequences where it is not forthcoming. This interpretation is warranted by the therapist's reformulation or restatement of the queries when they fail to engender such a repair, even giving the model herself. For instance the therapist's next turn shows that simple yes/no replies are not what is required following an apparent understanding check. These utterances, even if not directly eliciting repair, are certainly intended as part of the process by which the child is brought to reflect on the nature of language itself. Careful searching has revealed only four occasions (within all the children's data) where phonetic change follows directly after a redoing which has been voiced as a query and these all involve accurate redos of the child try which form nonsense words. Where an inaccurate redoing, including those that form an alternative lexical referent, are involved then phonetic repair does not take place. This fact deserves further attention and the types of response that the child gives following these turns will be considered in sec 4.VI.

It has already been suggested that there are a number of factors that contribute to the equivocal nature of the original #4.1 query "pots?" which in turn affect the nature of the child's response. The simple structure in which the redoing figures is one factor but others that need further exploration are those touched upon already; namely the inaccuracy of the redoing and the significance of the redoing as a real word with alternative referent. There is a natural propensity for listeners to interpret doubtful utterances as real words in conversation and there are few examples of nonsense words being used by mothers or therapists in these circumstances. Thus the therapy experience is a special one. The three factors of turn structure, accuracy of the redoing and lexical referent interact in their effect on the child's response.

It will be shown at this point in the discussion that the therapist's redos arising from the /s/ blend wordset (of which /sp/ is only one item), all share a common pattern which remains consistent over a number of weeks. This has to be a deliberate strategy on the therapist's part and this factor will be considered in light of the overall therapy programme underway.

4.V. THE NATURE OF THE REDOINGS THEMSELVES IN THE LIGHT OF THERAPEUTIC AIMS.

The nature of the redoings arising in the /s/ blend work have common features to those found throughout the therapy data in that;

i) There is a tendency on the therapists' part to shape the redoings very much like words, whether nonsense or real, being a paraphrase of the child's actual output. Phones apart from the target one are reinstated without undue emphasis. Hence "pots?" has a clear plural although this was not so clearly said by child. Similarly in an interchange where the child says /vaɪ/ ("vie") for 'bike' and the adult follows up with "it isn't a fike is it?" (Th/Bernice), replacing the final /k/ and increasing friction on an initial /f/ for contrast to /b/ rather than the weak [v]. In order to produce a wordlike structure the therapist may 'redo' the child's attempt at the crucial phone as the nearest possible phone as with the above [v] but also in #4.6, where there was little friction on /f/ in 'fur' the therapist realised it as 'hair'. Thus it fits this tendency for Stuart's unaspirated [p̣] to either be rendered as /b/ or /p/. As it is the latter fits in more judiciously with the target of therapy for the additional reasons given below;

ii) With Stuart the therapy programme here is designed to present the /s/ as a missing component which must be added to the front of the word. This usually has an unaspirated phone to be attached to i.e. [p̣] rather than [p^h]. The adult target contrast sp/p makes sense in this framework but does not present Stuart's actual sound system error. This, combined with the preference for glossing over errors that are not significant to the therapy programme (e.g. the poor pronunciation of the plural) result in the wordlike "pots" as opposed to the child's [p̣ɒt]. That /s/ is seen as an addition is clear from the frequency of statements such as "Let's hear the snakey sound in the beginning then" (line 7) and the highlighting of the /s/ in the written form throughout. It is not possible to add the /s/ to 'bots', i.e. 'sbots' is not a permissible combination in English. It makes more sense to present the child's version as voiceless [p^h], as might occur in an emphatic production, rather than the perceived /b/, and then request the addition of the /s/.

iii) by presenting the rest of the word as heard 'correctly' it focusses the 'mishearing' as being dependant on the area of the target phone. It cannot be coincidence that the inaccurate part of the redoing, that does not resemble the target word or the child's output, tends to be the target sound.

The /s/ blends as target sounds will now be considered. What is noticeable about this section of work on /s/ blends is the remarkable consistency with which the therapist builds up the repair sequences with each word. To return to the original extract, what is in question here is whether the therapist is aiming to produce an exact redoing of the child's first response. If so then in this case she has failed as "pots" [p^hɒts] and "bots" [p^hɒt]⁶ do not share the same initial sound. If the therapist intended to produce a version that was only very similar but not identical to the child's try then the question is why this should be so and whether it achieved the aims it intended to.

The child's rendition and the therapist's redos are consistent over the two sessions recorded (three weeks apart). In each case the child produces a plosive with no aspiration which therefore sounds voiced i.e. as 'b' or 'd'; e.g. [sp^h] → [p^h], [st^h] → [t^h]. In her redoing the therapist produces an aspirated version, e.g. the child's [p^h] is rendered as [p^h], [t^h] as [t^h]. It has been noted that this form of /p/ and /t/ is a permissible one in initial position in a word whereas the unaspirated one is not. The following words appear consistently in the data, the mispronounced words having been written as they sound in normal orthography to make the contrast clear at a glance. These next paired examples occur separated by a number of weeks. Where there are not two examples the word has been practised but the therapist has approached the repair in a way that does not involve a redoing.

⁶ we know that the child's version can be perceived as 'bots' as this exactly what the mother does in her redos of the child's prior in therapy talk.

a) 'SP' Group:

That the intention of the redoing is not simply to display an interpretation of what the child has said is clear from the variety of constructions that the redos appear in.

1.SPADE

#4.15. St/Th.2.. Target; spade. First presentation.(picture)

- 1.St. [p^heɪd].
- 2.Th. Now that's got an 'es' sound at the beginning. Do you think it's a pade
[p^heɪd]
or a spade?
- 3.St. [p^heɪd].

#4.7.1 St/Th 3. Target; spade.Second presentation (picture).

- 1.Th. You dig the garden with a:
- 2.St. [p^heɪd].
- 3.Th. a pade?
(.)
- 4.Th. It's not a pade, what is it?
- 5.St. [p^heɪd].

2.SPOON.

#4.16.St/Th 2. Target;spoon.First presentation(picture).

- 1.St. a [p^hum].
- 2.Th. Now has that got a snakey sound in it do you think?
(.)
- 3.Th. Is it a poon or a s::poon?
- 4.St. [p^hum].

#4.14.1 St/Th 3 . Second presentation (picture)

- 1.St. [p̄um].
- 2.Th. not a poon.
(.)
- 3.Th. Was it a poon or a;?
- 4.St. nee:
- 5.Th. spoon.

3.SPIDER.

#4.17.St/Th 3. Target; spider(picture)

- 1.Th. He's an insey winsey:
2. St. [p̄ɛ dɪ].
3. Th. pider?
4. St. ((nods))
5. Th. He's not a pider he's a:

b) 'ST' Group:

The child's system results in st- [t̄], commonly heard as 'd'

The adult renders this 'd'([t̄]) as "t" [t̄^h].

4.STAR.

#4.13.1. St/Th. 2. Target; star(picture).

- 1.Th. Now what twinkles in the sky at night? ,
- 2.St. [t̄ɑ]
- 3.Th. Now a tar or a;
- 4.St. [t̄ɑ]

5.STEPS.

#4.18. *St/Th 2.Target; stairs ("What you go up to get to bed").*

- 1.St. [t̄ɛps]
- 2.Th. Are they teps?
- 3.St. ((shakes))
- 4.Th. What are they?
- 5.St. [t̄ɛps]
- 6.Th. Snakey sound first.

6.STICK.

#4.19. *St/Th.2. target; stick. First presentation.(picture)*

- 1.Th. What is it?
- 2.St. [wɔʔɛn t̄ɛk̄].
- 3.Th. Mmm, is it a walking tick?
- 4.St. ((single firm shake))
- 5.Th. It's a walking:
- 6.St. [t̄ɛk̄].

#4.5:1. *Target; stick. second presentation.(St/Th 3)*

- 1.Th. And this one?
- 2.St. dem, a [wɔʔɛn t̄ɛk̄].
- 3.Th. a walking tick?
- 4.St. ((shakes))

Thus in all 6 words the redosings follow exactly the same pattern. The consistency of the therapist's interpretation in devoicing and/or aspirating the plosives must be seen as evidence for this being a deliberate policy on her part. Although it does not always produce a meaningful word contrast as with spots/pots it does produce a neat dichotomy between the target sound and another English phone.

Both the mother and the therapist use redos of the child initial utterance in next turn throughout the data. However the mother uses the redos in a different way to the therapist as she routinely says the child's error as it is heard and does not shape it as another word in the consistent fashion that the therapist has been shown to do. As an example it is interesting to find Stuart's mother perceiving his attempts at /st/ as /d/ and making a redoing based on this. She does not appear party to the use of the therapy based distinction which would have her hear it as a /t/ as the therapist had done, as part of the programme to present /st/ and /t/ to produce meaningful word contrasts.

#4.20. *St/M 2nd session, target 'st-' in 'stick'.*

- 1.M. and stick
- 2.St. [ṭiḳ]
- 3.M. Say stick.
- 4.St. [ṭiḳ]
- 5.M. no: not dick ((laughs))
- 6.St. eee
- 7.M. No, you're saying it wrong, listen.

This example is significant in backing up the premise that the child is making a distinction between 'st' and 't' as outlined above and that the normal listener perceives this distinction by hearing the [ṭ] as /d/. Thus by interpreting the child's version of 'stick' as 'tick' the therapist introduces a semantic element that does not bear much relation to his production. This hearing of the [ṭ] as 'd' is not an isolated incident as we also have "Not dool, stool" and "not done, stone" from Stuart's mother appearing in the data when dealing with the same 'blend' word set.

Whether the therapist's idealised system actually addresses the problem the child has will be debated in due course. In brief it is proposed that the child actually has a working contrast system [p̣]('b') opposed to [p^h] working in parallel to the adult /sp/ opposed to /p/. Therefore, on the level of reducing homonymy, Stuart does not need to change his version 'bots' as it is not the same as the therapist's 'pots'. By saying a word or wordlike interpretation that

does not match accurately what the child has said the adult is posing a completely different problem for the child than that of contrasting his errorful output to the target word. Instead he is comparing the therapist version to his original, finding that the therapist has not interpreted his utterance accurately and therefore rejecting it.

c) Another example of a consistent approach.

Consistency of redoing within a word set is not isolated to this single therapist. Many redos reflect the target contrast of therapy. However these /s/ blends are the only kind of sound substitution that are regularly treated in such a way that an allophone of one phone (/p/ or /t/) is consistently treated as another allophone, at least in this body of data. For instance, Elizabeth had a substitution in her speech that involved two 'simplifying' processes, stopping a fricative (f) and then voicing it when it shouldn't have been. Hence /f/ was realised as /g/ and this precise contrast was being presented to the child in therapy. There would be opportunities for the adult to deal with only one simplification process by devoicing the velar plosive /g/ as /k/ but this does not occur. For instance when they are involved in counting toy animals the following occurs;

#4.21. *Eliz/Mother, 1. Counting toy animals*

- 1.E. girteen gourteen, .h now.
- 2.M. No, no it's not gourteen, what is it?
- 3.E. fifteen.

The adult does not devoice the /g/ and say 'kourteen?' which would 'simplify' the contrast to one process of simplification as occurs with Stuart and the /s/ blends. The therapist was presenting precisely the /f/g/ contrast to the child in therapy and the error is repeated exactly by the therapist and the mother. Thus misperception or simplification seem unlikely explanations for such consistent handling in Stuart's case.

As has been seen in this and other examples it is a common enough feature of the therapist's response to an error is intended to repeat the key word as the child has said it and this can be associated with phonetic repair in the child's subsequent turns. However with the /s/ blends it will be seen that the redoing tends to fail to achieve a phonetic repair. Phonetic repair is certainly the ultimate aim of repair sequences even if not directly following the

redoing and the sequence often subsequently leads to a final explicit model of the target, failing to get self-repair. Prior redoings aim to get the child to reflect on the nature of their error but the types of response that follow these redoings are diverse and reveal something of the nature of the child's interpretation of the talk in interaction. Attention will now be turned to those.

4.VI. CHILD RESPONSE: THE CONSEQUENCES OF AN INACCURATE REDOING.

This section has no cases of phonetic repair as these only followed *accurate nonsense* versions of target, whether in single word understanding checks or forced choices. Inaccurate redoings did not generate phonetic repair in next turn, and it is these which will be the focus of this section. The responses following *inaccurate* redoings of the child prior fall into three main groups;

- a) Responses as in the original #4.1 that constitute a repeat of the child's original try, with no repair, implicitly rejecting the therapist's redoing as a version of their prior.
- b) Responses that explicitly confirm or reject the therapist's version with yes/no or equivalent gesture.
- c) Responses that involve some attempt at lexical repair even though the therapist's follow up displays that phonetic repair was expected.

It is argued in this section that the first two categories of response occur partly because of the lack of equivalence between the therapist redoing and the child prior that it was supposed to represent. The final group, where lexical repair is effected, is attributed to the combination of a redoing which forms a real word and the structure of the turn. Firstly I will return to the original extract #4.1 to show how the child's response to the understanding check can be considered a repeat of his own first try with no correction. This opens up the discussion of other similar cases.

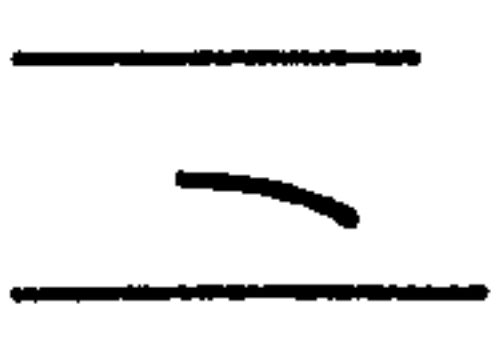
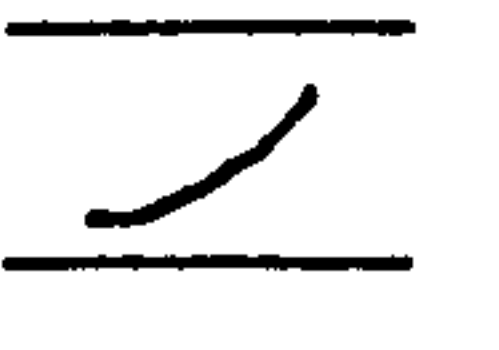

a) Child Responses that are a repeat of their own initial try.

i) Child repeat of original try in #4.1.

To recap; the question frame of "pots?" is simple and of a type that is routinely used in conversation to display a proposed version of the child's prior, as already shown. By redoing the child's [p^ot] as "pots" it has been stated that an element of ambiguity has been

introduced. Here 'pots' has a possible alternative lexical referent (something for cooking!). The therapist could be questioning the apparent lexical content, exhibiting that the child's version is interpretable as another, if unlikely word. On the other hand she could be pinpointing the inaccurate phonetic content. The element of surprise marked by the wide pitch range denotes the utterance as being one which does not expect confirmation of this 'unlikely' interpretation.

#4.1;3.

- 2.St.  [p^ot^o]
 ((looking at picture))
- 3.Th.  ↑ [p^hots]?
- 4.St.  [p^ot^o].
 ((looking at therapist, then away))
- 5.Th. Are they pots? ((St. looks to therapist again))
- 6.St. ((shakes))

In his turn (line 4) the child repeats back his original version with no alteration. He does not confirm or deny the therapist's query explicitly (with yes/no) but rather it is proposed that he is implicitly rejecting her version through the repeat of his own. Through not altering his version he displays that he does not recognise her word as a version of his own or as an appropriate label for the target. He is rejecting the absurdity of 'pots' as a label for 'spots'. That his unaltered repeat is not the required response is shown by the therapist reiterating her question in a new version at line 5; "Are they pots?". She is still redoing his output [p^ot^o] as "pots" after a second hearing so she is displaying that the two tries (at 2 & 4) are equivalent for her .

At this juncture it is important to exclude the possibility that the child's reply at line 4 is a

simple repeat of the therapist's query. This is vital to the ensuing arguments as to the role and status of "pots?" in therapy dialogue.

ii) Evidence for child's utterance as a reaffirmation of own first try.

The utterance is interpretable as being an affirmation of his original utterance for a number of reasons. These will be detailed below but in outline are as follows. It will be argued that there is no effortful production in his repeat (line 4) that might signal that he was trying to change it in some way (The effort often displayed in phonetic repair is a phenomenon that was also mentioned in the last chapter.) and there is in fact considerable consistency in the phonetic content of his first try and the repeat. Also the likelihood that by repeating his first try he is rejecting the therapist's interpretation of his try is backed up by Stewart's next turn where he shakes his head when the therapist rephrases her query. It is also unlikely that his version of 'spots' at this point would be confirmation of the therapist's prior as a repeat on its own does not feature routinely as a form of affirmation in this or Tarplee's (1993) data, following a query as phrased by the therapist here.

The lack of articulatory effort: Firstly the lack of effortful production will be considered. Why should a child who has already been through a large amount of phonic work in this session and before fail to make any attempt to vary the phonetic content of his answer when it has been shown to be misinterpretable? There are two possible directions in which change could have been made. If he had recognised that his original try [pʰʌt] failed to match up to the target then effort could have been made to repair the /sp/. If he accepted "pots" as an appropriate version he could have aspirated the initial plosive /p/, it being in his phonetic repertoire. This he begins to do later in the repair sequence following further modelling;
#4.1;4.

8.Th. .h Spot.

9.St. [pʰ ʌt].

There is certainly no indication that Stuart was attempting any phonetic repair at line 4 as the utterance is made with no pause, with no articulatory effort noticeable and with pitch that starts low but otherwise has the same pattern as at line 2. This is a pattern common to reiteration of first try e.g. following a 'what?' type question when the listener is interpreted as having trouble hearing. There is no increase in loudness as has been found before when

interpreting the prior request as being one addressing lack of clarity; however he does look up to the therapist this time, rather than down to the picture, an action that does assure joint attention to the matter and increases 'clarity' through visual information.

- #4.1;5. ((St looks at picture)).
- 2.St. [p̣ ṭ]
((Th. looking at St. throughout))
- 3.Th. pots?
.....
- X.....,,,
- 4.St. [p̣ ʌ ṭ].
- 5.Th. Are they pots?
.....X.....
- 6.St. ((shakes))

That this example differs from those where effort is obvious can be seen by comparing it with the next extract where a number of significant differences are apparent. The extract occurs in a similar manner in that the therapist at line 3 is querying the content of Stuart's first try. She redoes his try and then states the 'correct' version 'house' as an alternative(line 4). Stuart looks at the therapist keenly throughout this utterance and actually mouths a version of the word 'house' as she says it, as if rehearsing. In the case of "pots?" he only looks at the therapist as he repeats his try.

In the current excerpt below, his next turn (line 6) is delayed following the two target versions by nearly 2 seconds, something which does not occur in the original #4.1 where it is argued that the child is simply restating his first try. The pause here makes it much more likely, combined with the rehearsal, that Stewart is reformulating his reply. His own next try at line 6 does not appear very different except that the final /t/ substitution for /s/ is accompanied by lipspreading, very like the mouth shape that the therapist has just produced on /s/. Thus

it would seem unlikely in this case that the child is simply reproducing his original version although the final outcome is not very different acoustically.

#4.11;1. *St/Th . Target; house(picture).*

((Th looks at St throughout))

1.Th. You live in a:

((St. looks at pic.))...

.....

2.St. [ʔaʋ³t²]

- 3.Th. A hout?

„X....((St looks to th. and smiles))

(.)

4.Th. or a h^ou,s;;e.

- 5.St. [((Mouths house))

(1.8).

.....

6.St. [ʔaʋ³t²]

7.Th. Snakey sound?

.....

It is clear from this example that a display of articulatory effort indicates that the child recognises that phonetic repair is required. This does not occur in the key extract. Obviously the above extract, #4.11, differs from the original repetition of [p²Δ t] in that the child has been offered an alternative which is marked as an augmented model, as being separated from the rest of the sentence. Thus it is less likely that the child would be clinging to his original version. (Also there is a tendency to repeat the second part of a forced alternative as the positively marked item tends to occur in this position.) There is also less opportunity for the

child to restrict his answer to yes/no as with the original 'pots?' query.

iii) The child's repeat as implicit disconfirmation of therapist's prior redoing.

The lack of explicit disconfirmation (e.g. with 'no' or equivalent gesture) of the therapists redoing (line 3 in #4.1) stands as an example of a pattern that occurs routinely in the data. A detailed exposition of Stuart's use of explicit and implicit confirmation and disconfirmation following such queries will be laid out. Briefly it can be stated that it would be usual for confirmation (i.e. acceptance of the adult version) to take the form of a nod, 'yes' or a continuation of topic. Such forms of confirmation do not routinely occur with a repeat unless it contains phonetic change. Disconfirmation is displayed with 'no', shake, or a repeat in isolation, maybe involving an expansion or contraction of the first try.

It can be seen from the following examples that 'no' is not a necessary prerequisite for rejection as there are further examples of Stuart appearing to reaffirm his initial try through repetition and these also follow a redoing with questioning intonation, very like "pots?"

#4.7:2. Th/Stuart 3. Target; spade (picture).

1.Th. You dig the garden with a:

2.St. [p^heɪd].

3.Th. a pade?

(.)

4.Th. It's not a pade, what is it?

5.St. [p^heɪd] .

6.Th. Now do you think it's a pade or a spade?

7.St. [p^heɪd].

Here the child repeats his original version at line 5 despite the therapist rejecting the redoing "pade" herself at line 4. It would be illogical for this repetition at line 5 to be seen as simply

accepting a version just rejected. It is argued (and will be elaborated upon later) that as his original try and the therapist's "pade" are not equivalent to the child he is actually agreeing to reject "pade" and repeating his own "bade" as an alternative. This argument is the same as that for extract #4.1. The same argument follows for his repeat of the version (line 7) following the forced alternative in #4.7 .

To recap I shall draw on a sequence from non-therapy talk at the end of the session when the following repair arises. In this sequence too Stuart does not choose to reject the therapist's interpretation of his utterance with 'no' or a shake of the head. Instead he reiterates his first answer, although in a contracted form. Thus this is further evidence that affirmation of a speaker's own prior turn can be done through repetition without overt rejection of the interlocutor's checking query. Stuart accepts the line 5 as an acceptable version of what he has been saying thus displaying that line 3 was an inadequate version of his line 2 and confirming that line 4 is a partial repeat of his original topic.

#4.3:1.St/Th. 2. *Talking about home, no pictures or other materials.*

- 1.Th. What sort of toys have you got?
(4.0)
- 2.St. cars and stuff.
[tʰɑ dʌn tʰə pʰ]
- 3.Th. Tarzan!?
(2.0)((Stuart looks away, down and then up))
- 4.St. ((looks down)) [tʰɑ d].
- 5.Th. Cars, I see.

There are cases of Stuart using a straightforward rejection (shake of the head) of the therapist's redoing of his initial response and in these cases he adds no further information. In these examples the redos are embedded in a question form much like that in line 5 in the original #4.1 ("Are they pots?") rather than the single word query which is followed more

routinely by the repeat. They are illustrated in section 4.VI(b).

Taking all the evidence together it is unlikely then that Stuart's repetition of the target word in the position following a query would be in confirmation as there are no examples in these data of the children confirming such a prior as appropriate in its interpretation without a confirmatory nod/'yes' or the topic being continued in some way (as will be illustrated below.). There are no straight confirmatory repeats.

There are cases of the child doing an isolated repeat of the adult's redoing and making some phonetic repair as has been illustrated. Such is not the case in the key extract #4.1 as is shown in the above section. By making a repeat with phonetic repair the child is accepting the adult's redoing as a version that highlights an error. It is argued that the critical differences between the key extract and the extracts where an effort is made at repair are that the adult's redoing more accurately reflects the child's initial version and also involves nonwords such as #4.9 "deet" (target 'feet') and #4.10 "thampoo" (target 'shampoo'), rather than "pots" which has a possible alternative referent. See section 4.IV(a).

The preceding pages form a strong argument in favour of line 4 of #4.1 being an implicit rejection of the therapist's prior as the turn design is most similar to others that reject the adult's interpretation than to those that confirm it. Stuart's turn is viewed not as a repeat of the therapist's version "pots" but as an unaltered repeat of his own first try, the two tries being phonetically indistinguishable. The query "pots?" has been described as a wordlike redoing of the child's first try and is not accurate enough for the child to recognise it as reflecting his errorful output for contrast with the target version. Instead he is comparing the therapist version to his original and, on finding it does not equate, he rejects it.

iv) Other examples of child repeat of own prior try.

It is interesting that the other examples of this type of child repeat predominantly occurs with this /s/ blend wordset. More interesting still is that they occur following a variety of structures but all have nonequivalence of the redoing and child first try. Some of them ('tick', 'pots') form real words but the others are nonsense words so this does not appear to be the critical factor in engendering the repeat. Rather the child at this stage in therapy still maintains the

contrast [p̄]/[p^h] to be a valid one in his phonological system and equivalent to the therapist's [sp̄][p^h] contrast. The therapist's inaccurate interpretation of his try does not address this contrast system. He is as yet not manipulating the words at the phonetic level with the information that is available to him in the repair sequence.

#4.7;3.St/Th 3. Target spade(picture).

- 1.Th. You dig the garden with a:
- 2.St. [p̄eɪd].
- 3.Th. a pade?
(.)
- 4.Th. It's not a pade, what is it?
- 5.St. [p̄eɪd].

This extract has a child repeat at line 5. It closely resembles the original extract in that the repeat follows after a simple query "a pade?/[p̄eɪd]" which is an inaccurate redoing of the child's "[p̄ eɪd]/bade". However the therapist has also interposed her own rejection of this version and another question with no model extant. The child repeat at line 5 is similar in prosodic shape to the first try at line 1, as occurs in the original. There is nothing in this prosodic shape that would say the child is contradicting the rejection of "pade"; he must be saying something different.

#4.13.2. St/Th. 2 Target; star.

- 1.Th. Now what twinkles in the sky at night?
- 2.St. [t̄ a]
- 3.Th. Now a tar or a;
- 4.St. [t̄ a]

Again no explicit rejection of the child's prior attempt is made but the forced choice is left open for self repair through completion with a contrasting version. The new version "tar/[t̄a]" is introduced which does not correspond to the child's try and is, therefore, fresh information. The child repeats his own "dar/[t̄a]" in contrast to this therefore.

Similarly in the next extract his own version "dick/[t̄ɪk]" is queried and the redoing used is "tick/[t̄ɪk]". Stuart is offered an opportunity to give an alternative to this redoing at 5 having rejected it himself firmly at 4. The alternative he offers to this inaccurate redoing is his own original [t̄ɪk̄].

#4.19:1 St/Th.2. target; stick. First presentation(picture).

- 1.Th. What is it?
- 2.St. [wɔʔɪn t̄ɪk̄].
- 3.Th. Mmm, is it a walking tick?
- 4.St. ((single firm shake))
- 5.Th. It's a walking:
- 6.St. [t̄ɪk̄].

Throughout this discussion it has been contended that the child is repeating his own original version of the word when he does not consider the therapist's redoing to be equivalent. Evidence will now be presented that shows that in forced choice questions he is accepting the second 'correct' version as equivalent to his own incorrect one and he is reestablishing his own version as a contrast to the first 'redoing' version on offer in the forced choice. The evidence is prosodic in nature.

In the next passage the child, in his first try, starts with a slight fall then rising pitch before the end of "boon/[p̄um]", this shape having been seen before to accompany first offer/suggestion. Then at line 4 the pitch picks up the lower fall of the therapists "s:poon/[s:p̄un]", the second of the two choices in line 3. The forced choice question frame fails to bring about a phonetic change. It carries an exaggerated model "s::poon" and follows a line that introduces the idea of the "snakey sound" /s/ into the picture. Both could stimulate some reference to phonetic content but appear not to;

#4.16:1.St/Th 2. Target;spoon.First presentation (picture).



1.St. a [p̄um].

2.Th. Now has that got a snakey sound in it do you think?

(.)



3.Th. Is it a poon or a s;;poon?



4.St. [p̄um].

This time, although "now" (line 2) is used to introduce the fresh idea there is a stronger link to the prior utterance (or at least to the target picture) through the use of the exophoric reference "that". However the idea of implicit acceptance at least on the semantic level still stands and a phonetic element is introduced with the augmentation of the correct version. However the exagerration of the /s/ sound fails to gain any attempt at imitation by Stuart. He instead repeats his original version at line 4. This version still stands in contrast to the therapist's "poon" and is equivalent in his system to the adult 'spoon'.

This exact repetition is the predominant pattern seen in this situation. However there is one example where the child does reject both the therapist's inaccurate guesses. This piece of dialogue occurred in conversation running up to 'work talk'. Stuart initiates the topic regarding his birthday presents and obviously has knowledge that the therapist does not share. What the therapist ends up doing in seeking the correct word is to present the child with a forced choice, neither of which is the appropriate interpretation of his first utterance. In fact the mother, present during the session has to intervene with the appropriate word "suit" (line 4) when Stuart's repetition does not help the therapist to understand.

#4.4;1. St/Th 3. Discussing birthday presents (no pictures).

1.St. And a [ʃ u ə 2]

2.Th. a,a sh-, a shoe?

(.)

3.Th. or a shoot.

4.St. A [ʃ u ə 2]

5.M. A suit!


6.St . What my Aunty Kath brought me.


In this case the therapist shows uncertainty through her hesitant speech at the beginning of line 2. There is no hint of surprise or humour as there is no absurdity involved in the suggested alternative referents at 2/3. Stuart makes no immediate reaction to her first guess and she follows this up almost immediately with an alternative interpretation. Stuart at once comes in at line 4 and at first glance his utterance could either be a repetition of the adult's second redoing or it could be a repeat/repair of his own initial try.

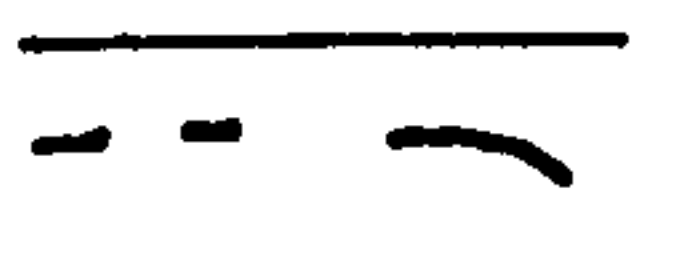
It would seem unlikely that the child would be repeating the therapist's inaccurate "shoot" unless he perceived it as appropriate and matching to his own initial utterance. Since the therapist does not share his knowledge of the word the forced alternative does not stand as a correction, having no unusual emphasis, and it would seem that Stewart does not interpret it as such. Certainly there is no pause or effort in his production at line 4 to suggest he is trying to alter the phonetics involved and there is also no pause before his turn.


What clinches the turn at line 4 as something other than a repetition confirming the therapist's "shoot" is the pitch pattern. It has been shown in most cases of imitation of the adults prior that there is a close matching of pitch. This is seen to occur in all the other forced choice questions already illustrated. This does not occur in this case where the pitch patterns at line 4 more closely resemble his first utterance and thus contest the therapists turn;

#4.4:2.


1.St. And a [ʃuɪʔ]


2.Th. a, a sh-, a shoe?
(.)


3.Th. or a shoot.


4.St. A [ʃuɪʔ]

In nearly all cases of forced choice questions extant in this chapter, there is strong evidence to suggest that the child is choosing to reiterate the second of the choices offered by the adult as equivalent to their own first response. The exception is this case involving 'suit' where the child has exclusive knowledge of the topic word and both the adult's guesses are inaccurate. Except in the cases of #s 4.19 & 4.20 ("face" and "house") there is little sign of any effort to alter the word phonetically when compared to his original version. This factor is important in proving that to the child the target word e.g.'spoon' and his version "boon/[p̄um]" are equivalent: [p̄um] is not equivalent to "poon" but is in contrast to it. As the child has supplied a legitimate contrast no effort is made to alter the phonetic content.

b) Responses that confirm or reject the therapist's version of the original try.
Research such as that of Gardner(1989) and McCartney(1981) looked for phonetic repair straight after an understanding check (or similar clarification request), but whilst there is evidence that this can occur (from mundane and therapy talk) this is not the only appropriate option as other types of repair or simple confirmation/disconfirmation may be appropriate next turns. Even though in these cases the therapist is aiming to get the child to reflect on the phonetic nature of his error this blatantly does not occur overtly in the shape of repair. The types of responses that can occur are illustrated below.

On some occasions Stuart chooses to respond to simple queries which include a redoing of his error by nodding or shaking his head. It has been mentioned before that this puts the onus back on to the adult speaker to continue the topic or provide the model when the test question and the following talk reveals the adult has access to the answer. In mundane talk the onus of repair has to be on the child if the topic is only known to them and so denial does not routinely occur without further clarification. In this first set the child on the surface seems to fulfill the adult's expectations by rejecting the redoing. However the child's follow up response gives evidence that they are not rejecting it on the terms that the adult needs as no phonetic repair follows without further explicit phonetic direction.

i) Yes/no responses that are minimally appropriate.

The general format of these extracts mirrors the original extract #4.1("pots?"), only this time an inaccurate redoing of first try which forms a real word, couched in a simple query, receives a shake of the head rather than a rejecting repeat of the child's first try. The first instance occurs in an identical position to the repeat in #4.1 as a response to the first query (line 4).

#4.5:2. St/Th 3.Target; stick. second presentation (picture).

1.Th. And this one?

2.St. dem, a [wɔʔɪn tɪk].

- 3.Th. a walking tick?

- 4.St. ((shakes, smiles))

5.Th. heh heh. What should it be?

(.)

6.Th. A walking::

7.St. [tɪk].

The headshake rejects the wordlike but absurd 'walking tick' but offers no repair. It is not an appropriate label for the picture but more importantly neither is it the same as he has just said. The basis for his rejection is unclear but he does not go on to address phonetic matters in the ensuing sequence until directed to do so (not shown here). The next example is similar and the direction to phonetic matters is clearly shown at 6;

#4. 18;1 .St/Th 2. Target; stairs ("What you go up to get to bed").St says 'steps'

- 1.St. [t̄ɛ ps]
- 2.Th. Are they teps?
- 3.St. ((shakes))
- 4.Th. What are they?
- 5.St. [t̄ɛ ps]
- 6.Th. Snakey sound first.

The therapist "teps /[t̄^hɛps]" is rejected by shake of the head as an appropriate label for the picture but again does not result in phonetic or other repair despite a further test question. In these above examples the therapist gets the denial of the absurd word she has just said. This would seem to fit in with the therapy plan of moving towards repair but in most cases, as in the key text, this does not occur in a straightforward fashion.

Also in the following extract the child still returns to his original response when pressed for a verbal response (Lines 5&6);

#4.19;2. St/Th.2. target; stick. First presentation (picture).

- 1.Th. What is it?
- 2.St. [w > ʔɛn t̄ɛk̄].
- 3.Th. Mmm, is it a walking tick?
- 4.St. ((single firm shake))
- 5.Th. It's a walking:
- 6.St. [t̄ɛ k̄].

Following the rejection the therapist may continue in the repair sequence as if the child is primed to execute a phonetic repair but it will not occur as the child's own version still stands as a valid contrast to the redoing. The inaccurate redoings of the child's error, despite receiving a rejection from the child, do not bring about a repair as the child does not consider their own version as erroneous but is rejecting the adult's as something different. Crucial to this argument is the fact that when Stuart does produce a version of the target, after his rejection of the therapist's redoing, he produces a version of his own first try. The child

therefore fulfills the adult's expectations at a local level through rejection but not through appropriate repair. The picture is further complicated when the adult does not even receive the expected rejection that the redoing/query was set up for. Stuart does not invariably reject the adult's inaccurate interpretation as can be seen from the next batch of extracts and whilst this fact appears contradictory the special circumstances actually give further evidence of the nonequivalence of adult and child forms.

ii) Yes/no responses that contradict the adult's expectations.

In the last examples it was contended that the child was perceiving the adult redoing to be something different to their own rendition. In the following set the child does something else, actually accepting the adult redoing as equivalent to their own rendition. It is argued that the common link that warrants this interpretation is that the redoings are all nonsense words in minimal understanding checks where no possible lexical confusion exists. In the previous grouping which received rejection the majority of redoings formed possible, if absurd, words ('pots', 'tick').

#4.17:1. St/Th 3. Target; spider(picture).

1. Th. He's an insey winsey:
2. St. [p^hɹɪdɹ].
3. Th. pider?
4. St. ((nods))
5. Th. He's not a pider he's a:

Here Stuart accepts the odd version "pider [p^hɹɪdɹ]" as correct. He treats it as if the therapist was checking what he'd said before moving on. In consequence the therapist then has to reject her absurd version herself; she knew it wasn't acceptable and therefore was not checking the meaning but something else. The child has not given the expected rejection or a repair. It may appear odd that the child should accept a nonword as appropriate but there are possible reasons for this. As it does not affect the meaning he can treat the incompleteness as an irrelevance. The mispronunciation does not produce an alternative word and may not even be perceived at all (much in the way it is known that people overlook slips of the tongue in mundane talk due to the redundancy built into the context).

There is a further very similar case where Stuart is so sure of his answer that he confirms it twice despite the pointedness of a second query, which emphasises the articulation of the /n/. Unlike the previous examples the therapist has repeated the child's version more accurately in her own utterance, although reducing it to one syllable. The context here is slightly different in that the child has already identified the 'sound' as /s/, at line 1, and is then asked to describe it with another name. Thus he moves from the phonetic into the semantic arena. It is therefore logical that he should confirm the therapist's query on lexical grounds, especially as he had initiated the topic himself, misunderstanding on the listener's part is more plausible in this context.

#4.8;1. St/Th 3. Target 'snake sound', to describe sound made by written letter /s/.

- 1.St. ss.
- 2.Th. That's it. And what sound is that?
- 3.St. The nakey sound.
- 4.Th. The nake sound?
- 5.St. ((nods))
- 6.Th. The n:ake sound?
- 7.St. ((nods))
- 8.Th. Or the s:nake sound? That was it wasn't it?

That the therapist was hoping for a phonetic repair is obvious from her emphasis at line 6 on the extended /n/ and from her final offer (line 8) of an alternative.

This type of dialogue is not exclusive to the the therapist working with Stuart. There are other examples of the use of an inaccurate redoing in the turn following a child's phonological error. Whilst Stuart seems to have dealt with the interactional demands literally enough, in the following example the child (Bernice) displays uncertainty as to how to respond to the therapist's unusual understanding check.

#4.22. *Therapist/Bernice. Looking at birthday card.*

1.Th. What's that?

2.B. A [θəd].

3.Th. It isn't a tard is it?

(1.0)

4.Th. .hh

(0.2)

5.B. ((nods + smile))

6.Th. What's it start with?

In this example the adult poses a question about a picture very much as occurs with Stuart. Thus the referent is known to both parties and the question is a 'testing' one. The child answers immediately and confidently but makes an unpredictable sound substitution at the beginning of the word 'card', producing "thard", [θəd]. The therapist reproduces a version of the child's utterance in her next turn that falls into the phonological contrast that they have been working on. They have been contrasting /k/ with /t/, the child's habitual substitution for the former. Evidence outlined in section 4.V showed that this type of redoing is very common and unlikely to be by chance. Whatever the basis for the therapist's 'mishearing' the redoing is couched in a question which expects a negative answer. As with Stuart the prosody is exaggerated to mark surprise but there is no special emphasis placed on the articulation of the /t/, there being equal stress on "isn't" and "tard". The therapist smiles throughout, highlighting the humour of the absurdity. There follows a long pause (lines 3-5) in which the child stares intently at the therapist and the slow nod and smile follows an aborted take up of next turn by the therapist. The uncertainty shown by this hesitation after a simple yes/no formula is clear. The child's smile is a response to the therapist's own, acknowledging the humour but with uncertainty. In nodding the child has contradicted the therapist's expectations by accepting her version "tard" as an appropriate label for the object in question. The therapist goes on to try and point her in the direction of the phonetic content (line 6) without further explanation of the redoing.

Whether the child perceived the mispronunciation or not it is irrelevant as the child has accepted it as a version of the target. As with the examples of "pider" and "nake" above, there is no alternative lexical referent for the therapist's nonsense version compared to the first try so that the former is lexically continuous with the word in question. In addition to this it is argued that acceptance at the lexical level is also made possible by the question frame which so closely resembles those used to deal with lexical errors. In the following examples I will present additional evidence that lexical matters are still salient to therapy talk and that lexical repair is still an option for the child working on phonetics.

c) Child responses to adult redoing that involve a lexical repair.

Whilst the above responses have all fulfilled the child's local interactional obligations they do not move directly to repair the original error. It is rare for phonetic repair to occur early in a repair sequence involving the types of structure outlined, as has been seen from the few successful examples. But both phonetic and lexical repair can occur following adult redoings, couched in forced choice structures and simple queries. The latter group, lexical repair, is once again contrary to the therapist requirements. The possible reasons why the child should seek to repair an answer and what form the repair takes will now be discussed in light of the examples available.

In the following set of extracts it will be detailed how the use of very similar structures to raise the issue of phonetics and to query lexical content at other times introduces a measure of ambiguity into the repair sequence. In the first extract an incomplete sentence cue "or a:" is again used as a device to encourage revision. The therapist this time is confident in her own rejection of the version "poon" straight away (this is ofcourse an inaccurate rendition of the child's "boon" [p^hun]). Being obliged to produce an alternative the child actually embarks on a different word completely before being interrupted.

#4.14;2. St/Th 3. Target 'spoon'. Second presentation(picture)

- 1.St. [p̄um].
- 2.Th. not a poon.
(.)
- 3.Th. Was it a poon or a;?
- 4.St. nee:=
- 5.Th. =spoon.

The above example is very similar to the other completion requests where the child successfully offered a contrast to the one included in the therapist's turn. Unlike "tar" in #4.13,3(see below) "poon" does not have an alternative referent and therefore we might expect Stuart to accept it as a real word, synonymous with 'spoon'. The therapist's redoing is semantically equivalent therefore to his own try and the adult has already rejected it as a valid answer at line 2. Having to seek an alternative answer to his rejected one the child offers an alternative label for the picture (target possibly 'needle') rather than phonetic repair. The therapist cuts him short as it becomes apparent he has missed the point and gives the phonetically correct term "spoon".

The next sequence follows a pattern similar to others in this data. Here the adult is actually aiming for more detailed semantic information;

#4.23. Mother/Elizabeth 1st session. Target /f-/ in 'finger'.

- 1.E. face.
(.)(mother moves point to next picture)
- 2.E. hand.
- 3.M. or a::
- 4.E. hinger.
- 5.M. f:inger.

The critical line is the mother's utterance at 3, which suggests that there is an alternative answer but without saying the first is entirely wrong. This shows the use of "or a" as a normal device used to encourage lexical revision. In this case the child gives an appropriate

semantic alternative and it is accepted, although a phonetic error is corrected emphatically in the adult's next utterance.

These two preceding excerpts share the same forced alternative structure as another extract that has already been illustrated, where Stuart is again led into reiterating his first try;

#4.13;3. *St/Th 2nd sess.*

- 1.St. [t̄ɑ].
- 2.Th. now a tar or a:
- 3.St. [t̄ɑ].

Given that the therapist has provided an alternative label, "tar", Stuart is justified in giving his version which, it has been argued, is semantically/phonetically different to the adult's other.

It is a clever child that covers all options in her answer and this can be seen to occur in Elizabeth's case on more than one occasion. One that has already been cited is;

#4.21;1. *Eliz/Mother.1, Counting toy animals.*

- 1.E. girteen gourteen, .h now.
- 2.M. No, no it's not gourteen, what is it?
- 3.E. fifteen.

In her response to the mother's rejection of her first try, which included a redoing of her child's error, Elizabeth alters her reply both semantically and phonetically. She goes from 'fourteen' to "fifteen" and also refrains from using an initial /g/, which could have been expected from her previous mispronunciations, and replaces it with a correct /f/. In fact she had counted correctly and it was only the phonetics that needed addressing. It is hardly surprising that Elizabeth should hedge her bets like this when the similarity of structure to that which invites correction at the semantic level is recognised.

Where the adult makes explicit what sort of error is contained in the child's try then self repair is more likely to be successful. The nature of the error can be made more explicit by

acknowledgement at the semantic level first, before tackling the phonetics. In fact this is how the therapist adjusts her repair request in the example below, after the child has made an inappropriate semantic repair following the ambiguous sentence cue (line 5-6). In line 7 the therapist addresses the semantic level first by telling him "you were right", following her rejection of his repair "doctor" with "no". She then goes on to state that it was his pronunciation that held the fault and exactly what the fault was.

#4.24.St/Th. 3. target 'nurse'.

- 1.Th. And who's this? She helps you when you go to hospital.
- 2.St. Nurt.
- 3.Th. The nurt?
(.)
- 4.Th. What, what should it be?
(.)
- 5.Th. Not the nurt, the;
- 6.St. doctor.
- 7.Th. No. You were right but you said it wrong. You forgot the snakey sound at the end.

In this extract the child offers a semantically appropriate response 'nurse' to the first question. However it is queried by the therapist, who accurately repeats his own version. This query is closely followed by another question,(line 4) that shows clearly through the use of the word "should" that the therapist had no problem with hearing his response but that the content was inappropriate at some level. Therefore confirmation of his first try would be inappropriate. The child therefore completes the procedure with the alternative "doctor". Again the therapist's repetition of the child's inaccurate attempt "nurt" has involved a nonword with no alternative referent as "pots" has. The child may not have perceived this mispronunciation, as was argued in the case of other nonwords ("poon", "nake"), as it did not affect meaning and thus responds at the semantic level, replacing the rejected 'nurse' with another possibility.

4.VII CONCLUSION.

In this chapter I have shown how *redoings of the child error* are used in the therapist's next turn as part of understanding checks and self-repair initiators. There is no doubt that the ultimate aim of the repair sequences in this clinical data is that of phonetic repair but this rarely occurs in next turn following these turn designs. In fact any sort of self-repair is rare, there being more occasions where straight repeats of the child prior try or explicit confirmation/denial take place. This is despite the fact that lexical and syntactic repair occur routinely in this position in mundane conversation. Howell and McCartney (1990) described how therapists engaged in clarification sequences are "in all probability setting up cognitive conflict within the child" (p54), but on the evidence of my data this does not necessarily mean that phonetic repair will take place immediately as an overt sign of this.

In finding out why this should be so the nature of the redoings themselves and the turn designs in which they occurred were analysed. The redoings were found to be either inaccurate or accurate redoings of the child error and to form real or nonsense words. Phonetic repair only followed cases where accurate redoings of the child prior were involved and these were ones that formed nonsense words with no possible alternative referent. Interestingly, Weiner and Ostrowski(1979) also found that, under experimental conditions, redoings which were exact repeats of the child prior engendered phonetic repair most commonly. Those that modelled a nonsense word unlike the child's (e.g. 'nebra' when the child said 'bebra' for 'zebra') did so to a lesser extent. On several occasions lexical repair occurred when the therapist's expectations were clearly that phonetic repair should be executed. The overlap between turn designs that are used to tackle lexical error and those used for phonetic error was shown to be a factor in the child's repair decision, especially when combined with inaccurate redoings that formed alternative real words.

The real words that the redoings formed were routinely those that fitted in with the therapy design, presenting word pairs which supposedly contrast the child error with the target phone. It was shown that in many cases the redoing presented a 'cleaned up' version of the child error to make it more neatly fit this contrast. There is strong evidence that the children did not consider these redoings to be equivalent to their own prior try as they were routinely

rejected either explicitly or through repetition of the child's own version. No repair was effected nor did they routinely display awareness of the phonetic issues implicated by the turn design. Whilst therapy based on contrastive minimal pairs is undoubtedly a valid approach caution must be exercised in ensuring that their application truly reflects the child's phonological system. This discussion will be taken up again in the conclusions to this thesis.

Following Schegloff's (1987) work on misunderstandings in talk it can be seen from the above presentation that the interactants not only display trouble with possible intended referents but the child in particular can have trouble with the sequential import (implicativeness) of the adult turn i.e what action is being done by the turn and what is an appropriate next. That the adult turn was seeking repair as much as being an understanding check was not always addressed by the child. The ambiguous nature of the therapist turn meant it could be taken literally. Other factors that influence the choice of response by the child include that of the adult routinely having the solution to their query in mind, displayed by their handling of the subsequent repair sequences. By simply rejecting the adult redoing as a version of the target word (or their try) the onus is passed back to the adult to initiate appropriate repair. In fact the child rarely addresses the phonetic issue spontaneously following these redos of child error until explicitly directed by modelling or explicit phonetic comments by the therapist.

It would be neat to put the lack of phonetic repair down to the early stage of therapy involved in much of this data, suggesting the child isn't yet at a stage of development where they could recognise the phonetic errors for themselves and correct them appropriately. The same cannot be said of McCartney's (1989) research which investigated the final carryover stage of therapy and still found little phonetic repair following clarification requests. These findings must bring requests for self-repair into question as techniques for gaining phonetic repair or even stimulating the child to address phonetic issues at all without more explicit direction.

CHAPTER FIVE

A MOTHER DOING THERAPY

5.1. INTRODUCTION

a) The parent in speech therapy.

Parental participation in the therapeutic process is considered crucial by most therapists. In this chapter it is my intention to look at one individual mother's pedagogic style as she takes on the role of therapist in the home. Some researchers have tackled the subject of how phonetic repair is executed e.g. in normal child/child (McTear 1985) and parent/child talk (Tarplee 1993) but there has been little specific study on how parents of language disordered children approach this aspect of interaction. More specifically there have been no studies concerning the execution of the parental role in speech therapy.

Incorporated within this analysis will be discussion of elements that have arisen in other chapters, particularly the use of modelling, redoing and some closings. In these and other respects certain aspects of maternal style will be compared to those of the therapist working with the same child. The comparison of mother/child and therapist/child styles of interaction is not looking for relative rates of success in producing phonetically 'correct' responses. Rather it will describe the collaborative moves mother and child make in the task of making sense of phonetic material. The forthcoming analysis shows that the parent's talk on a given target differs in the length of the repair sequences involved and the manner in which they are executed. Predominantly it appears that therapist's talk is chunked into smaller subunits than that of the parent and this is demonstrable through the differential distribution of certain behaviours such as redoings as models, explicit evaluation and closings.

The other chapters in this thesis have not dealt exclusively with therapist/child data. Mother/child examples have been interspersed and used as illustrative examples of therapy interactional phenomena. This obviously points up the fact that both types of adult/child dialogue share common features when dealing with therapy (and other) issues. However what is of interest in this chapter is how one particular mother 'does therapy' in the home following on from what she has seen and been advised to do at the clinic. To a certain extent the belief

system that this mother brings to and, at least in part, gathers from the clinic becomes transparent through the interaction just as the therapist's has been shown to do.

The parent's contribution to the therapy process is considered crucial to the child's progress. Children usually receive therapy once/twice a week in a clinic in bouts of approximately 8/10 weeks. One weekly halfhour out of a child's life is not considered sufficient to bring about profound changes in behaviour without carryover into the home setting. The parent is therefore expected to work with the child at home and to some extent (dependant on various factors) to 'correct' him during everyday talk. The importance of this role and how it is best executed is hopefully imparted during therapist/parent counselling. The advice that Stuart's mother receives is mainly concerned with what to "practise" rather than any specifics on how to do it. For instance, in the first session the mother is told to "work on" the sound /k/ "in isolation, on its own...use your hand to show where the sound is made..." (referring to the use of gesture). There is also some indication of what level the child is at and what he will accordingly find easier (in the appendix is a transcription of the advice that the mother received during the first therapy session).

The data used will be predominantly that involving Stuart with his mother, filmed at home (with the researcher present) five times over six months. They use the 'homework' book provided by the therapist as well as playing and looking at picture books. The homework book contains all the tasks set out and used by the therapist in the clinic session, although some of the task elements are either not used in the same way or not used at all by Stuart's mother. For instance, she does not do any auditory discrimination work nor does she use a game involving ladders of target words for drilling which have the intrinsic incentive of ascending a rung for each correct answer. This selective choice of material may be significant in itself in that it omits the only obvious element of play built into the work. This particular mother/child partnership has been chosen for analysis as the modes of interaction apparent in the data seemed the most removed from those recurrent in the child/therapist exchanges. From a professional standpoint a detailed analysis of such interaction may help to give an informed perspective on how some parents execute therapy practice in the home and the implications for future therapy practice considered.

b) The length of task bouts in mother/child data.

As a part of the analysis certain numerical data are presented. One of the factors that stands out immediately in the mother/child data is the lengthy, seamless quality of the tasks compared to those of therapist/child. To illustrate this more clearly the length of task bouts that concern one particular key word are presented numerically, based upon the number of turns¹ per participant. The number of turn construction units per turn is not counted. The comparative length of task bouts in two samples of clinic and home data will be shown in the form of a table. This relates to the first part of the *first* and *second* clinic session and the complete follow up session at home a few days after each. A bout is defined as a number of turns dealing with a target word as initiated by the adult and finishing with a closing strategy or change of target or topic that is taken up by the listener. The table excludes non work-talk such as that about the child's own experiences, behaviour management or preparatory preamble to a task. If the same word was practised several times in succession it was counted in separate bouts if some intervening talk or activity had occurred. An example of the divisions made is given in appendix 2.

¹A 'turn', broadly equivalent to an utterance in linguistic terminology, consists of one or more 'turn construction units', where there is no lengthy pause (more than 0.8sec, Jefferson 1989) separating the units and each turn generally bounded by a pause (where there is no overlap or cutoff etc). See Sacks, Schegloff and Jefferson (1974).

The table presents *frequency of bouts of varying length* measured by *number of turns within bouts* in two complete mother/child practice sessions and the same in an equivalent number of bouts from the therapist/child data (the clinic sessions were longer than home practice).

The two sections labelled A/B for each adult in Table 1 consist of;

A) *bouts* in the whole of the 14 minutes of the first practice session and the equivalent number of bouts, in the first therapy session (excluding two episodes of auditory discrimination work).

B) *bouts* in the second filmed practice session (12mins) and the equivalent number of bouts in the second therapy session (15mins).

TABLE 1. Frequency of bouts of varying length.

NO. OF TURNS PER BOUT	0-5	6-10	11-15	16-20	20+	TOTAL
MOTHER A)	4	4	4	4	4	20
B)	11	16	8	2	0	37
THERAPIST A)	11	6	3	0	0	20
B)	21	13	3	0	0	37

What is most striking about this table is the fact that none of the therapist/child bouts extend over more than 15 turns and a large majority fall into the 0-5 category (55-57%). Whereas the mother has a more even spread between very short bouts and some that go up to nearly 30 turns. The more leisurely pace of the therapist data, with more time spent in drawing and non work-talk, is to some extent also reflected in this table as despite the extended length of the mother/child bouts both dyads experience 20 bouts in the same length of time in session A and with only a few minutes difference in B.

A detailed interactional analysis will now be presented, based on an extract that illustrates a lengthy repair episode. After this description which will include details of certain adult turn types some further frequency data will be presented. This will be based on a limited

proportion of the data available on the particular mother/child and therapist/child dyads used in this chapter. I will look at the *proportional use* of certain turn types as well as assessing whether therapist and mother have any distinct *idiosyncratic* behaviours. The ensuing analysis will help to elucidate how a certain turn's *place* in the task sequence may be of significance.

5.II. A LENGTHY BOUT; AN INITIAL DATA PRESENTATION.

The initial analysis will concentrate on mother/child data. Having said that lengthy procedures are rare and constituted differently in the therapist/child data it will be useful to isolate those aspects of maternal style that contribute to the lengthy episodes that occur and provide such contrast to therapy data. This first extract #5.1 is chosen because it is itself lengthy and illustrates the mother's propensity for certain types of behaviour.

Put simply the task for the adult/child is to work towards a 'correct' version of a target sound, usually in a lexical context. In general, throughout the data, the child routinely fulfills his interactional obligations in terms of supplying answers to questions and repeating redoing/models in lengthy repair sequences. However there are numerous exceptions to this in the mother/child dyad where the expected response is not forthcoming, for example when the child instead initiates a topic other than the phonetic business in hand. There are also several interactional side sequences where the mother deals with the child's behaviour. There are no such occurrences in the therapist/child data (with the child involved in #5.1) as the adult maintains control of the length and content of the therapy bouts with few child initiations (much as was found by Letts 1989).

What is considered an acceptable version can vary from one context to another and from adult to adult. At first glance the dialogue presented in #5.1 will not appear so very different to that which occurs with a therapist when a phonological error is made. An error is picked up, modelled and evaluated and the targets of therapy and repair usually are made to stand out from the surrounding speech and usually to display to the child what form that repair should take. Where no help is given in this direction then self repair is sought. However in #5.1 the mother will be seen to target more than one phonetic segment during the course of the repair sequence through the use of speech perturbation and other overt means. In this respect

a distinction must be drawn between two types of therapy target. First there are those phones that the tasks are officially designed to tackle. Secondly other targets can be highlighted by modelling or direct comment by the mother. In #5.1 not only is there a shift in targets throughout the sequence but also multiple targets can be displayed in one turn. Thus attention can be turned on errors which are not the immediate target of that bout. In the course of this it also becomes clear that Stuart's mother is aiming for a level of accuracy that goes beyond the initial target sound.

a) The data.

Stuart was four years old at the outset of filming and had attended assessment and advisory appointments prior to the commencement of therapy. There was a familial disposition towards linguistic difficulties and in Stuart's case this was compounded by a fluctuating hearing loss due to glue ear. Stuart's hearing had tested as normal at the outset of therapy however. He had other language skills within normal limits but a phonological problem that showed little improvement in the months before being taken on for therapy. His phonological system showed immaturities (e.g. fronting of velar plosives [k→t], [g→d]) but also deviation from the expected pattern of development. Some features of this, such as stopping of fricatives ([s/ʃ→t/ʒ], [v→d]), are typical of a child who has experienced hearing difficulties. The therapy has been tailored to tackle these features predominantly.

Extract #5.1 is taken from a practice session at home a day or two after attending the first working therapy session (i.e. apart from assessment and review/advisory appointments). Parent and child are simply going through the workbook as prepared and used by the therapist in the session. A phonetic error occurs and a repair sequence ensues. It is counted as a single bout as they work continuously on a single word as initiated by the adult and finishing with a change of topic that is taken up by the listener. Mother and child are seated at home looking at the practice book together. They have moved from work on /k/ to that on final plurals with /z/. The dialogue starts off simply enough with Stuart labelling the picture with lexical accuracy but with several phonological errors.

#5.1 *St/Mother.1. Going through homework book and naming the /-z/ plural pictures.*

- 1.St. ((points and looks to pic.)) [$\underline{b}v\ \text{p}\ g^{(i)}$]
- 2.M. Not brogs, [frogs.
 ((exaggerated artic.))
- 3.St. [$\underline{f}v\ \text{p}\ g^h$]
- 4.M. Yeh ((glance to book))
 (.2)
- 5.M. again look.
 (.5)((touches him))
- 6.M. sit up.
- 7.St. [$\underline{f}v\ \text{p}\ g^h$].
- 8.M. Well sit up.
 (0.6)
- 9.M. [$f\lambda\ \text{p}\ g^z\ z\text{:}$]
 < >
- 10.St. [$\underline{f}v\ \text{p}\ g^s$]
 ((looks to mother))
- 11.M. That were good were that, do it again.
- 12.St. [$\underline{f}v\ \text{p}\ g^{(s)}$]
- 13.M. [$\underline{f}\lambda\ \text{p}\ g^z\ z\text{:}$]
- 14.St. [$\underline{f}v\ \text{p}\ g^h$]
 ((M. moves head to seek eyecontact))
- 15.M. Put your ser on.
 ((St. moves head away rapidly))
- 16.St. We have to=
- 17.M. =frogs::
- 18.St. We have to make the fishpond.
- 19.M. Yeh, we have to make the fishpond.

The first repair episode² occurs between lines 1 and 4, ending with a clear evaluation "yeh". In line 1 the initial /f/ is stopped and is bilabial rather than labiodental and the second part of the /fr/ cluster is realised as [v̄] a labiodental, liprounded approximant. The final [z] is not signalled clearly. It is not clear from the recording whether any attempt is made. (This is the target error for therapeutic remediation i.e. the omission of final alveolar fricatives (s/z)).

At line 2 Stuart's mother rejects his initial try with the overt marker "not (brogs)" plus an inaccurate redoing of his errorful try as "brogs" (he actually said [bʋogs]). This rendition glosses over the poor articulation of the /z/, the focus of therapy, and of the /r/ as [v̄], but redoes his rendition of the initial /fr/ cluster as br. This redoing is then contrasted to a model of the target word "frogs", a tactic that the therapist had used in the session. It is designed so that the correct version comes at the end of the turn, in the clear for imitation. The focus on the initial segment, (in addition to the auditory contrast 'fr/br') is created by exaggerated articulation rather than any increase in loudness or length. At line 3 Stuart responds promptly to the model set up in the prior turn and successfully repairs the initial /b/ to the required /f/. Although his mother looks at him directly Stuart is looking away during this episode. This does not prevent him attending to the /f/. The final fricative /z/ is little changed.

Thus the combination of the overt rejection, contrast of the correct and incorrect versions and the very slightly exaggerated model has prompted an appropriate repair, although it is not of the target sound as identified by the therapist. His mother immediately confirms this repair with "yeh" but qualifies this with a quick request to say it "again". It initiates a whole new path of repair. No redoing or model is supplied with the repeat request. The continuation of the work topic at line 4/5 is continuous with her exhortations for him to sit still, at a time when he is beginning to fidget and not focus his gaze on her or the book. (This sort of behaviour is something the therapist rarely has to contend with as evidenced by the data available.)

²this is a continuous part of the complete bout that constitutes the extract. The combination of 'Yeh + again' is followed by a side sequence on behavioural matters which is not responded to verbally by Stuart. Instead he responds to the prior 'again' and so the side sequence is not considered as closing that repair episode. The bout is closed at 18/19 by Stuart's initiation of the fishpond topic which is taken up by his mother and the task is subsequently reinitiated by the mother for a second, shorter bout.

Stuart replies to this request for repetition at line 7 in slight overlap with her utterance "Sit up". Despite his restlessness he displays interactional compliance to the "again" request but does not look at her. His repeat (7) does not differ a great deal from his prior try except that there is some voicing on the rather effortful production of the /f/ (exhibited by blowing out the cheeks in the production of air pressure). Thus he would seem still to be displaying work on the initial phone. His interpretation is arguably that the minimal acknowledgement "yeh" plus "again" requires more than just a repeat but is seeking some improvement in clarity, albeit unspecified.

That this try has remaining segmental error as far as the mother is concerned is made transparent by the mother's next relevant turn (9) where she does not confirm his try and where the redoing/model that occurs is an implicit evaluation of his prior try as inadequate. The clear model marks the segment for attention, the final /z/. This model differs significantly from the previous one at line 2, where the stress was on the [f], as this time the focus has moved to this final section of the target word. Individual weight is given to each segment of this /gz/ through a rapid 'sforzando' (increase and decrease in volume) on each (renewing the acoustic energy and fully voicing the /g/). There is some prolongation of the final fricative but more unusually it is released with a syllabic schwa /ə/. Stuart's following repeat (10) has a clearer element of final friction, possibly interdental. There is no imitation of her unusually phased emphasis on /gz/. He turns to his mother for the first time and meets her gaze as he utters the final fricative.

This repair is followed by praise at line 11 yet this does not function as a closing. It is followed by a further request for repetition "do it again". "That were good were that" differs from the more qualified flavour of the evaluation plus request at line 4 where the "yeh" did not mark the status of the prior try so explicitly (line 2). Part of the nature of this sequence thus involves the withholding of appreciation following an initial appropriate repair (br→fr) until 'correct' pronunciation of the therapy target /z/ is also achieved. Thus two phonetic segments have been targetted and repaired in one sequence.

The praise at line 11 raises the question as to what the repeat request could be doing here. At line 4 such a request follows a still inadequate try (despite the appropriate repair)

displayed by the adult through a shift in the stressed segments of her following redoing/model. But here at line 11 "do it again" follows a wholly adequate token of the target word as evaluated by the mother. Another key aspect of this request is the absence of a further model. The onus is on the child to reproduce an error free try.

The mother's request for repetition is overlapped (lines 11/12) with another try by Stuart in which the final /z/ is not as good as on the previous try. Following the repeat request and overlapped try there is a further model (13) that once again shifts the phonetic focus. This time the final /z/ is augmented but so also is the /r/ of the initial blend. In more detail the articulation here (13) is unusually open with prolongation of the r. The plural marker is devoiced to a greater extent than would be usual following a final voiced plosive [g] and this plosive is made almost syllabic by the release onto a schwa before the start of the [s]. Thus the final phone sounds like [s] rather than the prescribed and discussed [z] form of the plural. Thus the model has changed from those given before the rewarded child try was achieved (at line 10). As part of the process of encouraging the child to 'do it again' his mother has produced a version of the word that does not highlight any single element but rather has careful articulation of the whole word including the /r/ not tackled before. The request for repeat leads to a recycling of the whole process.

The mother's model does not result in an improved rendition at 14 but does result in some minor change from his prior try. The alveolar plural is again stopped as a plosive but with some aspiration, reflecting the voiceless plural marker [s] of the mother's version. But the matter does not end there as the mother continues to pursue the production of the final fricative, returning to the sought after plural with "put your 'ser' on" at 15. This overt reference to the letter name acts as a repair request with no outward evaluation of the prior. She does not make any reference to the content of the rest of the word so if there were any intent to improve the overall articulation, as suggested by her carefully articulated model at 13, it is not reiterated explicitly here. Only the therapy target /z/ is referred to. It is Stuart who signals that enough is enough and changes the topic to fishponds at line 16, ignoring his mother's prior request and the model that interrupts his utterance at lines 16/18.

b) Summary of initial analysis.

In summary this extract consists of a lengthy task bout, the longer of two bouts concerning 'frogs', where there is evidence of the mother seeking a version of the key word that goes beyond the correct pronunciation of the actual therapy target /z/. This is evidenced by the presentation of a shifting focus (by speech perturbation and verbal description) from one segment to another and the child's reaction that follows that shift. The length of the bout is produced not only by repair on the initial try but reinitiation of the process through the use of repeat requests (e.g. "do it again") after a positive evaluation has been forthcoming. The overt requests for repetition occur without a further model in this instance though this is not true throughout the data. There are other options that are available to an adult in response to errorful and acceptable tries, several of which also solicit further child tries. Investigation of their deployment may provide evidence of contrastive and complementary use of such turns with differential sequential implicativeness for child response/repair. Also of interest to the analysis is how the endings of these lengthy task bouts come about. Although in #5. 1 the child tries to take the initiative in this respect this is not always the case, and the mother's closing moves will be of interest too.

The child's reaction generally follows the adult focus but seems different to that which occurs with the therapist in that, with his mother, Stuart does not always seek to imitate prosodic and phonetic features of the parent turn (model). This is evidenced at lines 9/10 where he retains the natural rhythm of the word 'frogs' following her distorted version. This apparent differential treatment of the two adult's models also warrants investigation. The rest of this chapter will seek to establish that these are patterns that routinely occur in this mother/child therapy talk and that such routines differ in their makeup to those produced in therapist/child talk.

c) Structure of the ensuing analysis.

The analysis that follows will deal predominantly with the issues arising from the construction of lengthy sequences in mother/child talk. It will initially seek to establish whether the mother is more generally seeking repair of more than one error. This phenomenon is the topic of the next section of this chapter. Further searches have revealed numerous examples of this phenomenon in the body of data and in section 5.III they are presented as evidence which

suggests that the mother is seeking overall 'correctness' not just of the therapy target but of the whole word. Multiple target phones are found to be modelled sequentially throughout a repair bout or together within a single modelled word. In section 5.IIIb, as part of the picture of the mother's higher level of expectation, comes evidence of her differential treatment, at the end of lengthy sequences, of child tries with unresolved error. Although such a sequence may come to an end through the mother's change of topic the final try commonly remains unevaluated.

Much of a lengthy task involving repair is made up of numerous repeats of the target word by the child. In section 5.IV a description of certain turn types which act as *repeat seeking turns* will be presented in order to give a fuller picture of how such task bouts are constructed. These turns then form the basis of a quantitative comparison of the mother/child and therapist/child data. Requests with 'again' are discussed in detail as they seem to warrant the interpretation of the mother as practising tries that are already an improvement on the child's own phonological system. Other child tries that exhibit a major systemic error or lack of repair will be shown to project a different response from the mother.

Finally, in section 5.V presentation of some therapist data will show that, in contrast to the mother's approach, the therapist tends to keep the repair sequences brief even if this means accepting a child try that falls short of 'correct' on the target phone. The therapist's approach to modelling/redoing (and other strategies) will also be shown to be different in that it routinely ignores extraneous error and, additionally, is influenced by the theoretical basis of therapy in a way that the mother's is not.

5.III. THE CONSTRUCTION OF LENGTHY BOUTS IN MOTHER/CHILD THERAPY TALK.

a) Modelling of multiple target phones.

In the practice tasks the target phone for the word list is not explicitly stated with each new target word by either mother or therapist. The child must rely to some extent on memory and experience to execute the appropriate changes to his established speech pattern, especially

where no model is available. It can be the case that the therapy target is left implicit (by therapist and mother) until a child exhibits problems with it and then its focus may be raised. This fits with the fact that the therapy target is not mentioned overtly with every single task bout. The aim of the exercise may only become clear to him (or an observer) through the pattern of highlighted models that emerges prior to and following the child's tries.

Not all tasks begin with a model. Some are initiated by a 'test question' regarding the stimulus picture such as "What's this one?". When a model does occur as the initiator then multiple targets as outlined below are conspicuously absent. They routinely only arise as part of a repair sequence. Changes in the target segment over the course of the repair sequence suggests a disinctive type of orientation to the overall correctness of a word's pronunciation on the part of the mother.

Stuart's mother displays an attention to multiple speech segments of a target word within any given repair sequence in a way that is not found in the therapy data. For instance in #5.1 Stuart's mother first isolated the /f/-[b] error (line 2) and then, in later turns, highlighted other segments such as the plural /z/. She even appeared to stress all the consonantal segments in line 13 [fr:og s:], including the unworked on "r".

Multiple repair targets can be found either :

- i) as two phones highlighted in one modelled word;
- ii) as two phones modelled in sequence with intervening child tries.

i) Two phones highlighted in one modelled word.

In the following two cases more than one target is highlighted in a single model. In #5.2 below this dual model is apparently reduced as the repair sequence progresses in that the prominence is taken off one of the phones rather than being shifted from one to another:

#5.2. St/M.1. Target /s-/ in "sun".

1.M. What's this here?

2.St. er:

(1.0)

3.St. [tʃ:ʌ m]

4.M. But you said 'choom', so it's s:uner. >Come on< you do it. s:un.

(2.5)

5.St. ts:ʃ

6.M. go on and the 'un' bit.

At his first try in line 3 Stuart produces a version with some effort at friction on the initial /s/ and then a closing bilabial nasal, rather than a display of a carefully articulated /n/. Whilst in connected speech this type of final consonant substitution may have gone unnoticed (returning to the rest position in closing), in this context it is picked up on by his mother. Her utterance contrasts his incorrect version with a heavily exaggerated model. The stress is not restricted to the target /s/ (which is prolonged) but includes emphasis on the final /n/ which is released onto a schwa [sʌnʰ]. This emphasises the alveolar rather than bilabial contact. The model is then modified later in line 4 from this distorted version to a repeat of the model with less stress on the [n]³ (and no schwa release) but maintained prolongation of the /s/ target. Stuart certainly responds to the former part of the model with [ts:ʃ].

What is unusual about the next extract is that the mother's description and her following model do not highlight the same error. The wordlist has been designed to exemplify the plural /z/ but she is referring back to the recent work on t/k as well. The model in line 2 stresses the therapy target not previously discussed and actually signalled reasonably by the child. Thus two phones are highlighted through explicit description and stressed articulation. Stuart's mother is thus highlighting two phones within a turn.

³footnote. The lack of speech perturbation on the /n/ at 6 is very like that when she said "it's frogs not brogs" in that temporary lapses from his normal pattern of speech are regularly highlighted by such contrastive means but retain features of normal speech rhythm.

#5.3 M/St.1. Target -/z/ in 'cars' (picture).

1.St. [t^hadz/

2.M. It's not tars it's cars, cars:

3.St. [t^həz]

4.M. Yeh, but you're still saying [t^hə]. [k^h], it's [k^həz:ə]

<

5.St. tars:

What is interesting about #5.3 is that Stuart is actually signalling the plural reasonably adequately with [z], even in his first try (line 1) yet this correct version of the target remains unevaluated. The /k/ is fronted however to [t]. In next turn he receives an explication as to the source of his error that contrasts /t/ with /k/, but in the immediately following model emphasis is put on the /z/ with "cars:". The speech perturbation in the model (only on /z/) thus does not match either the prior description "it's not tars it's cars" nor her following evaluation which focusses only the t/k distinction (line 4). At no time does the initial /k/ become emphasised through speech perturbation as part of the key word; the contrastive presentation of "tars" with "cars" is the evidence that this is a target. In this case, therefore, the mother is presenting two versions in the same utterance and the focus does not follow the child's error pattern as closely as in #5.1. A data search revealed other examples of this phenomenon.

ii) two target sounds identified through modelling in sequence.

In the above two extracts Stuart's mother clearly sets out her multiple goals in next turn based in most cases on the child's pattern of error in the immediate prior try. However in the last extract (#5.3) the child is actually signalling the plural yet it is still a highlighted feature of the maternal model, where two targets are presented together. In other cases multiple targets are presented sequentially, once one issue being dealt with another being raised although not previously marked.

In the next extract Stuart's mother is working on the target /k/ in her first modelling turns but once the child has achieved this phone she immediately moves onto another part of the word,

with no overt evaluation or closing of the work just accomplished. The target sound moves from /k/ to /p/ but this latter phone has not been highlighted through speech perturbation in any way previously.

#5.4. M/St.2. Target /k/ in 'pink'.

1.M. Say pink.

2.St. [p̄ɪŋ]

3.M. k^h

4.St. [bɪŋ]=

5.M. =k^{her}.

(1.0)

6.M. [p^hɪŋk^h]

<

7.St. [bɪŋk^h]

8.M. No:, your saying bink,[p^hɪŋk^h].

9.St. I wer-[p̄ɪŋk^h]

(2.0)

10.M. What's this then.

In the above request for St. to say 'pink' his mother does not initially put any particular stress on the target /k/ or any other phone in the model 'pink'. However her next move is to prompt the final segment of his try [piŋ] with an aspirated [k] where he has omitted it in his response to her model. This move is enough to make Stuart say the word again but his version appears unaltered as regards this phone (4). His mother then follows his next try with an even more emphatic version of /k/ that is followed by a schwa, and when no repeat is forthcoming she says the complete word herself with a heavily aspirated /k/ (5/6). This stressed model, with crescendo in volume, actually does result in Stuart repairing his try and incorporating a /k/. However this vast improvement is followed by a "no:". This rejection is then displayed to be explicitly founded on his poor rendition of the initial /p/, nothing to do with the /k/ which they have both been attending to. His mother moves the stress on to the heavily aspirated /p/ of her model (line 8).

In this extract the expectation of correct production of a phone other than the therapy target remains hidden until the adult's explicit comment regarding the previously nonhighlighted /p/. That there is an expectation of correct pronunciation of phones other than the therapy target and other than those emphasised by any model is again exemplified in the next two extracts. Some targets do not become obvious initially through speech perturbation or explicit comment prior to a try. They are only identifiable as targets by their later evaluation.

In the next example it becomes clear through her final evaluation that the mother had expectations of overall correctness even though her original models only highlighted one segment. In this stretch of speech the therapy target is /s/. The word picked out to be worked on actually formed part of a game involving the stereotyped phrase "I can see.." which was intended for practice of the use of /s/ in a phrase. The items affixed to this phrase were those found in the room and did not all begin with /s/. Therefore the context was not such that the child should automatically expect an 's' word.

#5.5. St/M.1. Target 'sink'

- 1.M. [sɪŋk^h]
- 2.St. [sɪŋ:k̚]=
- 3.M. = k, remember your 'ker' at t'end. [sɪŋk^h].
- 4.St. toilet.
- 5.M. NO, it's a sink. Say [sɪŋk^h].
- 6.St. [sɪnk^h].
- 7.M. Goodboy, you remembered your 's:' and 'ker' there.
8. Again, say it again. [sɪŋ:k̚]
- 9.St. [s:ɪŋ:k̚].
((tense articulation))
- 10.M. Remember your /k/.

Here the first model at line 1 has some marked aspiration on the /k/ but the /s/ is said with the normal flow of speech. Stuart makes an indistinct, unreleased [k̚] in his try and is explicitly reminded to add it at line 3. After two more models (and joking apart) with no particular emphasis on either beginning or final segment Stuart succeeds in producing an

acceptable version at line 6. At this point his mother praises him for producing both an /s/ and a "ker" in the same try (7). The /s/ has never been marked as a target nor Stuart's correct production noted before. The fact that the child got the /s/ element right from the outset must be a significant factor in the mother's lack of emphasis on this target. In other extracts where a child's try at a target has been unacceptable then the emphasis has been added to that part of the word in mother's next model (or comment).

What is important here is a shift of focus actually incorporated into an evaluation of the child's prior try. Assessing positively phones which are unofficial targets along with those that are official ones, seems to be another way in which the parent exhibits her orientation to the overall correctness of production. It is not out of the question for a therapist to do this in reference to phones recently targetted in prior work but many of these other multiple target options would be alien to clinical dialogue, unless phone combinations were the explicit therapy target.

These various examples warrant my claim that the mother is often aiming for an overall correct production of a key word, not just of the target phone which links the word lists. Here then is some evidence that targets for correct pronunciation may not always be highlighted by speech perturbation when modelled and may remain implicit until evaluated at a later stage by the adult. Multiple models are not the only way in which the mother's strict criteria of 'correctness' are expressed. There is evidence that maternal use of closing strategies varies according to whether an acceptable level of phonetic accuracy has been achieved or not.

5.IIIb) Absence and deferment of maternal closing moves in lengthy repair sequences.

In this section the ways in which repair sequences are brought to a close will be investigated. The following analysis exposes the mother's differential treatment of 'worked on' tries and those that still show some discrepancy from the desired 'correct' pronunciation. Firstly a brief overview of typical closings that confirm lexical choice and phonetic accuracy in non-therapy activities will be given. Then a series of examples will show that the mother treats positively repaired responses in a similar manner. Unresolved errors, however, are usually left without

any explicit closing and with the mother switching to the next task with no further comment. This lack of clear demarcation with closing strategies leads to the impression of a continual pursuit of perfection.

The types of closing strategy that the mother uses when engaged in non-speech therapy activities (e.g. looking at books and other didactic sequences) more clearly resemble those routinely used by the therapist. These simple closings occur in therapy talk when the child is 'correct' at an early stage and the utterance does not warrant repair. They reflect the style found by Tarplee (1993) in her work on pedagogic book sessions between mothers and young children. In such circumstances the child's naming response is routinely met with a simple confirmation combined with a redoing of the key word or phrase.

#5.6 St/M. 1. Playing with miniature 'playmobil' playground toys.

1.M. What's that then?

— —
— —

2.St. a swing.

— —
— —

3.M. a swing. Good boy. Who's going to sit on there?

The mother is asking for information that is known to her as is shown by her ability to evaluate the answer as appropriate. Stuart replies simply with the label " a swing". He articulates the word accurately and his mother confirms his response with a redoing of his utterance that reproduces the prosodic features of Stuart's response. This noncontrastive presentation is succeeded immediately by praise for his response that could be aimed at any aspect of his reply (informational or phonetic or both) She then continues by expanding the topic, moving the conversation on.

Stuart's mother also routinely employs redoings of the child utterance in isolation, without any overt confirmatory markers. They mimic the prosodic pattern of the child prior, especially the pitch pattern in a playful way. In the next example even though there has been an extension of the /s/ in mother's redoing it is still treated as a closing by the child (as found in the

gives him an incomplete phrase in the same format as line 1 using a prolonged 'a:' as a cue. This time she does not go on to complete it herself. After a long pause Stuart completes the sentence and his mother then gives him the prompt 'take care'. Stuart imitates this with the /k/ segments correct. Stuart's mother then repeats this again followed by the comment "that's a bit better" which clearly exhibits that her implicit evaluation of line 2 was that it could be improved upon. Thus we have clear evidence to warrant the claim that a withholding of evaluation may follow unresolved error whilst wholly correct ones are praised.

In the above extract comment on the initial try was withheld until a better version had been produced. In the next extract we see that initial evaluation is deferred with "And again" until such time as a vastly improved response is achieved within the one repair bout. Then the try that has both modelled elements acceptably signalled is evaluated as correct.

#5.9. *St/M 2. Target 'steps' (st-),*

- 1.M. s::teps.
- 2.St. [s:t̄ep̄f]
- 3.M. And again. s:teps:
- 4.St. [t̄eps].
- 5.M. [s:t̄eps].
- 6.St. [*t̄eps]
- 7.M. That were very very good were that.

Initially his mother is exagerrating the initial /s/ in /st/ and subsequently Stuart signals this correctly at line 2. However at the same time he signals the final plural with a labiodental fricative. Therefore this try has successfully dealt with the key phone of her first model and in response to this almost acceptable attempt his mother requests a repeat, rather than rejecting it outright or accepting his accomplishment of the /st/ segment. In her follow up model she then emphasises both the initial /s/ and the final plural, making clear the nature of the work that is still to be done. Stuart, at line 4, then reverses his success, appropriately signalling the plural but missing on the /st/, [t̄eps]. Finally, after one more model where his mother has isolated the prolongation on the initial /s/ (line 5), Stuart gives a wholly acceptable response [*t̄eps] (6). This receives unconditional praise.

Simple closings are rarely found at the end of the longest repair sequences as these usually involve unresolved error. What often happens in these cases (as in #5.1) is that Stuart will move to change topic or his mother will leave any further comment on the topic and move on to the next item. What links the next few examples is that the final child attempts continue to contain segmental features that are recognisably discrepant with respect to the target word and his mother makes no final comment but moves on. There is no all inclusive praise at the end of a group of linked practice words as might occur in a successful drill session. The following extract comes at the end of a repair bout.

#5.10. *St/M.2. Target 'newspapers' (-z)*

6.St. [p^heɪp^hə d^z]

7.M. two papers:. Go on you say it z: two papers:

8.St. [t^hu p^heɪp^hə d^z]

9.M. two cars:

At line 8 Stuart eventually succeeds in signalling some friction for the plural /z/ on the end of "papers", where before he has used /d/. There isn't even a pause before his mother moves on to the next item on the list, "cars", for which the same type of response will be required and the repair remains unevaluated.

Another example occurs in #5.11 after some work on the nontarget sound /p/. At 5, mother provides another model; although the /p/ is now correct the therapy target /l/ remains in error. No comment is made either then or at line 7 and the next target word is brought in immediately, moving from 'lip' to 'ladder'.

#5.11. *St/M. 3. Target /l/ in 'lip'*

1.M. [lɪp^h]

2.St. [wɪp^h]=

3.M. =[p^h]

4.St. [wɪp^h]

5.M. [lɪp^h]

6.St. [wɪp^h]

7.M. ladder.

In a further example where the repair quite clearly is not resolved successfully, #5.12, we find the closing is dealt with in the same manner. In this stretch of speech Stuart is signalling the critical friction for /s/ at the end of 'face' (line 4) but it is palato-alveolar and preceded by an element of labiodental contact. The try is not overtly rejected (as was the possibly semantically incorrect response at 2). Instead his mother offers a further redoing/model. This results in further distortion of the child's try rather than any improvement (6).

#5.12. *St/M.2 Target 'face' (-s)*

1.M. Bet you don't know what that is.

2.St. (der a nose)

3.M. No, hehhehheh face.

4.St. [ferf]]
labiodental structure

5.M. fac:e

6.St. [pferf]:]
labiodental structure

7.M. No, you say it, face.

8.St [p^feif^h!]

(5.0)((Mum turns the pages and points to the next item))

Then at line 7 Stuart's mother clearly rejects his prior try, which has moved further away from the target version because Stuart has elaborated on the initial consonant unnecessarily whilst leaving the final fricative unchanged. Her model removes the prolongation of the /s/ and, in response, Stuart's next attempt (8) shows some modification of both the initial and final segments in the word. The /f/ becomes more affricated and the /s/ is released onto a devoiced vowel. Whether his mother finds this version acceptable or just decides to leave the matter is not recoverable from the interaction (and may well not be for the child) but she pauses and moves on to the next item in the book.

What links all these examples together is the fact that the mother's lack of closing comment follows a try which, although 'worked on' does not have all the target errors resolved. For instance, 'fac:e' (in #5.12) has a final fricative [f^h] that remains palatalo-alveolar rather than

alveolar [s]. On top of that the initial /f/ which was initially correct became affricated in repair and showed no signs of improvement over several turns. It would seem that Stuart's mother does not always provide a final evaluation for answers that are half right. When the trajectory of repair moves in a positive direction, within a few turns of the error and repair initiator, then she routinely makes a closing move⁴.

5.IV. ACCOMPLISHING A CHILD REPEAT IN NEXT TURN.

It has been shown that a sequence may be prolonged by the production of a succession of models that tackle various phones through change in emphasis, augmentation and other such strategies. Other factors which contribute to lengthy sequences were identified in the original extract such as the use of phrases with the word 'again' that pursue the repair sequence after a positively evaluated try. Table 1 has shown that long repair sequences are more characteristic of the mother/child data. Now further tabulation of the differential frequency of various repeat initiating strategies between *mother and therapist* will be presented and followed up by detailed discussion of the implications of these differences.

⁴ In the above examples the mother is making the decision to close the topic and embark on a new word. This is not the only way in which these lengthy repair sequences are brought to an end. In the original extract it was seen that St. was the one who tried to draw the repair sequence to a close by changing the topic and this occurs elsewhere too, for instance when he verbalises his feelings more overtly;

1. St. [wɒvɪ] stick in the mud.
- 2.M. Ler not wer.
- 3.St. wer.
- 4.M. ler.
- 5.St. I'm sick of this (**).
(4.0).((St. laughing))
- 6.M. racing car.

5.IV a) Repeat initiating turn types.

There are a number of options the adult can take in order to encourage a further try at the target word by the child. It is those moves that are successful in engendering a repeat try⁵ that will now be presented in table form. (Whether the repeats contain phonetic repair or not is immaterial at this stage of the analysis.) All the following behaviours have been found to occur in the data and they mostly incorporate the use of a repeat request and/or a redoing of the child's prior.

- A) **AGAIN ALONE** i.e. with no evaluation of the prior try or any redoing.
- B) **POSITIVE EVALUATION + AGAIN.** Positive Evaluation of the child's prior, followed by a repeat request such as "again". E.g. M. "That were good were that, do it again."
- C) **AGAIN + REDOING.** The use of "again" (often in a phrase) followed (or occasionally preceded) by a redoing of the child utterance as a model. The majority of these models follow only a micropause and are not a reaction to delay in response from the child. There may additionally be some form of positive evaluation of the child's try before the repetition request.
- D) **EVALUATION + REDOING.** A positive or negative evaluation of the child's try followed by a redoing as a model for imitation. E.g. "No, not tee, key."
- E) **PHONETIC COMMENT.** A comment on the phonetic or articulatory structure e.g. "right at the back"(re tongue position) or "Put your ser on". Such remarks may be followed by a redoing of the child try.
- F) **REDOINGS ALONE.** These also occur routinely as models for imitation (with the characteristics as outlined in chapter 2.)
- G) **OTHER.** This includes use of self repair initiators, such as incomplete sentences for completion with the target version and understanding checks such as 'Pardon?' that are followed by a repeat.

⁵This count does not include those turns that are followed by a significant pause >0.7secs and then another repeat engendering turn that is successful.

5.IVb) A comparison of mother and therapist use of repeat initiations.

The bouts presented in Table 1 (occurring in the first two filmed sessions) will now, in Table 2, be broken down into the turn types described above. The bouts labelled A & B in Table 1 constituted the first two complete maternal practice sessions and the equivalent from clinic session . The turn types from these two sessions (from 57 bouts in total) have been counted together.

TABLE 2.

FREQUENCY OF REPEAT PROJECTING TURNS (*turn types that successfully initiate another try at target word*).

TURN TYPES WITHIN BOUTS	MOTHER	THERAPIST
AGAIN ALONE.	7 (4.3%)	2 (2.4%)
POSITIVE EVALUATION + AGAIN.	8 (4.9%)	1 (1.2%)
AGAIN + REDOING (+ POS/NEG EVAL.)	17 (10.4%)	9 (10.8%)
POS/NEG EVALUATION + REDOING	41 (25.2%)	7 (8.4%)
PHONETIC COMMENT+REDOING.	23 (14.1%)	20 (24.1 %)
REDOING ALONE.	57 (35 %)	19 (22.9%)
PHONETIC COMMENT ALONE.	7 (4.3%)	16 (19.3%)
OTHER .	3 (1.8%)	9 (10.8%)
TOTAL NO OF ADULT TURNS.	163	83

It should be noted that this table represents the numeric frequency and percentage proportion of turntypes during the first two recorded sessions out of four (over six months). It does not include those turns that are not followed by a child repeat. There are two ways of interpreting these figures, firstly considering the *simple frequency* counts and secondly the *percentage* that each turn type constitutes as a proportion of each adult's talk. The *frequency* counts are important in revealing the sheer volume of turns in the teaching bouts and the *percentages* are critical when considering how the bouts are differently constituted for each adult.

In terms of frequency it is the sheer volume of *repeat engendering turns* on the mother's part that is so striking, especially when looking at the overall total of turns in the final row. In the same number of bouts, dealing with the same material, there are almost exactly twice as many of these moves by the mother: totals for mother are 163 compared to therapist's 83. The most extreme contrast is where there are 57 cases of the mother using *redoings alone* compared to 19 with the therapist and 32 maternal utterances contain *again* compared to 12 therapist. Additionally 41 of the mother's utterances constitute *evaluation* (predominantly negative) + *redoing* compared to 7 of the therapist's. In the other direction the therapist uses 16 *phonetic comments alone* compared to the mother's 7.

Looking at the percentages these turns make up of the particular adult's talk gives a clearer picture of how the adults are using these turns. A type of null hypothesis would be that despite variations in raw frequency the adults are using similar proportions of turn types, but this does not appear to be the case. The types of turn that feature predominantly with both adults are those with *redoings* as models, these making up over 80% of the maternal data and 65% of the therapist's. The majority of these, in the mother's case, occur in isolation with no other comment (35%) but also with frequent evaluation (25.2%) or phonetic comment (14.1%). This frequency may partly be explained by their serial use when an appropriate repair is not forthcoming (see #5.17) and by the mother's concern to encourage the child to give an overall correct version (not just the target phone). The therapist normally alters her strategy more frequently in such circumstances. For her a *redoing alone* is used slightly less frequently (22.9%) a redoing being just as likely to occur with a *phonetic comment* (24.1%) or *evaluation* (8.4%).

Table 2 also reveals some interesting individual turn choices where there are no redoings. The therapist uses more instances of *phonetic comment* than the mother does, making up a higher proportion of her turn choice;

MOTHER. THERAPIST.

PHONETIC COMMENT ALONE.	7 (4.3%)	16 (19.3%)
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Phonetic comments are turns which can explicitly attempt to direct the way the repair should go. As the therapist is using this type of utterance more frequently she is interpretable as

taking an overtly phonetic/articulatory approach to repair.

The mother uses a small but significant number of turns which feature an explicit repeat request with 'again', while the therapist uses such moves rarely unless a redoing is also provided.

MOTHER THERAPIST

AGAIN ALONE.	7 (4.3%)	2 (2.4%)
POSITIVE EVALUATION + AGAIN.	8 (4.9%)	1 (1.2%)
AGAIN + REDOING (+ POS/NEG EVAL.)	17 (10.4%)	9 (10.8%)

The mother does take opportunities to be positive, for example using (*positive*) *evaluation + again* but, more significantly, *redoings with negative evaluation*, (e.g. "No, not tee, key) make up a much greater proportion of the mother's turns than they do the therapist. These turns are incorporated into *evaluation + redoing* where both negative and occasional positive evaluations occur. The mother however only uses negative evaluation with a redoing whilst the therapist more routinely uses both positive and negative. (The therapist more commonly presents the contrast of correct and incorrect versions in the form of a query e.g. "Is it nurt or nurse?", counted in *other*).

MOTHER THERAPIST

POS/NEG EVALUATION + REDOING	41 (25.2%)	7 (8.4%)
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What we do not find in the corpus are examples of negative evaluation standing alone, they are always qualified in some way.

Being an analysis of an early stage of therapy would partly explain the large number of *redoings as models* appearing in the therapist output. At later stages one might expect to find a higher proportion of turns that we find in the '*other*' category in Table 2; for example, invitations to self repair like these in the following:

#5.13. St/Th.2 Target st- in star.

- 1.St. [t̥a]
- 2.Th. Now a 'tar or a:
- 3.St. [t̥a]

and:

#5.14 St/Th.3 Target s- in 'snake'.

- 1.St. /ʒami neik/
- 2.Th. Sammy the:
- 3.St. /neik/

In the early stages of therapy a therapist would certainly be more reliant on imitation than she would hope to be as therapy progressed. The 'Other' category in the maternal data does not have the above turn types but rather more frequent use of "Pardon?", "What were that?" and "Say it".

	MOTHER	THERAPIST
OTHER .	3 (1.8%)	9 (10.8%)

In summary all the above turn types are ones that have been responded to by the child (thus warranting their inclusion) and the mother is therefore stimulating a greater number of tries at target words than the therapist within a given bout. Partly this is due to her seeking repair on phonetic segments that are not concerned with the therapy target. The pattern is one of continuous search for perfection. Stuart's mother elicits most child repeats with the use of redos with embedded corrections through speech perturbation. On the other hand she makes more overt repeat requests where no further support is given in the shape of a redoing/model or phonetic comment than the therapist does. For the therapist the practice, restricted to the target phone, is built across tasks rather than on one word. She gives more positive than negative evaluation and does not routinely follow the former with further requests for a repeat. Redoings occur less frequently in therapist talk and are often combined with a variety of structures that give more information regarding the child's prior try.

In the next part of this chapter certain of the above turn types will be discussed in more detail, particularly those which contribute to the differences that have emerged between the two adults. The form that redos (as models) take has been analysed thoroughly in Chapter 2. Other turn types bring in arguments regarding their distribution not tackled elsewhere in the thesis. For instance although the structures using '*again*' make up a small proportion of the mother's talk they contribute significantly to the production of lengthy sequences. Their sequential distribution is of interest in that they are more narrowly distributed in comparison to other repeat instigating structures such as redos as they most commonly follow tries and repairs that show a positive trajectory. Much of the ensuing discussion will therefore focus on the analysis of these turns.

c) The mother's use of repeat requests and redos in lengthy repair sequences.

This analysis aims to show that repeat requests with '*again*' are in contrastive distribution to other strategies that stimulate further tries at a target. It will be shown that '*again*' is a repeat request that follows positive work already accomplished by the child and is a device for seeking further moderate refinement. In support of this it will be shown that the child routinely undertakes a different type of repair following such repeat requests compared to *redoing* structures. Repair following the former takes the form of alteration of suprasegmental and phonetic features of a phone (such as alterations in phasing or type of release) without major segmental substitution or addition. Redos in contrast follow major segmental error, including child repeats where little repair has occurred, and are often followed by segmental substitution or addition.

The structure of this section will be as follows;

i). Firstly *'again alone'* requests will be illustrated. *'Again'* will be shown to follow tries where some positive work has been accomplished and potentially permit the rehearsal of a single target word after repair has already taken place. Such requests for repetition are shown to rarely follow child tries that are far away from the target, for instance those that are derivable from the child's own phonological system. Examples show that *'again'* is treated as denoting that some further refinement is required on the phonetic segments already in place, and repair to prosodic and secondary phonetic features follow.

ii). These extracts will be contrasted to those where there is a major segmental error, in such as replacing one phone with another. Here the adult generally provides a further *redoing/model* or other explicit description of the repair to be executed. Redoings will be shown to follow initial phonological errors, or attempts positioned later in a sequence where no appropriate repair has been exercised or where the trajectory of repair has been negative.

iii). Key extracts will then show that *'again'* occurs predominantly with POSITIVE evaluation and not negative, an exceptional case being dealt with later in this section, (p258). Contrastingly *'redoing/models + evaluation'* are shown to be predominantly negative in orientation. Turns that incorporate both *redoings* and *again* will be shown to act much as other *'again'* structures do.

i). *Again as a marker of positive work undertaken.*

'Again' is used to encourage practice of tries praised as correct and also to shape attempts that are in some way good enough not to be dismissed completely. In the next selection of extracts it will be seen that 'again' is used routinely in such a way and the child is seen to interpret them as signalling the need for some sort of work to be done. What type of work is left open to the child especially when there is no model. By not evaluating the turn straight away the child is thus kept alert to the fact that there may be room for improvement.

In the following extract the repair the child makes after a repeat request deals with alteration to prosody and segment length, not a major segmental substitution. Therefore it supports the stance outlined above.

#5.15 *St/M 2 Target /s-/ 'sand'*

- 1.M. Bet you don't know what that is.
(.)
- 2.M. s:ander
<
- 3.St. S:AND (laughs)
>
- 4.M. Pardon?
(.)
- 5.M. Say it again?
- 6.St. Sand.
- 7.M. And again.
- 8.St. SAND
((claps in rhythm))
- 9.M. Don't be silly.
((turns back to book for next item))

Stuart's initial imitation has been very loud and is recognizably a version of the target word. This is, however, followed by a query 'Pardon' and then a repeat request "say it again" following the near adequate try. Here the repeat request at line 5 has a rising pitch and comes before any overt evaluation of the try, either negative or positive. Stuart diminishes the volume at line 6 but no major phonetic repair occurs. Instead the /s/ is shorter, returning to the normal phasing for the word. When another repeat request occurs at 7 he responds by increasing the volume but not altering the phasing of the articulation. The requests for repetition without evaluation in this example engender further tries, with only minor suprasegmental variation, that establish the status of what was effectively an acceptable first try before the matter is closed.

He does not treat the repeat request as requiring systematic phonetic work on his prior. Thus requests for repetition, especially when in combination with such a query as 'pardon' (or voiced like a query themselves) are not interpreted as requiring major revision. The response to this type of request here is such that improved clarity is achieved through work on volume but not through phonetic repair. This style and pattern corresponds to that of the therapist when carrying out an assessment procedure i.e. where no work is overtly being done on the articulation but careful attention to detail is required from the adult.

However the child does not just deal with 'again' structures through suprasegmental alteration. That Stuart can interpret 'again' as requiring some other moderate changes in clarity is confirmed by the next extract. In the cases described below the repair actually moves the try away from the appropriate articulation. His mother then has to alter her strategy from one of shaping to explicit rejection with a supportive model.

#5.16 St/M.2; Target -s in 'nurse'

- 1.M. Nurse.
- 2.St. [n ɔ ?t^{ls}]
- 3.M. Again.
(0.5)
- 4.St. [n ɔ ?^fb].
- 5.M. Nurse. No, Watch what I'm doing. Nurs:e.

Stuart's initial try (2) follows an unaugmented model and his /s/ has a lateral element. His normal phonological propensity would be to stop the fricative at the alveolar or glottal level (to /t/ or /ʔ/). So, as there is some friction, some 'work' has been done compared with what could have been expected from his own phonological rules. In line with the other examples of near acceptable tries above his mother does not reject this try outright but follows it with a repeat request. Stuart uses her request "Again" (said with a falling tone) as an opportunity for some phonetic repair, not substituting one phoneme for another but executing some refinement on the fricative /s/→[f^b]. However in so doing at line 4, [n ɔ ?^fb], he moves further

Here there are two clear examples of a redoing occurring in isolation. One (line 3) follows an aberrant first try where the child says alveolar [t] rather than the desired /k/. The second (line 7) comes after a much later try that shows no positive revision, despite further contrastive modelling where the mother has rejected the child's prior with "No, that's ter, ker", and then given him an emphatic model which is similar to her previous ones except for a slight increase in volume accompanied by a nod. The child's try parallels her speed and prosody but there is no velar articulation. In both described cases the mother then goes on to use other more descriptive tactics rather than further isolated redoings which have proved to be of little help in engendering repair.

Although no phonetic revision followed the redoings in the above extract there are numerous occasions when it does.

#5.18 St/M.4. Target /sp/ in 'spoon'.

- 1.St. [p̣um].
- 2.M. [s:p^hun].
- 3.St. [s:p̣um].
- 4.M. That's better.

Here the mother's simple redoing (line 2) of the child's try adds on the critical /s/ and lengthens it. Stuart imitates it with precisely the same lengthened fricative /s/ as the mother's model.

Another example clearly contrasts the use of 'again'(+redoing) following a try with good target /st/ but other errors outstanding and a redoing in isolation after a try where Stuart has reverted to the original error on /st/. This is also followed by an appropriate repair.

#5.9,1. *St/M* 2. Target 'steps' (st-),

- 1.M. s::tɛps.
- 2.St. [s:tɛpʰf]
- 3.M. And again. s:tɛps:
- 4.St. [tɛps].
- 5.M. [s:tʰɛps].
- 6.St. [ʰtɛps]
- 7.M. That were very very good were that.

In this extract 'And again'(+redoing) phrase has followed a try that displays a positive move away from his habitual phonological pattern but still has some error on the final plural. Even this segment shows some friction [ʰ] which would not be expected in his system and thus displays work in progress. In contrast the redoing in isolation, at line 5, follows a try, [tɛps], where a segment that had been correct before in the first try at line 2 (/st/ of 'steps') has reverted to [ʰt] (sounding like "d"). The following redoing stresses this initial phone and not the final /s/ which he successfully repaired in his prior.

iii) *Again plus positive evaluation.*

Further evidence for the positive stance of the use of 'Again' as a repeat request comes from those cases where it is coupled with overt positive evaluation. In these cases where the child's try is followed by the repeat request the attempt is recognizably close to the target. After the request the child routinely makes very little alteration to his version unless a redoing/ model accompanies the evaluation + repeat request as well. A straightforward case occurred in the first extract at line 10/11 well into a task bout with several child tries;

#5.1,1.1.St.

9.M. [fʌɒgʷz:]
 < >

10.St. [fʌɒgʷ]
 ((looks to mother))

11.M. That were good were that, do it again.

12.St. [fʌɒgʷ(s)]

13.M. [fʌɒgʷz:]

14.St. [fʌɒgtʰ]
 ((M. moves head to seek eyecontact))

In this stretch of speech the mother's line 11 gives a clear positive evaluation but this is followed immediately by a request for repetition with no accompanying model. Stuart then produces a similar try in overlap, with no major segmental revision, and the process of modelling and imitation is thus started up again.

In the next example the mother uses 'again + positive evaluation' and Stuart is successful in repeating the target quite accurately without any more work on it. It is said with the same prosodic pattern as the prior successful try with no increase in effort or volume that might accompany a try where an effort is made to repair.

#5.19. M/St. Target /-z/ in 'cars'



1.St. cars.

2.M. That's it, Good boy you did it that time. Do it again.

3.St. nn.

4.M. Say it again.



5.St. Cars.

Thus at line 1. he says the required plural and receives immediate praise (2). This is followed by requests for repetition, the one responded to being at line 4.

The child's response in the above case warrants the interpretation that these requests when accompanied by positive evaluation are to do with practising a word once a successful try has been established. The content of the repeat lies entirely in the child's hands. The addition of a redoing to the above format, whilst not altering the positive mode of the structure restates clearly the target as the mother wants it in a way slightly different to the child's prior positively evaluated try. That the child then interprets this model as requiring some refinement on his prior is displayed through imitation of the contrasting prosodic/length features of the mother's model. For example in the next extract the mother provides a model following her positive evaluation with lengthening on the target /s/ that Stuart has just produced.

#5.20 *St/M.4. Target /sn-/ in 'snake'.*

- 1.M. s:
2.St. snake.
→ 3.M. Good boy, now you've remembered. Do it again.
→ 4. s:nake.
 <
5.St. s:nake.
 <

Here the positively evaluated child try (line 2) comes at the end of a very lengthy repair sequence. He picks up on the mother's prolonged cued /s/ and successfully completes the word. The model that follows a request for repetition highlights the /s/, which is still the crux of the matter for the mother. The child imitates it with the same prolongation of the /s/ therefore slightly altered from his prior at 2. The explicit repeat request "again" therefore has been followed with subtle revision to the successful try, prompted by the model.

The picture of '*redoing alone*' turns coming after major segmental error in contrast to '*again alone/+positive evaluation*' structures is complicated by the presence of certain cases where these seemingly polar designs come together in phrases containing '*redoing + again*' (with no

overt evaluation) Where 'redoing and again' do come together they maintain the positive feel of 'again' structures on their own in that they follow versions which show some progress away from an original or systemic error. The redoing simply gives clear indication of the form the repetition/repair should take.

These points are illustrated in #5.21. Here the treatment of an outright error at line 2 is very different to that of the improved version at line 4. The former first try is rejected (after initial confirmation on semantic grounds) through a '*negative evaluation and contrastive redoing/models*' whilst the second is handled with a *request for repetition + redoing*.

#5.21 *St/M.1. Target /s/ in 'horse'*

- 1.M. What's this then?
- 2.St. [ʔɔt̚] (and it got a gate on it to get out).
- 3.M. Yeh, but you said 'or'. It's hors:e.
- 4.St. It [ʔɔt̚^h]
└─┬─┘
(\ articulation sustained post release)
- 5.M. Do it again.
 (0.3)
6. [ʔɔ:s:ə]
<
- 7.St. [ʔɔ's̩]
 ((claps in rhythm))

This stretch of speech shows that the mother's response to a definite phonetic error in first try is to (line 3) mark it as correct semantically with "Yeh but..", the 'but' displaying that it is not possible to deal with the informational level until the phonetic issue is addressed. She then provides a redoing of the child error plus a model that emphasises the /s/. When St. imitates this model at line 4 he keeps it in the context of the phrase "It horte" and signals the final consonant /s/ with a [t^h] that shows evidence of being a more open, aspirated articulation than was obvious at first try (line 2). Thus there is evidence of both syntactic and phonetic repair compared with the first try. His mother does not then reject this second try which shows some repair compared to the first try but instead requests that he "do it again". She also provides a further model (after a pause where no repeat appears forthcoming) with greater emphasis placed on the /s/ by a crescendo on the prior vowel and a release of the articulation

on to devoiced schwa. This model does indeed result in a further improvement in Stuart's next try.

When repetition requests are combined with models there is an obvious window for the child to use to improve on an already creditable attempt before any final evaluation. Where there has been no improvement between several child tries at the same target then the mother routinely uses strategies other than any combination with request for repetition, instead employing devices such as a model alone or explicit rejection/ phonetic comment.

There is one extract that contains an apparent contradiction to the finding that 'again' occurs following tries which are recognisably acceptable or showing positive work having been done. It also seems to go against the argument that 'again' structures only appear with positive evaluation. In this extract we find mother saying "No again, do it again." i.e. '*again + negative evaluation*' with *no redoing*. Careful examination however reveals that whilst the mother is indeed rejecting the child's prior try she is asking for a repeat of a previous better version. Thus this case, although apparently deviant, is in fact perfectly consistent with the argument so far developed.

#5.22. *St/M.2. Target /-s/ in 'horse'.*(numbering is taken from #5.22,1 p264)

7.St. [ʔʔts]

8.M. ['ors:e

9.St. [ʔʔts]

10.M. ((M. turns away to relocate book)) And again.

(0.9)

11.St. [ʔʔs:]

12.M. ['ors:e

(1.0)

13.St. [æʔ ʔʔʔʔs:]

14.M. No again, do it again.

(4.0)((St. turns away and M pulls him round))

15.M. Sit still and do it again.

16.St. [wʔʔʔ]

At line 7 Stuart gives a reasonable rendition of "horse" with some signalling of the /s/. His mother and he come in in unison (an example of shadowing discussed in section 5.V) so it is difficult to tell exactly how accurate the /s/ is, but it is there. His mother turns back to the picture at line 10 and the request for repetition follows. Stuart then comes in with a repeat which has a slightly prolonged /s/ with a schwa vowel on release (line 11), thus having modified his try in line with the 'again' request. Meanwhile his mother has shadowed his turn with another model where the /s/ overruns the end of his.

At line 13, following this overlap Stuart chooses, after a false start, to do more work on the word. The result is a very distorted version with labiodental articulation appearing with the addition of another syllable; [ʔɔ̃ʃɔ̃ʔs]. At this point then, unlike his tries at 7 and 11 he has started on a trajectory that takes him away from the correct version, and it is now that the version is rejected (13) by a clear "No" (14). The immediate request for a further repeat ("No again, do it again") is not accompanied by a model. The "No" can be heard of as specifically orienting to his wayward try "[ɔ̃ʃɔ̃ʔs]" but two previously better tries have already occurred. His mother is not likely to be asking for a repeat of a rejected version so the most sensible interpretation is that 'again' refers back to a recognised better version. After the long gap in which St. has tried to disengage himself from the sequence by turning away he responds to the repeat request with the version [wɔ̃ʃɔ̃ʔs] (line 16) which bears very little resemblance to the target or his original try. As stated previously there was no model to direct his repair and this resulted in the continued wayward trajectory.

In summary from the examples in this section it appears that any evaluation is routinely deferred by the mother in the case of tries that are nearly correct. Through the mother requesting a repetition rather than a repair of such a try the child is given the opportunity to repeat and improve on his given version. The type of response that the child regularly gives to a repeat request is one that shows he is regularly doing more work on the target word but does not involve major phonetic revision (e.g. in terms of replacing one phone with another) but rather alterations of certain features such as phasing or prosody. Major segmental alteration occurs with greater frequency when a redoing and/or clear negative evaluation has been signalled by the adult. When the nature of the type of phonetic work needed is left

open (i.e. there is no model) the repair may move away from the correct pronunciation. Then evaluation or redirection through modelling occurs.

d) Summary

In the major part of this chapter we have explored the various factors in the maternal style that account for the preponderance of lengthy practice bouts in mother/child therapy talk that were illustrated in table 1. The initial data analysis (#5.1) showed the mother to be initiating repair on more than just the official target of therapy. More detailed analysis of the corpus revealed that this was a pattern of interaction found many times and examples of multiple models highlighted in one word or sequentially within the bout were presented. It was concluded that lengthy sequences arise through a combination of circumstances in which the mother's expectation of overall correctness is a key factor, as exemplified by her use of multiple targets that go beyond the target phone. The absence and deferment of closing moves when unresolved error remains in the target word has also been noted as a feature of the maternal style, and this also reflects her expectation of a high level of articulatory accuracy.

The types of turn that initiate a child repeat were then described and quantified (displayed in Table 2) for both the mother and therapist, in terms of numeric frequency and percentage. The difference between the two adult's styles was shown to be based more on their proportional use of certain turn types rather than in the exclusive use of any particular behaviours by one party. The choice of repeat engendering turn used is differentiated according to the type of prior child try. Evidence of this was given from the mother/child data although the trend is true for both adults to a great extent. Some differences in their response are present however and are discussed in the next section. In the mother's case tries with major phonological error were more routinely followed by a redoing and/or negative evaluation. Those tries which show some moves towards the correct production, or display some resolution of a highlighted error, are responded to with a repeat request and/or positive evaluation. There is also some evidence of differential treatment of such turn types by the child in terms of the nature of repair/repeat he makes in response. For instance more major segmental revision follows redoing/models than occurs following repeat requests such as 'again' when suprasegmental or articulatory features (such as manner of release or alteration

in phasing) are more routinely altered.

In the next section (5.V) the contrast between aspects of the mother/child and therapist/child talk will be given greater definition through the juxtaposition of extracts from each dyad that ostensibly deal with the same material, at the same stage of therapy. Firstly the nature of the therapist's shorter bouts will be shown to depend on the therapist dealing solely with the therapy target and commonly accepting tries at target that are only approximately correct. She will also be shown to have a more varied response to the child error. This is displayed partly by the frequency counts that show her using less redos alone and more phonetic comments than the mother. The motivations that are made explicit by variance in styles between mother and therapist will then be discussed further. The mother has already been shown to be seeking a level of correctness that goes beyond the therapy target. The evidence for the therapist's theoretical motivation having an effect on her presentation will then be strengthened by the discussion of additional phenomena outlined below.

It is argued that the style of modelling and the quality of phonetic comment reflect the therapist's desire to expose the articulatory makeup of a phone. There is a tendency on the therapist's part to display greater variability in the modelling of an individual target phone (as already discussed in chapter 3) and this is shown to be in sharp contrast to the mother's modelling style in certain circumstances. Silent cueing and shadowing of child tries using exaggerated articulatory postures also feature in the therapist talk. These contrast with the voiced shadowing of tries typical of the mother, which also do not put the same emphasis on visual articulatory features. The therapist's articulation dominated approach is another expression of the theory informing therapy and in this sense there are parallels between our arguments here and those relating to inaccurate redos in chapter 4. Thus the therapist displays a psycholinguistic, theoretically motivated approach to therapy that is not shared by the mother.

5.V. A COMPARISON OF THE REPAIR SEQUENCES OF THERAPIST & MOTHER.

a) The ending of a bout.

In the first part of this chapter it has been shown that lengthy bouts concerning one target word are common in the mother/child interaction. These are generated by the use of a variety of turns that request repetition and the deferment of closing strategies. The shape of the sequences warrants the belief that the mother is routinely seeking overall correctness in a way that goes beyond any therapy target. In contrast, the therapist builds the practice of the target word across several bouts, usually involving new target words. Therapist/child bouts are not only commonly shorter in duration but are also constructed around the main therapy target with little digression to other errors. The contrast in the length of time spent on a target is clearly illustrated in the next two examples where both mother and therapist are tackling the word 'horse' in order to establish the final /s/. The two episodes are taken from recordings made within a few days of each other, the clinic session occurring first.

#5.23. *Th/St 2. Target /-s/ in 'horse'.*

- 1.Th. An' what's this one?
- 2.St. hortie.
- 3.Th. horse:
- 4.St. [2ɔts].
- 5.Th. That's it. And what does he like to eat?

#5.22.1. *M/St 2. Target /-s/ in 'horse'.*

- 1.M. What's that?
- 2.St. hortie.
- 3.M. No, not horsie (0.7) horse:.
(1.0)
4. You do it.
- 5.St. horte.
(1.0)
- 6.M. ^pProperly^p,
- 7.St. [ʔpts]
- 8.M. ['ors]e
- 9.St. [2ts]
- 10.M. ((M. turns away to relocate book)) And again.
(0.9)
- 11.St. [ʔs:]
- 12.M. ['ors:e]
(1.0)
- 13.St. [æ2 ʔɔʔs:]
- 14.M. No again, do it again.
(4.0)((St. turns away and M pulls him round))
15. Sit still and do it again.
16. St. [wɔʔs]
- 17.M. ^fhorse:^f
- 18.St. o-((looks at brother))
- 19.M. ((to brother Gareth)) No,(0.8) Gareth, move.

on. The therapist spent 7 turns on this compared to the mother's 17 under similar circumstances. And similarly, coming at the end of one of the longer therapist/child sequences;

#5.25. St/Th 2. *Target st- in 'Star'.*

- 12.St. tar.
- 13.Th. Like me with a snakey sound in front. >You're forgetting the snakey sound<. You're saying tar. >Try it again<. s:
- 14.St. s:=
- 15.Th. =tar=
- 16.St. =tar.
- 17.Th. That's it!

Here the therapist has failed to get a correct repair from Stuart so at line 13 she explicitly outlines his error and then utters /s/ in isolation. Whether this was meant as a cue to the complete word or as a model Stuart chooses to imitate it. The therapist then completes the word for him, immediately appending 'tar' to his /s/. He in turn latches 'tar' onto her prior and is praised as if he had said the word as one item.

b) Therapist versus maternal style of modelling.

To isolate other differences between the therapist's and mother's approach I will now deal with the style of modelling. Stuart's mother follows a similar pattern of modelling to that of the therapist in terms of stressing key targets through volume, lengthening and other prosodic and phonetic perturbation. She also makes sure the models are presented in the clear and usually unhampered by syntactic complexity. However her presentations have other areas of divergence.

First multiple targets for imitation and repair are presented in a way very different to the therapist's approach. We have evidence, as presented in section 5.III, of the mother highlighting segments of a target word that are not the official target of therapy. The therapist routinely glosses over errors that are not the target of therapy and emphasises the key target

only. This pattern reflects the more focussed concern with 'correctness' of the therapist's approach. Secondly, also significantly the mother routinely shows less variation in her production of a particular key segment in terms of articulatory features (rather than prosodic ones). It is argued that the variability in the therapist's production reflects her focus on displaying to the child the articulatory makeup of a particular phone. This is also displayed through use of overt phonetic comment specifically pertaining to articulatory posture and her own exaggerated articulatory posture as part of cueing and silent shadowing of the child try. These are behaviours rarely demonstrated by the mother. These points will be further elaborated below ⁶

i) The therapist dealing with nontarget errors.

In the whole corpus there is little evidence of this (or any other) therapist extending the repair sequence or increasing the complexity of the repair issue by switching to nontarget errors. Certainly there are rare cases quoted where the therapist has digressed from the key target but this has usually been to a phone that has been worked on recently. And such an incident is clearly demarcated before any return to the therapy target. I have not come across an example with this particular therapist.

In the next extract the therapist clearly sticks to the therapy target when there are other candidate errors that could be highlighted. The therapist sacrifices 'normal' speech expectations and glosses over errors that do not concern the therapy target.

6

It was noted anecdotally that more models in maternal talk appeared to be presented with little or no distortion of the phonetic pattern compared to the number of augmented models evident in the therapist talk. This is an interesting factor but one that is not covered in this chapter in any detail. Some discussion of this factor occurs in the final conclusions.

#5.25,1 St/Th 2. Target /st-/ in 'star'.

- 8.St. [t^hɑ s:]
- 9.Th. Good, snakey sound in front? S:tar.
- 10.St. [t^hɑ t^h]
- 11.Th. s:t a r.
- 12.St. [t^hɑ].
- 13.Th. Like me with a snakey sound in front. >You're forgetting the snakey sound<. You're saying tar. >Try it again<. s:
- 14.St. s:=
- 15.Th. =tar=
- 16.St. =tar.
- 17.Th. That's it!

In #5.25,1 the therapist could have tackled the dual error [t^hɑ t^h] at line 10. with some reference to the final as well as the initial consonant but she does not appear to do so, there being no lengthening of the vowel that would highlight it as final in contrast to the child's [t]. There is a form of embedded correction of this segment by virtue of the redoing but the relevant sound is not highlighted as such. Her phonetic comments at 13 continue this focus.

In #5.26 the redoing of the error on the plural /s/ is not stressed or prolonged in the therapist's turn at line 2 and she focusses on the target /st/ through prosody.

#5.26 St/Th. Target /st-/ in 'steps'.

- 1.St. [t^hɛpt^h]
- 2.Th. Are they teps?
- 3.St. ((shakes head)).

The contrast between the two modelling styles points to different motivating factors on the

part of the mother and the therapist. The former routinely aims for generally correct speech with less isolated emphasis on target phones whilst the latter glosses over other discrepancies to focus on the therapy target.

There are other examples where the therapist clearly ignores errors that have a marked effect on intelligibility; again this clearly contrasts with the mother's approach to the same problem. In a clinical session we find the therapist working on the plural /z/ but presenting a word incorporating another previous therapy target /k/. The therapist only augments the /z/ and the systemic error /k/[t] is said with normal, unmarked suprasegmental features.

#5.27. St/Th.3. Target /-z/ in 'cars'.

- 1.St. Two [t^hadf]
- 2.Th. Two cars::: Again?
- 3.St. Two [t^ha z:]
- 4.Th. That's it.

Stuart clearly misarticulates the /k/ as /t/ initially in the word 'cars' as well as pronouncing the plural /z/ as /f/. The therapist simply remodels the word, with the correct /k/, but this is not highlighted in any way. However the /z/ is clearly lengthened. She accepts his repair to the plural and moves on with no reference to the /k/. In very similar circumstances (#5.3,1) the mother was seen to highlight both errors in one turn (line 2) and to pursue the /k/ once the plural had been repaired.

#5.3,1 M/St. 1. Target -z in 'cars'.

- 1.St. /t^hadz/
- 2.M. It's not tars it's cars, cars:
- 3.St. [t^haz]
- 4.M. Yeh, but you're still saying [t^hɔ]. k^h, it's cars:er.

Not only does the therapist routinely focus on a single target phone but her modelling of that

phone is also different in its approach. In the above example there is some variation in the mother's presentation of "cars" in line 2, there being an additional schwa vowel in the second of the two tokens. This is typical of the type of variation she produces either within or across turns. However, the vowel is not part of the phonetic makeup of the actual phone, such as hold or release phasing. The therapist will now be shown to produce considerable variation on such features.

ii) Variability of modelling of the phonetic features of a single phone.

The mother routinely varies her presentation of target phones through perturbation of prosodic features of the utterance but the therapist's approach shows an added dimension. This will be shown to be part of an approach to child error that particularly focusses on articulatory and phonetic features of a phone. This focus is also made evident through the use of exaggerated articulatory postures and overt phonetic comments of a type the mother does not routinely use.

To contrast the two adult's different approaches take the phone /k/ as it is modelled in isolation. The therapist presentation formed a major part of the discussion in Chapter 3. For her, the /k/ is executed with a hold phase routinely held. Then the release is deliberately made so that aspiration (#5.28 line 21), ejective release (19) or affrication occurs (31). Finally the articulation is often frozen rather than immediately relaxed. There are other features such as lip shape variation (spread or wide open and rounded) that occur as part of the effort to display to the child how the sound is made. The adult's head is often held in a fixed position to further display 'doing articulation'.

#5.28 Th/St.1 Target /k/

19.Th. ((nod)) ^f[k']^f

((+ finger under chin))

20.St. .h [t^hɔ].

21.Th. .h [k^h]

((louder))

22.St. .h. [t^h]

23.Th. put you finger underneath there.

((gestures on herself + head back))

24.Th. .h ^f[k^h]^f

25.St. ^f[t^hɔ]^f

_{identical structure}
((+ finger under chin gesture))

28.Th. .h[k'] ↑ You do it.

((+ finger, + nod of head to child))

29.St. .h[t']

((+ finger on throat))

30.Th. Feel it at the back here.

((touches child's throat)). [k']

((taps own throat + head back))

((St. opens mouth))) ((child draws head away.))

31.Th. [k^x]

32.St. [t̂kx]

It was shown in chapters 2 and 3 that this therapeutic approach sometimes leads to the child imitating any slight change in phrasing or articulation as every aspect took on an unusual significance in the search for the appropriate repair. This matter will be discussed further in the next section 5.Vc.

The mother's approach to modelling this same /k/ in the practice directly after the therapy session was rather different, being untrammelled with knowledge as to how a phone is made. The models she gives vary little and are presented at a rapid pace.

#5.17.1. St/M.1. Target /k/.

- 1.M. [k^{hʌʔ}]
- 2.St. [t^{hʌ}]
- 3.M. [k^{hʌ}]
- 4.St. [t^{hʌ}]
- 5.M. No, that's [t^{hʌ}]. [k^{hʌ}]
- ((large nod))
- 6.St. [t^{hʌ}]
- 7.M. [k^{hʌ}]
- 8.St. [t^{hʌ}]
- 9.M. move your finger right up there.

In summary the therapist's style of modelling is built round the target phone and model variation is built round the target's phonetic features. The mother in comparison shows little such systematic phonetic variation on one phone.

5.Vc) Further therapist displays of articulatory features.

It is contended that the modelling variants that the therapist displays to the child are a result of an approach that centres on the articulatory makeup of any target phone. This is also displayed through the use of other exaggerated articulatory postures (such as silent cues and silent prompting of the child's try) and phonetic comments directly concerning the articulation.

#5.31. St/Th.1. Target /k/

12.Th. Well done, good try. Can you try it again? ((CUE, open mouth + finger under chin+smile))

13.St. k' ((lip spread))

Here at 12 the therapist makes the articulation for a [k] and holds it throughout the child's

turn. There does not appear to be a release of air until after he has finished. In the following extract the therapist attempts to display articulatory posture through the use of gesture (lines 2 & 3) and uses phonetic comments that relate to how the articulation is made (line5)

#5.32 St/Th.1. Target /k-/ in 'key'.

- 1.Th. What is it?
- 2.St. [t^hi]
((+ finger under chin))
- 3.Th. ooh not tea ((points to teeth)), [k xʒi]
- 4.St. [k x•j•]
 _z
 + friction
- 5.Th. Right at the back. k' ((no gesture))

- 6.St. [k_zʒ]
 ((+ finger under chin))

Table 2 (on p.28) showed that the therapist used phonetic comments frequently but did not show how elaborate some of these are. Phonetic/articulatory descriptions go to extreme lengths on occasion, as occurs below where the therapist laboriously describes and demonstrates the makeup of /k/;

#5.33. St/Th.1. Target /k/

- 1.Th. Keep your tongue still, open your mouth wide.
 (.5) ((demonstrates))
- 2.Th. Like that. ((St. follows suit))
- 3.Th. Now try saying, 'k', like that >with your mouth open<
 ((St exhibits artic. struggle behaviour, sticks out tongue but keeps mouth open))

There are no such descriptions from the mother nor is there much evidence of the use of extended hold or release phases of articulation on plosives. Silent cues do not occur as aids to articulatory placement. Rather she occasionally uses 'shadowing' of the child try i.e. an

almost simultaneous vocalised overlapped production of the target word, as seen with #5.22,2.

In this way the child is exposed to an auditory rather than purely visual co-production.

#5.22,2. M/St.2. Target /-s/ in 'horse'.

3.M. 'orse.

6.M. Properly_p.

7.St. [ʔts]

8.M. ['ors]e

9.St. [ʔts]

10.M. (M. turns away to relocate book) And again.

(0.9)

11.St. [ʔs:]

12.M. ['ors:e]

(1.0)

13.St. [æʔ ʔ> ∫^f ʔ s:]

14.M. No again, do it again.

(4.0)((St. turns away and M pulls him round))

15.M. Sit still and do it again.

16. St. [wʔ^fʔ]

Lines 8 and 12 are not simply mundane overlapping turn starts but are delicately handled by

the mother so that they form a model running consecutively with his own try. The mother's turn starts as soon as the child's voice has initiated and picks up the child's pitch and volume level. This differs to her own earlier model as it is monotonic and higher in pitch. The timing is such that the phonetic segments run in parallel and her /s/ therefore starts with his, extending after it in the first case but finishing more in unison in the second at 12.

Additional evidence of a non-articulatory stance is that the *phonetic comments* that the mother makes predominantly concern the inclusion of the sound itself rather than its articulatory execution. She also spends time encouraging the use of the gestural prompt that is supposed to signal a 'back' articulation, the finger under the chin.

#5.34 St/M.2. Target /k/

8.St. t^{her}

9.M. move your finger right up there.

The use of the letter name 'ser' for the plural phone /z/ as it has been presented by the therapist also displays an orientation that is not phonetically based (/z/ is voiced as opposed to voiceless /s/) but is rather based on reading knowledge. She also tends to use the neutral substitute 'the snakey sound' less than the therapist does. For example

#5.1.3.

11.St. fwog^s

12.M. Put your ser on.

The therapist's presentation of articulatory features of voice/manner and place has been described as 'doing articulation' and as such is an example of a theoretically based approach to modelling which is not shared by the mother. In other words the therapist's knowledge of how the phones are formed and her desire to teach a feature such as articulatory placement have a profound effect on the way she deals with modelling and repair as we have also seen in earlier chapters.

5.VI. CONCLUSION.

In this chapter the structure of maternal and therapist task bouts has been analysed and compared by looking specifically at the structure and sequence of modelling and repair. This has been done in order to trace the collaborative path that the interactants take to accomplish a positively evaluated try at target or, failing this, to move on to another task. Quantitative data presented in Tables 1 and 2 has shown that the maternal bouts differ from the therapist in both the volume of turns that make up a bout and in the proportional use of different turn types. With the mother/child dyad the task bouts are more often found to be lengthy. Even when a 'good' try has been positively evaluated further practice is instigated by the mother in a search for complete, consistent correctness. The analysis has focussed on turns that project a child repeat in next turn, including *repeat requests* and *redoings as models* to see how the mother/child bouts are differentially constituted compared to those of the therapist.

Use of *repeat engendering turns* is common to both mother and therapist and their individual deployment routinely project similar responses. However differences in their frequency and proportional use by each adult means that the final shape of the task bouts is very different in each case. There is considerable evidence that repeat requests such as '*again*' and '*again + evaluation*' are in contrastive distribution to redoing/models. The latter commonly occur following major segmental error (e.g. those derived from the child's own phonological system) or when no positive repair has taken place. Redoings are routinely accompanied by negative evaluation in such a sequential position. In contrast '*again*' structures are routinely placed with positive evaluation and follow positively 'worked on' child tries i.e. ones that show movement away from the child's own system or any original error. That this differential display is available to the child is evidenced by the child's choice of repair or repeat following a redoing or repeat request. There is a definite tendency for major segmental revision to follow redoings and subtle changes to suprasegmental or phonetic features to follow repeat requests.

The mother's actions in response to the child tries warrant a belief that she is looking for a level of 'correctness' that goes beyond the therapy target, for example by using multiple models in one word and by requesting repeats of positively evaluated turns. Evaluation is

regularly deferred until a level of such acceptability has been reached. On occasions when she does close a task before such a version has been achieved then commonly no comment will be made before passing on to the next item.

It is quite clear that although therapist/child and mother/child interaction share many common features they definitely 'do therapy' in a very different way. For the therapist finding a point at which to close a repair episode is often a compromise in that she will accept a child try that falls a long way short of target. Whereas the mother will keep working on one task for an extended period the therapist will build the element of practice across task bouts. The resulting therapist/child bouts tend to be shorter and contain more constructions which incorporate a redoing/model as a form of support for the child but with additional instruction or guidance. The mother in contrast uses a lot of redoing/models in isolation from other supporting behaviours as well as requests for repetition where little explicit guidance is offered. Where little support has been evident in the mother/child data the child has been found to move on a trajectory away from the target version.

Considerable evidence has been put forward for the contention that the therapist is 'doing articulation' in a more explicit way through the use of exaggeratedly articulated allophonic variants, silent cues and phonetic comment describing the way phones are made. Stuart's mother on the other hand displays none of these features, tending instead to 'shadow' her child's productions at her customary volume and to provide comments regarding 'remembering' the particular phone or supporting gesture. This divergence in emphasis is met by the child with a differential response to therapist and mother. For the former he routinely makes considerable effort to imitate every aspect of the exaggerated production. However with his mother his imitation has less variance and is more likely to retain the prosodic rhythm of his prior.

The therapist's approach to phone production is theoretically based and this influence is also displayed through her production of redoings. Commonly the therapist will produce a redoing of a child try that is inaccurate but rather reflects the 'minimal pair' that has been chosen as the basis of therapy. The mother's approach to the task is less theoretically based and it may be that she uses language in a way that the child is more accustomed to. Her models are not

influenced by a knowledge of how a phone is articulated or by a desire to display this to the child. Her redos are of the child error as she hears it and not as theory would dictate. Her explicit descriptions of the target sound, when they occur, are more direct. It may be that the inaccurate redos of the therapist lead to more interactionally based errors than the more accurate redos of the mother, especially if they are couched in less direct requests for repair (as occurred in chapter 4).

The quantitative data used in this chapter was taken from the first two sessions of therapy and home practice. It is my opinion that an exploration of longitudinal changes in the interaction would show a continuing divergence in styles as therapy progresses. In this particular case the therapist moves towards actively seeking child self repair through various turns which take the form of queries with less overt support in the shape of redoing/modelling. These turn types have already been displayed, albeit infrequently, as part of the therapeutic repertoire in the early stages. The mother on the other hand continues to use a high level of modelling throughout the tasks, although repair sequences become shorter due to the child's greater facility with the phonetic work after several months. In fact the mother appears to use a narrower range of turn types once a recognisably 'correct' try is arrived at more rapidly by the child with less request for repetition. Invitations to self repair in any form rarely occur in this mother/child therapy talk and the mother's motivation would still seem to be that of eliciting a 'correct' try. In contrast the therapist's motivation has moved on to encouraging more child selfmonitoring and selfcorrection as a basis for generalisation to other contexts. This orientation has not been taken up by the mother for some reason.

CHAPTER SIX.

CONCLUSION

6.I. SUMMARY.

The analysis presented in the chapters of this thesis has sought to show how therapists (and parents) 'do' therapy with children who have a developmental speech (phonological) disorder. I have used the technique of conversation analysis to give an empirically based description of some of the regularities to be found in this type of talk, especially regarding aspects of phonetic modelling and repair. The corpus of data has been that of several therapist/child dyads working in the clinic and two mothers working with their children at home (as advised by the therapist). Conversation analysis has proved a valuable research tool in that it shows the collaborative way in which therapy works and the sequential implications of various types of turns at talk. Speech therapy interaction has been shown, similar to other types of institutional interaction, to have its roots in mundane talk, but also to have patterns of interaction that make it identifiable across the 'contexts' of home and clinic, mother and therapist. There are identifiably differing states of knowledge between the interactants and there are certainly asymmetrical contributions between interactants. The adult for instance routinely takes (and is allowed) greater responsibility for the way the work is initiated and closed. There are also similarities to be drawn between this and other institutional interaction in the way the talk has clear markers leading up to changes in dialogic context, for instance demarcating work and nonwork talk and the roles ('frames') inherent in these changes.

In this conclusion I will summarise the contribution of this work to the wider body of knowledge regarding child language learning, talk at work and most importantly, therapeutic techniques. Implications for future research will also be discussed throughout. Whilst this thesis, in using CA, is aimed at systematic objective description of therapy data the 'professional' part of me feels bounden to make some value judgements and raise questions about the therapeutic process on the basis of the analysis. Firstly I will look at the similarities and differences that have emerged, in this study, between phonology therapy talk and other adult/child talk. I will then move on to consider some of the special properties of therapy talk, such as how theoretical notions have been displayed in the interaction. Of special import for therapists working with families is the comparison between the therapist's and mother's style

of doing therapy and implications for therapy are discussed in the final pages of this chapter.

6.II. THERAPY TALK AND ORDINARY MOTHER/CHILD TALK: A COMPARISON OF FINDINGS.

Turn designs found in this corpus parallel those found in the work of other conversation analysts on adult/child talk. Some repair initiations and closings compare with those found in work on didactic talk between mothers and very young children, for instance that of Tarplee (1993). She drew a distinction between mundane and picture-book mother/child talk but found didactic talk pervading both. This distinction is reflected in my own work between therapy talk and other talk, both being identifiable across the physical contexts of home and clinic. In both types of talk Tarplee found that the adult's turns following a child's are often retrospective, and, as in therapy talk, evaluate the child's prior. However linguistic correction is treated less directly in mundane talk than in labelling sequences and this finding is reflected in my work when we look at the mother's low key reaction to phonetic error in mundane as compared to therapy talk. Tarplee also found a difference in the way lexical and phonetic repair are treated respectively in mother/child talk. Lexical repair is often direct with overt syntactic marking and with other-correction more common. In contrast phonetic repair is disguised with little overt indication that such correction is the business at hand (the exception being the teaching of new words).

In therapy talk phonetic repair is often open with little constraint on other-correction. In some ways, in therapy talk, the approach to phonetic repair shares features with the way lexical error is more commonly handled, being overt and employing turn designs Tarplee found were routinely used to instigate lexical repair. Thus, in some ways, the distinction between lexical and phonetic repair in therapy talk is not so defined. The redoings that Tarplee found, that confirm the lexical content but subtly initiate phonetic repair, also form part of therapy style. However subtlety is often lessened by the use of augmented redoing/models unlike those usually found in mundane talk and the need for imitation of these models may be clearly indicated through prosodic and nonverbal means. Tarplee found that, in picture book talk, child imitation of a given label was less often receipted than a spontaneous one, nor was it pursued over several turns. Nothing could be further from the style of therapy talk where

evaluation of imitative responses forms a major part of task sequences. Whilst my work confirms Tarplee's on the use of prosody¹ to mark redosings as confirmatory or contrastive the design of imitative sequences in terms of prosodic and nonverbal features is something previously unexplored. Models for imitation show how much of what is required of the child remains unmarked overtly by syntactic means, such as direct commands, and the adult therefore maintains a facade of dispreference for other-correction.

There are other turn designs and sequences special to therapy interaction that are related to the more explicit nature of phonetic repair. Explicit phonetic description and evaluation occur much more commonly as part of the lessening of the disguised nature of phonetic repair that has been found to predominate in other adult/child talk. Indeed where the phonetic nature of the talk remains implicit in therapy the child may not always display attention to these features of their own talk as is seen in the case of misunderstanding checks in chapter 4. As in other pedagogic talk there is some evidence of differential treatment of an error according to whether the child is considered to have a correct answer available or not. Other correction is predominantly used where the latter is the case but invitation to self repair also occurs, in the shape of misunderstanding checks, when the child is presumed to be able to accomplish correction. From the evidence in this corpus, as therapeutic moves, invitations to self repair need to be very carefully constructed and matched to the child's stage of progress if they are to produce the desired result. In this corpus and in prior work by Gardner (1989) and McCartney (1981) these checks were rarely met with a phonetic repair, rather being treated, as they are in mundane talk, as open to any form of clarification. Tarplee only found 2/100 repair sequences used misunderstanding checks in her picture book talk, where the talk is tied to an obvious referent, but she found clarificatory work occurs pervasively in mundane talk in order to establish a lexical referent unknown to the adult. By using these turns in therapy talk the therapist is therefore using a style that is rarely used to isolate errors that obviously require phonetic repair. Other researchers have found, in mundane talk, that understanding checks often form the initial nonspecific query in a sequence. When an appropriate repair is not immediately forthcoming the specification of the trouble source becomes more detailed

¹One phenomenon Tarplee found that did not come across strongly in my data (and therefore I have not investigated it) is that where a noncontrastively pitched redoing is preceded by a pause and followed by a repeat/repair by the child, rather than being interpreted as a closing.

as the repair sequence progresses (Langford 1981, Drew 1981). This is precisely what occurs in lengthy therapy sequences, especially those that begin with a request for self repair which fails.

Obviously the discrepancy in ages between the children involved in this study and those in research such as Tarplee's (who were only 18 months-2 years in age) places constraints on any direct comparisons to be drawn. There is some indication that more direct other-repair (for both lexical and phonetic error) becomes more common in talk with older children (4-6 yrs) according to Cresswell (1994), more the age of the children in my study. This is attributed to the less frequent occurrence of such error. This is not true of phonetic error with the phonologically disordered children in this study and it would be interesting to see how comparable Cresswell's data is to mundane talk in my data. Much research has pointed to the fact that maturity in specific linguistic and social abilities is the crux in determining children's response to therapy. Being able to self repair at a phonetic level is seen by therapists as a marker that the child has reached a level of 'meta-awareness' regarding the phonological nature of their miscommunication and is a vital stage in the generalisation of the skills learned in the clinic to the outside world. Failure to respond appropriately may be due to the fact that the child is not aware that is what the therapist requires of him in this kind of talk, in the initial stages of therapy. In this thesis there are some pointers to individual differences in their choice of strategies in repair which may well be linked to social and intellectual factors. For instance Elizabeth astutely often covered lexical and phonetic options at one go whereas others, such as Stuart, showed no sign of this ability. These are anecdotal observations but individual differences in approach to therapy with regard to other social and intellectual abilities could well be an interesting subject for further research. There is a need for more careful wideranging cognitive and social assessment allied to the CA analysis than is available on the subjects in this study.

Whilst comparison to other research into adult/child talk is interesting the real crux of this thesis has been to describe some of the special features of therapy talk such as the presentation of models and the treatment of error. It is worth adding at this point that the findings of this study, in broad terms, are similar in flavour to those of other investigators that have sought to analyse the structure of therapy discourse. The interaction is

predominantly in adult control as Letts (1985) and others found, with little room for spontaneous child talk. The generally positive nature of therapist talk also comes through with the bouts of therapy generally kept short. There are clear similarities between mine and McCartney's (1989) findings that, even at a more advanced stage of therapy there is a high rate of modelling (although with less augmented models in her work). The next section will go on to consider some of the findings of this study that pertain uniquely to therapy talk.

6.III. THE NATURE OF CHILD PHONETIC ERROR.

In this study I have sought to show how children can be seen to be working on the phonetic aspects of their talk and to show that many phonetic errors are interactionally derived. The nature of child error within therapy talk has been shown to be diverse, not always related to their phonological system and, in some cases, to display that the child is actually not working on talk at the phonetic level. This is taken as evidence that the child is not completely at one with the therapist's overriding goal of phonetic work on talk. Rather each encounter is judged by the child on the localised interactional context: where the child does not seem to be attending to the phonetic level of his talk his responses are usually bound up with the shape of the prior adult turn (for instance the design of the invitation to self-repair or repeat request). For the children phonetic features are not the only parameters salient to therapy work. Even adult models which the child imitates may also include imitation of nonverbal features such as gesture. The child will explore any avenue to execute a try that meets adult expectations.

That children display variability in their production of a single phone has long been recognised and indeed such variability forms the basis for theories as to the dynamic nature of phonological development. My CA analysis has helped to demonstrate how the dynamics of phonetic production are realised, at least in the special circumstances of therapy talk. I have shown that a wide range of phonetic features are imitated by the child in turns immediately following models. Some of these features then return as repair options later in the task where no immediate model is available or, if there is a model, where that particular feature hasn't necessarily been highlighted by the adult. The features that the children pick up on are not necessarily those critical to the distinction of the target phone from their

original phonological error. Where augmentation through perturbation of the normal speech flow plays a prominent part in highlighting a critical target phone it is shown that even more distorted versions can arise in the child's next turn.

In line with these findings one must consider whether there is any particular value in using such distorted presentations as augmented models in therapy. Hodson (1991) advocates use of amplification rather than over stressed modelling as she also found that children tended to 'overproduce' what had been modelled with distortion. This action produced inaccurate kinaesthetic feedback which hindered therapy. These augmented presentations do not seem to occur so frequently, or with such major distortion, in mother/child talk and in therapy they exaggerate the already bizarre, idealised nature of the language that is being presented to the child. These effects are compounded by the fact that the targets are commonly totally removed from any communicative context. The possible longterm results of speech therapy were illustrated by the case study of Jimenez and Brasseur (1986) in the opening chapter where the child exhibited increasing suprasegmental difficulties in connected speech. Other researchers such as Ripich & Panagos (1985) have argued that failure to generalise new skills occurs when distinctive patterns of linguistic usage become associated with the speech therapy register associated only with the clinic. It may be that the inclusion of augmented models in therapy should be carefully considered and restricted with greater emphasis on communicative talk. Wells(1994) gives details of a case similar to Jimenez and Brasseur above and through careful assessment of the patterns of intersyllable and interword phonetic 'junction' suggests ways in which the phonetic linking of connected speech could be included in therapy.

The analysis in this thesis cannot provide the answer as to the effects of such modelling but a longitudinal study could. One line of further exploration is that of Stuart's differential treatment of the mother's augmented models compared to the therapist's. He did not always imitate the extraneous features of his mother's models with the same accuracy as he did the therapist's and occasionally did it playfully. It could be that he treating such distortion as lying outside of 'normal' output in some way and that this capacity, plus other near normal prosodic skills, may mean he is less likely to incorporate these features into his own speech in the long term. Other children with more severe expressive language difficulties may use

such augmented features, having less recourse to utilise other patterns of speech in the struggle for intelligibility. Such speculation could only be given substance through careful comparison of longitudinal case studies.

6.IV. THEORY AND THERAPY

Another important aspect of this thesis has been to show how theory informs therapy in ways that are made explicit in the talk. Obviously it is expected that there should be differing states of knowledge between therapist and child. However the consequences of theory impacting on therapy have to be addressed when quite clearly the techniques therapists are using are not always working in the way we think they are. One of the first issues addressed was that of the therapist's use of multiple variable models of one phone, which she may assume to be one cohesive whole linked by certain distinctive features (even with a lettername reference included). For the child there is evidence that he/she may not be aware of an overall target as one cohesive phone in the way the therapist is. The child may imitate various features of a model but he/she does not necessarily extract those critical to the 'root' phone's makeup. How or when they come to view phones in the way the therapist does is a matter for further research. It may be that the therapeutic process could be simplified or speeded up if the therapist was more explicit as to what she is doing, giving clear explanations as to what critical factors make up a phone and what type of variables are acceptable. It was pointed out in chapter one that generally children only improve in their metalinguistic awareness when they are taught specific psycholinguistic skills, of which such phonetic knowledge would be an example. As Magnusson (1991) and others have said there is a need for specific explicit teaching on precise skills, at different levels of speech processing, if these are what is necessary for phonological development. But we must be sure of what those skills are, through assessment such as that advocated by Stackhouse and Wells (1993), and through further research.

Another theoretical issue has been shown to have an effect on the interaction in a way that has not been touched on by other studies. It is that of therapist's tendency to 'phonemicize' children's phonetic output in a way that can hide some critical information regarding their phonological knowledge. Hewlett (1985) highlighted the importance of the difference between the speaker's intended productions as opposed to the actual effect of them for the

listener: in other words the importance of recognising that the child has phonological knowledge of a meaningful contrast and may mark it in a way that is barely perceptible in his speech. Howard (1993) talking of the need for careful phonetic and phonological assessment as the basis of treatment said the following:

"The premise that all phonetic information may have phonological implications prohibits the common temptation to 'clean up' or 'phonemecize' inappropriately and can aid diagnosis and speech and language management"(p 299)

Milroy (1985) also cautioned therapists regarding making assumptions about abstract phonological theories as having psychological reality for the speaker. Therapists "clearly cannot intervene in elegant theoretical fictions" (p 40, Howell and McCartney 1990). These facts are not new but what is new in this research is the close attention paid to the consequences of using such theoretical notions as phonemes in response to child error, for instance when a misunderstanding check or redoing contains an inaccurate version of the child's error (based on the phonemicised interpretation). It is argued that a major consequence is that the child does not display awareness that the redoing bears any relation to his speech error and does not effect a phonetic repair. Thus whilst the child is made aware of a miscommunication, and the need for repair, such turn designs cannot be seen to isolate the source of the trouble as accurately as other strategies and may not be helping to speed up the process of phonological change. As therapists we must be aware when our planned actions are not producing the expected effect and change tack accordingly

The discussion above deals with how the therapist's theoretical stance affects therapy talk and, indeed, what the theoretical basis of therapy should be. Obviously there is a need for controlled clinical research to assess the efficacy of various approaches and I feel strongly that CA could provide a fresh means of such evaluation. I would dispute Howell and McCartney's (1990) statement that therapists say the same kind of things whatever their theoretical background might be. The measurements that analysis has produced in the past have been too gross to capture the nature of therapeutic interaction. There is a need for finely tuned investigations such as CA here to find out what is really going on. For example, if a theoretically based programme produces therapy targets more accurately matched to the child's linguistic representations, and focusses teaching on appropriate skills, these factors may

become visible through interactional analysis, not only in the therapist's talk but in the child's responses. For instance the ambiguity produced by the use of redos that do not reflect the child's own system could be removed. Another therapy strategy might result in the child targetting the critical features of a target phone more accurately. Metalinguistic approaches might result in a totally different error pattern that has a lot to say about what the child understands about therapy.

6.V THE COMPARISON OF MATERNAL AND THERAPIST STYLE IN THIS STUDY.

Another major part of this research has been an analysis of a mother doing therapy and a comparison of mother and therapist. It has been shown that it is not so much variation in type of turn design but rather their proportional use that constitutes the difference between the two adult/child dyads. Part of this comparison shows that they come to do the therapy with a different set of beliefs displayed within their talk.

An area that I have not been able to explore in as great a depth as I would have wished is that of Stuart's differential treatment of the models provided by therapist and mother. It is clear that the mother approached the presentation of target phones less from an articulatory perspective (as the therapist did) than from the written form that she was familiar with. In respect to this it is interesting to note, as already mentioned, that Stuart does not seem to go to such great lengths to imitate the subtle phonetic details of each model, thus not displaying 'doing phonetic work' as he did with the therapist. Nor does he display such obvious visual attention to his mother's face. It is possible to speculate that he sees the adults as doing different things with the tasks, recognising their differing expectations, and it would be interesting to investigate this further, not only with Stuart but with other available adult/child data. Of course there are different relationships at work between therapist/child and mother/child and it may be possible that this aspect too could be incorporated into any future analysis.

As regards Stuart's mother it was shown that she regarded overall 'correctness' as the goal of the tasks and she pursued perfection at length. The therapist was at pains to keep the task bouts short, practice being built across bouts and ending on a positive note with evaluation

only of the target phone. The mother/child lengthy repair sequences arose mainly because of the child's inability to produce the target easily. It could be argued that the mother and child should not have been put in a position where they were experiencing such a level of failure. The tasks could have been more within the child's (and mother's) grasp and the mother more clearly made aware of what was an acceptable answer. The other mother recorded in this study had an approach that was more like the therapist but, in addition, the child was also able to achieve the targets of the task more easily, lessening the need for repair in the first place. Ease of production could be an influencing factor on maternal style. Later sessions do show Stuart and his mother to be involved in shorter bouts with an acceptable version reached more rapidly.

What is noticeable at this later stage, however, is that Stuart's mother makes no moves to encourage self-repair as the therapist has started to do. If generalisation to more communicative talk is needed then it is obvious this mother needed more careful advice as to how to help this process (see appendix 1 for an example of the type of advice given in early sessions). The therapist did not seem to have incorporated communicative tasks into the sessions to any degree and chose instead to move on to tackle more phone groups using modelling and imitation drills. Therefore she was not giving much example of how generalisation might be encouraged. The need for the therapist to be more explicit in her dealings with mother and child as to the workings of therapy arises time and again and it may be that special care needs to be taken in monitoring what type of task the parent is confident in performing.

In a brief survey I carried out (1986) with 8 parents working with phonologically disordered children at home no parents said they had been taught any special techniques to help their child whilst working on his speech. There may be a place for this type of specific advice. There has been talk in the past about the parents of language disordered children sometimes having 'negative' and corrective attitudes in talk to their offspring (for an overview see Cross 1984) and that there is therefore justification in trying to modify the mother/child interchange (Clezy 1979). Martin(1991) advocates parents carrying out 'input' rather than production training as some parents are anxious in production work 'lest they do something wrong'. In the case of phonology disorder, as in this study, it may be that making clear what the

expectations of therapy are at each stage will be enough to diminish the use of excessive correction built on unrealistic expectations. Anecdotally neither of the parents in this study pursued phonetic repair to any length during mundane conversation, a finding that backs up that of Porter and Conti-Ramsden (1987) who found mothers of language-impaired children would rather change the focus of conversation than put pressure on the child in mundane talk.

I have been careful in the text to be nonjudgemental as to efficacy of either the therapist or mother in their work. However I chose to discuss a mother whose style seemed most removed from that typically associated with a therapist. It is interesting that the therapist/child talk that seemed to throw up the greatest number of problematic misunderstandings was that involving the most inexperienced therapist. Similar types of, for instance noncoordination of expectation, occurred across the board but it was the frequency and the way they arose that was of interest here. This therapist was also helping the mother whose style was so individual. There was considerable variation between the two mothers I filmed with the other mother more closely matching the style of the therapist she was observing. Obviously it would be interesting to do a comparative analysis of these two mothers in the future to see where the divergence lies. It would be also be interesting to analyse the style of the other mother involved in this project who superficially appeared to 'do therapy' in a way more similar to the therapist. It may well be that that theoretical stance displayed in the therapist's talk is absent from this mother's talk too, or may be taken on board as therapy progresses.

6.VI FINAL COMMENTS.

I have no doubt that therapy works but through this analysis I have come to realise it may not work in precisely the way we as therapists imagine it to, and it could work better. Many of the points in this section point to the need for a longitudinal study of the mother/child and therapist/child data to see when and how changes in the interaction take place. It may be that the styles of the two adults move closer together but some of the signs are that, at least in one case this is not so. There is certainly room in the future for more detailed analysis of how the learning process goes on over a longer period of time as this may give greater insights into the types of skill that children acquire in therapy. It should be possible to trace any

changes in the child's imitative turns, ability to selfcorrect and to generalise skills to nontherapy talk. This line of research could have a lot to tell us about the child's (and mother's) ability to extract critical phonetic information and trace their growing knowledge of what therapy is all about.

Perhaps by adopting what we consider 'naturalistic' devices in therapy talk we are being implicit when we should be more explicit, especially when we are dealing with language that has little to do with mundane talk. The place for more naturalistic repair may need to be carefully incorporated into the therapy programme in a more thoughtful, structured way than it has been before. If therapists wish the child to execute phonetic repair have they ever been so explicit as to say something like 'every time I query your speech I expect you to think first about how you said the sound we've been working on'. I suspect not, and if not, then why shouldn't the child try to repair his utterance in any way he sees fit. When talk about phonetics is embedded in other talk, where lexical and truth elements also have to be dealt with, then boundaries between one sort of repair and another have to be made clear. If the aim of the game was made clearer then it may be the child's metalinguistic abilities could shine through more brightly rather than relying on their social astuteness to get them through.

There is also a need for therapists in the future to consider the growing body of knowledge on interactional phonetics (Local, Kelly and Wells 1986, Kelly and Local 1989, Local 1992a) and syntagmatic phonological relationships (Wells 1994) and how it could be applied in therapy, especially in regard to the difficulties inherent in the generalisation of 'idealised' phonological skills to connected speech. If a more 'holistic' view of phonetics were taken, where it is part of talk in interaction, then these generalisation problems may not arise. The phonetic variables of one phone that are presented in therapy do not include many of those that the child will hear in connected speech (and include some that he/she is unlikely to hear). This is a path where CA could definitely be of value, especially in assessing individual case studies such as that by Jimenez and Brasseur. The child's talk had many bizarre qualities such as word by word delivery and it could be that careful analysis could show consistencies in the talk and show how the interactional 'glue' that holds talk together needs to be applied.

CA has a lot to offer speech/language therapy, not only as the basis of research but as the basis of assessment. It has already been shown to be of value in the assessment of an individual prosodic problem (Wells and Local 1993). CA has also been used in other areas of language disorder, such as analysing paths of repair in dysphasic adults (Perkins and Milroy 1993) and autistic echolalia (Local and Wooton 1994). Whilst such analysis is not an instant preset assessment it has a lot to offer in unravelling the complexities of normal and 'dysfunctional' talk in individual cases and in more general terms. There is also a lot more to discover about the way therapy is constructed across various domains.

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APPENDIX 1.

ADVICE GIVEN TO STUART'S MOTHER DURING THE FIRST SESSION . (transcribed from the video)

TH. I think perhaps we'll leave that sound for the moment because he'd got it at the beginning and now he's getting confused.

M. Yeh, we'll have a practice of it at home.

TH. Yes, have a go at practising the sound in isolation, on its own. The 'ker' sound, and you can put your finger

M. mm

TH. underneath, >you know< to er: show him where the sound is ((puts own finger under chin)) made. You could have a go at trying to discriminate the two sounds ((points to pictures)).

M. xxx

TH. That's just auditory discrimination work.

M. mmm.

TH. To see if he can actually tell the difference when you're saying the word.

M. Yes.

TH. I think he does actually, >you know< like 'tea' and 'key'

M. yeh

TH. that he- that he could tell which one I was saying. I think he's just lost confidence at the moment because he's got confused.

M. Yeh

TH. Okay (back to Stuart.

END OF SAME SESSION.

TH. I think at home if you could just do the 'ker' sound. I only did the es sound because (1.0) I didn't want to continue with the ker sound because, obviously he was getting confused. If you can just continue with the ker sound and see if he gets that ehm. You can have a go at the es sound as well ehm at the end of the work. I think that he finds it fairly easy at the beginning of the word, just the end of the word and there's

M. Yes.XX Yes.

TH. lots more I can think of which we'll do next time >I see you again< But I think he's had enough for today..

Th. I think a lot of the time he's probably not listening to the way he's saying it though. If I say a word wrongly, if I repeat a word after him he knows it's wrong but then he'll say "no,it's not a hout, it's a hout".

APPENDIX 2.

AN EXAMPLE OF A THERAPY SEQUENCE DIVIDED INTO 3 BOUTS AND WITH CODED TURNS, AS DESCRIBED & USED IN TABLE 2 OF CHAPTER SIX (p)

M/St 2. Target /s/ in sword and /-s/ in 'horse'.

1.M. What's this?

2.St. /sɔd/

3.M. Say it again?

AGAIN ALONE

4.St. /sɔ:d/

(1.0)

5.M. /sɔ:dʰ/

REDOING ALONE

6.St. /sɔ:dʰ/

7.M. Stop being silly.

(0.5)

8.M. sword.

REDOING ALONE

9.St. /sɔd/

10.M. XXX a bit annoyed

END OF BOUT.

TOTAL TURNS 9.

#5.22. 11.M. What's that?

12.St. hortie.

13.M. No, not horsie

(not coded as did not strictly engender a repeat, being followed by a pause + other turn)

(0.7)

14.M. horse:.

(ditto)

(1.0)

15.M. You do it.

OTHER

16.St. horte.

(1.0)

17.M. ^PProperly^P,

PHONETIC COMMENT.

- 18.St. [ʔ>ts]
- 19.M. [ors:e] **REDOING ALONE**
- 20.St. [ʔ>ts]
- 21.M. ((M. turns away to relocate book)) And again. **AGAIN ALONE**
(0.9)
- 22.St. [ʔ>s:]
- 23.M. ['ors:e] **REDOING ALONE**
(1.0)
- 24.St. [æʔ ʔ >ʔ>s:]
- 25.M. No again, do it again. (not coded, as above)
(4.0)((St. turns away and M pulls him round))
- 26. Sit still and do it again. **AGAIN ALONE**
27. St. [wɔʔʔ]
- 28.M. ^f horse:^f **REDOING ALONE**
- 29.St. o-((looks at brother))
- 30.M. ((to brother Gareth)) No,
(0.8)
- 31.M. Gareth, move.
- END OF BOUT.**
TOTAL TURNS 19
- 32.Th. Take that one away, just for five minutes.
(2.5)
33. M. Horse: **NEW BOUT.**
(1.0)((Stuart turns away))
- 34.St. horse:
- 35.M. That way and stop it ((turns him round))
- 36.St. horse- **END OF BOUT.**
- 37.M. What's this ((pointing to next picture))
- TOTAL TURNS 4.**