A LINGUISTIC STUDY OF THE
PSYCHOLOGICAL ASPECTS OF APHASIA

By
Salma Qayyum

NATIONAL UNIVERSITY OF MODERN LANGUAGES
ISLAMABAD
February 2015
A LINGUISTIC STUDY OF THE PSYCHOLOGICAL
ASPECTS OF APHASIA

By
Salma Qayyum
M.A. English, National University of Modern Languages, Islamabad, 2003

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
In English (Linguistics)

TO

FACULTY OF HIGHER STUDIES

NATIONAL UNIVERSITY OF MODERN LANGUAGES, ISLAMABAD

© Salma Qayyum, 2015
THESIS AND DEFENSE APPROVAL FORM

The undersigned certify that they have read the following thesis, examined the defense, are satisfied with the overall exam performance, and recommend the thesis to the Faculty of Higher Studies for acceptance:

Thesis Title: A Linguistic Study of the Psychological Aspects of Aphasia

Submitted By: Salma Qayyum          Registration #: 394- MPhil / Lit / Jan 09

Doctor of Philosophy

Degree Name in Full

English (Linguistics)

Name of Discipline
Dr. Sohaila Javed  
Name of Research Supervisor  
Signature of Research Supervisor

Prof. Dr. Shazra Munnawer  
Name of Dean (FHS)  
Signature of Dean (FHS)

Maj. Gen. Zia Uddin Najam HI(M) (R)  
Name of Rector  
Signature of Rector

__________________________
Date

CANDIDATE DECLARATION FORM
I, Salma Qayyum

Daughter of Abdul Qayyum

Registration # 394 - MPhil / Lit / Jan 09

Discipline English (Linguistics)

Candidate of Doctor of Philosophy at the National University of Modern Languages do hereby declare that the thesis, A Linguistic Study of the Psychological Aspects of Aphasia submitted by me in partial fulfillment of PhD degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

I also understand that if evidence of plagiarism is found in my thesis at any stage, even after the award of a degree, the work may be cancelled and the degree revoked.

____________________________
Signature of Candidate

Date

Salma Qayyum
Name of Candidate
ABSTRACT

Thesis Title: A Linguistic Study of the Psychological Aspects of Aphasia

This is a cross disciplinary study as it draws upon ideas from neurology, linguistics, developmental psychology and philosophy and examines the effects of emotional security on the process of language recovery after aphasia. Language recovery after aphasia is generally studied by using the standardized terminologies from the domains of first language acquisition and second language learning. This orients and controls the ways in which researchers look into this phenomenon ignoring its own uniqueness. Overemphasis on concepts such as neural plasticity and critical period has resulted in neglecting the emotional and psychological aspects of the process. The neurological and linguistic debates over aphasia support the existence of a critical period till which the human brain can retain its plasticity. This study challenges these ideas by discovering the positive effects of emotional stability and security on language recovery of an aphasic even when s/he had crossed the so-called critical period. The study covers one year of the linguistic recovery process of the research participant. The data collection methods included audio recordings of the research participant’s speech, diary notes about her linguistic performance and discussions with her physician about the same. The insights drawn in the end strongly support the positive effects of emotional security on language recovery after aphasia. The study concludes with grounded theory that emerges from the data. The researcher has named it as her theory of emotionicology. This theory is based on the serendipitous discovery that not only initiation of positive emotions help in language recovery but also inclusion of the negative emotion, that is, aggression in controlled and mild forms (at advanced stages of recovery) can be used for further fuelling the speech production process. It is, however, suggested that aggression has to be employed with caution and should be applied only by a trained caregiver in brief episodes (of say 10-15 seconds) when the aphasic is emotionally and physically secure. This study also stresses that for the betterment of the aphasic, the caregiver has to acquire emotional competence as a skill. The understanding in the end is purely subjective, and situated. Thus, no generalization claims follow.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>THESIS &amp; DEFENSE APPROVAL FORM</td>
<td>ii</td>
</tr>
<tr>
<td>CANDIDATE DECLARATION FORM</td>
<td>iii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iv</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xii</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>xiii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>xiv</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>xv</td>
</tr>
<tr>
<td>1 INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Background</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Rationale for the Study</td>
<td>2</td>
</tr>
<tr>
<td>1.2 Statement of the Problem</td>
<td>3</td>
</tr>
<tr>
<td>1.3 Objectives</td>
<td>3</td>
</tr>
<tr>
<td>1.4 Research Questions</td>
<td>3</td>
</tr>
<tr>
<td>1.5 Scope of the Study</td>
<td>4</td>
</tr>
<tr>
<td>1.6 Significance of the Study</td>
<td>5</td>
</tr>
<tr>
<td>1.7 Delimitation</td>
<td>6</td>
</tr>
<tr>
<td>1.8 Chapter Breakdown Plan</td>
<td>6</td>
</tr>
</tbody>
</table>
Delimitation of the Literature

Section I: “Normal” Language Development

Neurological Foundations of Language

Psychological Ideas on Language Development

2.1 Wilhelm Wundt’s Contributions

2.1.1 Wundt on Human Development

2.2 Lev Vygotsky

2.2.1 Vygotsky’s Ideas on “Normal” Language Development in the Child

2.2.2 Three Elements of Intellectual Development

2.2.3 Concept Formation

2.2.4 Vygotsky’s Idea of Phylogenetic and Ontogenetic Development

2.2.5 Language Development in the Deaf and Dumb Children

2.3 Jean Piaget

2.3.1 Piaget on “Normal” Language Development

2.3.2 Egocentric Talk and Socialized Speech

2.3.3 The Development of Thought and Language in the Human Child

2.4 John Bowlby

Recurring Ideas in Psychology on Language Development

2.5 Cognitive Development / Intelligence

2.6 Emotional Expressivity and the Developmental Process

Linguistics on Language Development

2.7 Language-centered Approach

2.7.1 Saussure’s Ideas about Language

(i) Paradoxes in Saussurean Discussions on Language

(ii) Linguistics after Saussure

2.7.2 Jakobson’s Point of Departure from the Structuralist Tradition
2.7.3 Halliday’s Concept of Language Development

2.8 Learning-centered Approach

2.8.1 Major Learning Theories

(i) Behaviorism

(a) Behaviorist Ideas on Language Learning

(b) Misunderstandings about Skinner’s Ideas

(ii) Cognitivism

(a) Cognitivists on Language Development

(iii) Social Constructionism

(a) Social Constructionists on Language Learning

2.9 Learner-centered Approach

2.9.1 First Language Acquisition

(i) First Language Acquisition: Some Dominant and Recurring Ideas

2.9.2 Second Language Learning

(i) Acquisition-Learning Hypothesis

(ii) Monitor Hypothesis

(iii) Natural-Order Hypothesis

(iv) Affective Filter Hypothesis

(v) Input Hypothesis

(vi) Critical Period and Automatic Speech


(viii) Controversial Ideas in Second Language Learning Theories

Philosophy on Language Use

2.10 Lacan’s Concept of the Subject

2.10.1 Lacan on the Idea of the Sign

2.10.2 Does Human Agency over Language Use Exist?

2.10.3 Lacanian Concepts of Need, Demand and Desire
<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>Section II: “Abnormal” Language Development after Aphasia</td>
</tr>
<tr>
<td>47</td>
<td>Language Disorders in the Brain-damaged People or Aphasics</td>
</tr>
<tr>
<td>48</td>
<td>The Earliest Discussions on Aphasia</td>
</tr>
<tr>
<td>49</td>
<td>Contributions from Psychology for the Mentally Ill People</td>
</tr>
<tr>
<td>50</td>
<td>2.11 Psychology on the Language Revival Process of Aphasics</td>
</tr>
<tr>
<td>51</td>
<td>2.12 Vygotsky’s Idea of Reflexology</td>
</tr>
<tr>
<td>52</td>
<td>Linguistic Discussions on Aphasia</td>
</tr>
<tr>
<td>53</td>
<td>2.13 Saussure’s Ideas on Aphasia: A Language-centered Approach</td>
</tr>
<tr>
<td>53</td>
<td>2.14 The Studies on Aphasia: A Learning-centered Approach</td>
</tr>
<tr>
<td>54</td>
<td>2.14.1 Roman Jakobson</td>
</tr>
<tr>
<td>54</td>
<td>(i) Jakobson’s Discussion on the Aphasics’ Language Recovery Process</td>
</tr>
<tr>
<td>55</td>
<td>2.14.2 Roland Barthes</td>
</tr>
<tr>
<td>56</td>
<td>2.14.3 Michel Halliday</td>
</tr>
<tr>
<td>56</td>
<td>2.15 Aphasia: Learner-centered Approach</td>
</tr>
<tr>
<td>56</td>
<td>2.15.1 Lacan</td>
</tr>
<tr>
<td>57</td>
<td>2.15.2 Foucault</td>
</tr>
<tr>
<td>58</td>
<td>Overall Analysis of the Literature on Aphasia</td>
</tr>
<tr>
<td>58</td>
<td>Implications for the Aphasics’ Language Retrieval Process</td>
</tr>
<tr>
<td>59</td>
<td>The Role of Emotions in the Language Recovery Process of Aphasics</td>
</tr>
<tr>
<td>59</td>
<td>2.16 Emotional Intelligence of the Caregiver and Linguistic Development of the Aphasic</td>
</tr>
<tr>
<td>61</td>
<td>Section III: Theoretical Framework</td>
</tr>
<tr>
<td>62</td>
<td>2.17 Attachment Behavior after Aphasia</td>
</tr>
<tr>
<td>64</td>
<td>2.18 Attachment Behavior and Caregiving Behavior</td>
</tr>
<tr>
<td>65</td>
<td>2.19 Formation of Attachment</td>
</tr>
<tr>
<td>65</td>
<td>2.20 The Effects of an Attachment Figure on Development</td>
</tr>
<tr>
<td>70</td>
<td>2.21 The Need for an Attachment Behavior in Aphasia</td>
</tr>
<tr>
<td>73</td>
<td>III RESEARCH METHODOLOGY</td>
</tr>
</tbody>
</table>
Design & Nature of the Study

Research Problem

Context of the Study

Research Participant

3.1 Demographic Details of the Research Participant

3.2 Role of the Researcher in the Study

3.3 Level of Language of the Research Participant before the Study

3.4 Linguistic Features Focused during the Study

Section I: Methods of Data Collection

3.5 Conversation Analysis

3.6 Participant Observations

3.7 Discussions with the Doctor

3.8 Role of the Doctor in the Study

3.9 Rationale behind the Research Methods

3.10 Conversation Analysis

3.11 Participant Observations

3.12 Discussions with the Doctor

Section II: Sessions of the Study and Objectives of Each Session

3.13 Discussion I

3.14 Session 1 (June 2011-September 2011)

3.15 Plan to Achieve the Objectives of Session 1

3.16 Discussion II

3.17 Session 2 (October 2011-January 2012)

3.18 Plan to Achieve the Objectives of Session 2

3.19 Discussion III

3.20 Session 3 (February 2012-May 2012)

3.21 Plan to Achieve the Objectives of Session 3
3.22 Final Discussion with the Doctor

Section III: The Ethical Issues of Representation, Legitimation and Voice

Methods of Data Analysis

Representation of the Data
# DATA COLLECTION, ANALYSIS & INTERPRETATION

- Purpose of the Study
- Theoretical Perspective
- Methodology
- Data Analysis
  - 4.1 Linguistic & Paralinguistic Features
  - 4.2 Segmental & Suprasegmental Features of Speech
- Topics used in the Research
- Speech Performance in Reading Activities
- A few Words about Data Presentation & Analyses
- Pattern of Analysis & Interpretation
- Session 1 (June 2011-September 2011)
- Analysis & Interpretation of Session 1
- Section I: Accuracy Check
  - 4.3 Phonemic Level
    - (i) Analysis & Interpretation (Table I)
    - (ii) Analysis & Interpretation (Table II)
  - 4.4 Lexical Level
    - (i) Analysis & Interpretation (Table III)
    - (ii) Analysis & Interpretation (Table IV)
    - (iii) Analysis & Interpretation (Table V)
  - 4.5 Syntactic Level
    - (i) Analysis & Interpretation (Table VI)
    - (ii) Analysis & Interpretation (Table VII)
    - (iii) Analysis & Interpretation (Table VIII)
    - (iv) Analysis & Interpretation (Table IX)
4.14 Intonation----------------------------------------- 217
    (i) Analysis & Interpretation (Table XXIII)--------- 219
4.15 Stress------------------------------------------------------------------------------------------ 220
    (i) Analysis & Interpretation (Table XXIV)--------- 222
4.16 Tempo------------------------------------------------------------------------------------------- 222
    (i) Analysis & Interpretation (Table XXV)--------- 222
    (ii) Analysis & Interpretation (Table XXVI)------- 224
4.17 Speech Performance in Reading Activities------------------------------------- 224
4.18 The Doctor’s Opinion about the P’s Speech in Session 2------------------- 225
Section III: Overall Analysis & Interpretation of Session 2----------------- 225
Comparison between Session 1 & 2------------------------------------------ 226
Comparison of Speech Performance in Reading Activities------------------- 228
Session 3 (February 2012-May 2012)---------------------------------------- 229
Analysis & Interpretation of Session 3------------------------------------- 252
Section I: Accuracy Check--------------------------------------------------- 252
4.19 Phonemic Level----------------------------------------------------------- 252
    (i) Analysis & Interpretation (Table XXVII)------ 253
    (ii) Analysis & Interpretation (Table XXVIII)--- 256
    (iii) Analysis & Interpretation (Table XXIX)---- 257
    (iv) Analysis & Interpretation (Table XXX)----- 258
4.20 Lexical Level------------------------------------------------------------- 258
    (i) Analysis & Interpretation (Table XXXI)------ 259
    (ii) Analysis & Interpretation (Table XXXII)-- 261
    (iii) Analysis & Interpretation (Table XXXIII)-- 263
4.21 Syntactic Level---------------------------------------------------------- 263
    (i) Analysis & Interpretation (Table XXXIV)---- 269
    (ii) Analysis & Interpretation (Table XXXV)----- 275
5.3 Emotional, Linguistic and Non-linguistic Training of Caregivers

Some Activities Suggested for Speaking

5.4 Sensory Perceptions

5.5 Attention Spans

5.6 Memory Cultivation

Reinforcement Schedules

Terms Suggested for Discussing Language Recovery after Aphasia

Anomaly during the Study

5.7 Serendipity

5.8 The Core Category in the Study

5.9 The Concepts Guiding towards Theory Generation

5.10 Theory Grounded in the Study: The Theory of Emotionicology

5.10.1 The Basic Premise of the Theory of Emotionicology

5.10.2 Tenets of the Theory

5.10.3 Discussion

5.10.4 Concepts/Disciplines Contributing towards the Theory of Emotionicology

(i) Biology

(ii) Developmental Psychology

(iii) Physics

(iv) Psychiatry

(v) Psychology

(vi) Organizational Behavior

(vii) Pragmatics

A Word of Caution

Directions for Future Research

5.11 Linguistics

5.12 Psychology, Psychiatry & Psychotherapy
A Final Word

REFERENCES

APPENDICES

APPENDIX A: Consent from the Research Participant

APPENDIX B: Consent from the Doctor

APPENDIX C: Guide to Transcription Symbols

APPENDIX D: Key to Roman Symbols of Urdu Sounds

APPENDIX E: Discussion #3 with the Doctor

APPENDIX F: Diary Entry

CD (Audio Recordings)

LIST OF TABLES

<table>
<thead>
<tr>
<th>Tables</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table I</td>
<td>139</td>
</tr>
<tr>
<td>Table II</td>
<td>141</td>
</tr>
<tr>
<td>Table III</td>
<td>143</td>
</tr>
<tr>
<td>Table IV</td>
<td>144</td>
</tr>
<tr>
<td>Table V</td>
<td>146</td>
</tr>
<tr>
<td>Table VI</td>
<td>148</td>
</tr>
<tr>
<td>Table VII</td>
<td>154</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>---------------</td>
<td>------</td>
</tr>
<tr>
<td>Table XXXV</td>
<td>270</td>
</tr>
<tr>
<td>Table XXXVI</td>
<td>276</td>
</tr>
<tr>
<td>Table XXXVII</td>
<td>279</td>
</tr>
<tr>
<td>Table XXXVIII</td>
<td>280</td>
</tr>
<tr>
<td>Table XXXIX</td>
<td>284</td>
</tr>
<tr>
<td>Table XXXX</td>
<td>286</td>
</tr>
</tbody>
</table>

**LIST OF FIGURES**

<table>
<thead>
<tr>
<th>Figures</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1. Sentence types produced</td>
<td>290</td>
</tr>
<tr>
<td>Figure 2. Ability to produce fully correct sentences</td>
<td>291</td>
</tr>
<tr>
<td>Figure 3. Ability to produce prolonged talk</td>
<td>291</td>
</tr>
<tr>
<td>Figure 4. Ability to communicate successfully</td>
<td>292</td>
</tr>
<tr>
<td>Figure 5. Techniques used during language recovery</td>
<td>298</td>
</tr>
</tbody>
</table>
### LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>The Research Participant</td>
</tr>
<tr>
<td>S</td>
<td>The Researcher’s Sister</td>
</tr>
<tr>
<td>R</td>
<td>The Researcher</td>
</tr>
<tr>
<td>D</td>
<td>The Doctor</td>
</tr>
<tr>
<td>AR</td>
<td>Audio Recordings</td>
</tr>
<tr>
<td>DE</td>
<td>Diary Entry</td>
</tr>
<tr>
<td>DD</td>
<td>Discussion with the Doctor</td>
</tr>
<tr>
<td>DDI</td>
<td>First Discussion with the Doctor</td>
</tr>
<tr>
<td>DD II</td>
<td>Second Discussion with the Doctor</td>
</tr>
<tr>
<td>DD III</td>
<td>Third Discussion with the Doctor</td>
</tr>
<tr>
<td>DD IV</td>
<td>Fourth Discussion with the Doctor</td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENTS

First of all, I wish to express my gratitude to my mentor and supervisor Dr. Sohaila Javed whose stupendous knowledge, tremendous guidance and patience have helped me throughout this research endeavor. Her sincere concern, tireless support, rigorous checking of the drafts and insightful comments have been providing the vigor needed to complete the task. I couldn’t do this work without her support.

I would also like to thank my Alma Mater, National University of Modern Languages (NUML) and the entire faculty of Higher Studies (FHS) for their sincere coaching and encouragement.

I also owe heartiest thanks to my dear sisters and friends Rehana, Najma, Asma and Samina for their immense emotional support, Capt. Rida and Sarmad for their technical assistance and concern and Samee Bhai, Sulman and Rafay for their moral support. Besides that, I also feel grateful to my entire family for being my strength, especially my dear father whose continuous encouragement and trust in me have always boosted my confidence. Dear Abbu, thank you very much for always being my inspiration.

I also feel deeply indebted to Dr. Asaf Alavi for his cooperation throughout the research process despite his busy schedule and for making the environment of the discussions lively with his great sense of humor. His heartfelt concern for my dear mother and his readiness to help whenever asked is highly commendable.

Last but not least, I would love to thank my adorable mother. Her exemplary cooperation despite illness and love aided me at each step. Her smiles kept me on track and her warmth and alacrity reduced much of my tension and made the research process enjoyable. This thesis has been an odyssey, full of emotional discoveries about the human psyche. I couldn’t have imagined undertaking it without the company and support of my beloved mother.
DEDICATION

To my lovely parents without whose love, support, guidance and trust I couldn’t do anything.

CHAPTER 1

INTRODUCTION

Background

This is an exploratory case study based on one individual. The study design is mainly qualitative. The research participant had a stroke in the left hemisphere in 2005 which resulted in aphasia. She was almost 60 years of age when it occurred. Initially, she suffered from a total speech loss but later started recovering. This study explores her process of linguistic recovery over one year.

Linguistic recovery is a time taking process. Thus, a longitudinal study design has been used in order to collect information on continuing basis and to measure the patterns of change in the data. The data were collected in the form of audio recordings of the conversations that the research participant used to have with the researcher or her immediate family members, diary entries of the research participant’s linguistic
performance and discussions with her doctor about her language condition. The audio recordings as well as the diary entries were made on daily basis whereas the discussions with the doctor were on four monthly basis. These discussions were also audio taped with the informed consent of the doctor. All the audio recordings have been provided in the form of a CD along with the write-up.

Usually, it is propagated through different disciplines such as neurology, developmental psychology and linguistics that at such an advanced age, the language faculty cannot be fully recovered after once losing it. The idea of a *critical period* is included in all such discussions which negates the possibility of retrieving language abilities after crossing this period or age.

The idea of a critical period was originally suggested by a linguist Eric Lenneberg in 1967. It says that there is strict age limit for the humans to learn language. The idea is controversial and remains a hypothesis but due to popularity, it has now broader applications and thus has crossed the boundaries of linguistics. This study investigates whether such a critical period exists in terms of age for linguistic recovery after aphasia or not.

Aphasia is a situation in which a person’s language abilities are negatively affected due to brain damage. Usually, it results due to damage to the left hemisphere as language is claimed to “reside” in the left side of the brain (Jacyna, 2000). Stroke, a head injury, accident, a shock or even an infection in the brain can result in aphasia. Stroke is among the biggest threats to language abilities as a result of which the connection between the brain areas controlling language and the organs related with language is broken. Thus, language abilities get affected. The situation can be temporary or permanent depending on different factors including the age of the sufferer. The neurologists suggest that a child’s brain has neural *plasticity* as the brain functions are not firmly fixed in it. Thus, it is believed to recover quickly as the language areas start developing in the right hemisphere (Taylor, 1990) but this process can take place till age 20 as after that, the neural plasticity starts withering (Kalat, 2004). This means that if the language abilities are lost after age 20, the chances of recovering them back will be bleak. The age till which the human brain remains plastic is termed as the critical period in neurology.
The dominant medical opinion is that a complete recovery of language after stroke is not possible. Majority of neurologists agree that an adult vertebrate brain is unable to generate new brain cells or neurons after brain injury. Thus, from neurological point of view, an aphasic whose brain is not plastic will have rare chances of linguistic recovery. This study challenges this idea by exploring the linguistic recovery process of the research participant who had crossed the so-called critical period at the outset of aphasia.

1.1 Rationale for the Study. The research participant in this study had started recovering her linguistic abilities after aphasia as a result of emotional stability. This generated the idea that linguistic recovery after aphasia can be aided and even accelerated by providing emotional stability to the aphasic. In most disciplines such as linguistics, neurology and developmental psychology the theorists favor the existence of a critical period after crossing which the process of linguistic recovery either becomes impossible or very slow. Thus, the chances of recovering the damaged or lost linguistic abilities are theoretically bleak.

The research participant’s recovery process tended to challenge this idea. This generated the idea of doing this study as it could aid the research participant in recovering her damaged linguistic abilities in a planned way and could also help the researcher suggest some activities for the aphasics in general who suffer from similar problems.

The professionals like doctors, speech therapists and neurologists generally depend on techniques like fMRI (functional Magnetic Resonance Imaging) and CT (Computerized Tomographic) scans to study aphasia. These techniques aid in understanding the level of damage after aphasia but the problem is that no brain scans are completely reliable as Hartwigsen & Seibner (2013) suggest. Hence, the understanding of the professionals is also not foolproof. This encouraged the researcher to undertake this study and explore linguistic recovery by employing linguistic and psychological ideas.

1.2 Statement of the Problem. The idea of a critical period in case of linguistic recovery after aphasia is generally foregrounded and overestimated whereas the efforts of the aphasic are backgrounded and underestimated. A total reliance on the concept is blindfolding as it not only orients the caregivers of the aphasic to think
pessimistically but can also cause fixation in their efforts in terms of providing linguistic assistance and practice to the aphasic. This study challenges the existence of a critical period for linguistic recovery after aphasia. It explores the possibility of recovering the language faculty after aphasia when the aphasic has crossed the so-called critical period and it also investigates the possibility of accelerating this process by providing emotional support to the aphasic.

1.3 Objectives. The primary objective of this study is to investigate the possibility of recovering language after once losing it after aphasia. The secondary objective includes an investigation of the factors affecting, aiding and hindering this process. This involves finding answers to some questions.

1.4 Research Questions. This study focuses on these questions:

1. What is the possibility of a critical period in terms of age for linguistic recovery after aphasia?

2. Does the linguistic recovery process proceed in stages? If yes, what are those stages?

3. Which strategies are used for communication by an aphasic during aphasia? Do they undergo transition over time or not?

4. Does an aphasic plan his/her speech or not?

1.5 Scope of the Study. The study seems to negate the existence of a critical period in terms of age of the aphasic for recovering language after aphasia, yet it favors the existence of a critical period for the formation of an attachment bond between an aphasic and his/her attachment figure who provides emotional security to the aphasic during the recovery process. It also suggests that an intimate bond of association has to be created consciously after aphasia has been detected. This bond of trust has to be nurtured through continuous contribution by the caregiver of the aphasic. In the language recovery process, the aphasic and his/her caregiver both contribute. Initially, the aphasic feels insecure and thus, is unable to contribute much. This feeling of insecurity is not only physical but also emotional. Thus, it is important to provide physical as well as emotional security to him/her because the aphasic can contribute towards his/her own recovery process only if s/he feels secure and safe. Being better
equipped with physical and emotional resources and having comparatively more control over language, more responsibility lies on the shoulders of the caregiver who invests his/her time and energy and helps the aphasic come out of this state of helplessness and become physically and communicatively independent.

The study examines the effects of emotions on the linguistic recovery of the aphasic and the part played by the caregiver in maintaining the emotional life of the aphasic and considers the importance of emotional and linguistic training of the caregiver before the procedure of the aphasic’s linguistic recovery starts.

The research participant in this study is an individual who is the researcher’s own mother. She had been suffering from aphasia as a result of stroke and was on her way towards recovery when this study was undertaken. The study deals with one year span of her recovery phases. The researcher was the caregiver of the research participant during the study.

1.6 Significance of the Study. The research on aphasia in different disciplines portrays it as a counterproductive phenomenon which curtails human abilities by having controlling and deteriorating effects on human intellect. The main reason behind this is that most of them focus on the ‘body’ aspect of aphasia, that is, its physical features such as localization of language on the brain and neural functions involved in language processing. Strict adherence to such ideas makes one believe that once the brain areas related to language are damaged (especially after age 20), language processing becomes astray forever. This study challenges this idea and maintains that though aphasia damages certain brain areas it also activates some brain functions, maybe as a “side effect”. Thus, in certain ways, it is also a developmental process. This study focuses on the ‘mind’ aspects of aphasia and it stresses that the emotional recovery should precede the linguictic and physical recovery of an aphasic.

The anatomical studies on aphasia restrict the linguistic recovery process of those above 60. Thus, there exists a trend of generalizing the results as most of such views have been contributed by neurologists following the nomothetic patterns of analyses (a term discussed by Palys, 1997) dominated by the positivist, scientific tradition. This study negates this idea by establishing the polemical view that this process is unique for every aphasic and can be stretched differently in different aphasics depending on the level of their emotional security. It establishes that the
more emotionally secure the aphasic, the brighter the chances of linguistic recovery will be.

The study also debunks the psychological idea that aphasia destroys language and thought both (Vygotsky, 1962) as it proves that both remain intact during aphasia. The study also challenges the neurological anatomies of the human brain which describe the human plasticity to wither away after age 20 as the neural functions become fixed at this age (Shaffer & Kipp, 2007). It maintains that neural plasticity is never lost. It only hibernates during maturity and can show up as a result of aphasia as it did in case of the research participant in this study.

This study explores the linguistic recovery process of a multilingual aphasic after stroke. It aims at generating optimism for the aphasics and their caregivers by challenging the neurological idea of a critical period which restricts the efforts invested by the aphasics and their caregivers. It gives an in-depth understanding of a complex process. According to Lorenzen & Murray, 2008 (as cited in Kiran & Iakupova), there is insufficient research in the domain of bilingual aphasia and research on multilingual aphasics is almost non-existent. This study is one such contribution as it explores the linguistic recovery process of a multilingual who knew three Oriental, heavily inflected languages with a grammatical gender and one Occidental language with a natural gender.

1.7 Delimitation. This study explores how healthy, joyous emotions can be initiated and negative emotions can be avoided in the aphasic and how positive and healthy emotions can be converted into a desire to improve because positive emotions generate happiness and are constructive (Oatley, 2004). Thus, they aid in the developmental process whereas negative emotions cause unhappiness, sadness and even anger and are destructive, detrimental and counterproductive. This study investigates how emotional and psychological stability of the aphasic provide a solid foundation for the linguistic recovery process. Thus, it suggests that emotional recovery of the aphasic should precede the linguistic recovery process. Though the researcher has also drawn upon ideas from neurology and philosophy, she intends to highlight only the linguistic and psychological aspects of the phenomenon.

1.8 Chapter Breakdown Plan. The next chapter outlines the literature related to language recovery after aphasia and discusses the contributions of theorists from
different disciplines such as neurology, linguistics, developmental psychology and philosophy about the same.

Chapter 3 discusses the methods of data collection for the study and the rationale for using each of them. It was a longitudinal study. The data collection process demanded factual information about the linguistic performance of an individual over one year. It also demanded prolonged interaction of the researcher with the research participant on continuing basis. Thus, it was necessary to choose the data collection methods that could reveal patterns in the research participant’s performance and the methods of analyses that could make the changes noticeable and measurable. So, participant observations, diary notes and discussions with the doctor of the research participant were used as data collection methods and the analyses were made linguistically, statistically and graphically.

Chapter 4 presents the data collected through three different methods (discussed above) and examines the linguistic performance of the research participant by considering the linguistic as well as paralinguistic features of her speech. It scrutinizes the process of her linguistic recovery by focusing on different linguistic levels that is phonemic, lexical and syntactic and by also studying the suprasegmental features of her speech. The chapter also draws parallels between the “normal” language development in case of first language acquisition and second language learning and the “abnormal” process of linguistic recovery after aphasia and discusses the similarities and differences between the two.

Chapter 5 concludes the study by delineating the process of linguistic recovery after aphasia as a separate domain of study. It also presents some fresh terminologies for discussing the phenomenon. The chapter ends with the theory of emotionicolgy. A theory grounded in the study that evolved during the analyses. The theory of emotionicolgy states that not only initiation of positive, enjoyable emotions aid in linguistic recovery but at advanced stages of recovery when the aphasic is emotionally secure, negative emotions such as aggression (in controlled ways) can also be used for aiding the linguistic recovery process. The theory emphasizes that negative emotions like aggression remain unexplored and misconstrued. They should also be explored and involved during the recovery process of aphasics (but with caution and care).
The study ends with an optimistic note for the aphasics and their caregivers as it negates the idea of restricting and generalizing the recovery process for every individual and suggests a different, unique possibility of linguistic recovery for each aphasic depending upon the emotional security and stability of the aphasic and the emotional competence of the caregiver.

Note: The thesis format is as per instructions in the APA Publication Manual (6th edition).
CHAPTER 2

LITERATURE REVIEW

This study on language development after aphasia is cross disciplinary in nature, and the present chapter explores the theoretical developments on aphasia from different disciplines. Language development after aphasia has historically been treated as “abnormal” and has always been studied in comparison with “normal” language development in case of first language acquisition and second language learning. Due to this reason, literature on language development in both domains has been reviewed. For the sake of clarity, the chapter has been divided into three sections: The first section deals with the literature on normal language development whereas the second section deals with the literature on abnormal language development after aphasia. The third section delineates the theoretical framework for this study. Care has been taken to focus only on the groundbreaking works. The ideas of same theorists in both sections have been included to analyze the differences or similarities, if any, in approach towards the phenomena.

Delimitation of the Literature

The purpose of this study was to explore what happens when the language recovery process starts in an aphasic. Aphasia has neurological, linguistic, psychological as well as philosophical underpinnings. Thus, literature from all these disciplines from late 19th century to early 21st century has been reviewed giving this study an interdisciplinary ontology.

Section I

“Normal” Language Development

The phenomenon of language development has been approached differently by different disciplines between late 19th century and early 21st century. Neurological studies dominate at the end of the 19th century and they concentrate on the biological
foundations of language. In the early 20th century, studies on language development also appear in linguistics as well as in psychology, yet these disciplines approach language in a different way and focus on explaining the language structure and the language learning process respectively. For this particular study, an understanding about all these aspects was obligatory. The discussion below reveals how normal language development has historically been approached in different disciplines.

**Neurological Foundations of Language**

The human brain controls all types of physical and mental activities. Language production and comprehension are among them. The whole process is done with the help of over one hundred billion neurons (Kalat, 2004) which organize themselves into clusters during the maturation process. Each cluster specializes in performing one particular function. This process can prolong, as some parts of the brain (especially those related with memory) continue to undergo change till age 20 (Kalat, 2004). In infancy, these neurons are scattered and the functions that they have to perform in future are not fixed. Till early childhood, this process is in flux. Afterwards, the process of neuron specialization starts which is called *lateralization* (Shaffer & Kipp, 2007). If accidentally, a group of neurons that specialized in performing one particular function loses its ability, some other group can take up the responsibility and this proxy group can also be trained for substituting the previous group. This is why it is said that a child’s brain is *plastic* (Shaffer & Kipp, 2007). After the maturation process is complete, it becomes very difficult for the brain to assign the job of the damaged neurons to the healthy neurons as they have already been engaged for some function. Initially, infant *perceptions* heavily depend upon the innate senses of vision, hearing, taste, touch and smell. Hearing is the most sensitive sense and is fully developed even at the time of birth (Shaffer & Kipp, 2007).

Language is said to be localized in the left hemisphere in the realm of *memory* (Danziger, 2008). Any damage to the left hemisphere would affect memory and consequently, the language faculty. Neurologists use terms such as hemisphere dominance or lateralization and language *localization* to talk about the physical presence of language in the human brain, yet these terms provide only empirical evidence for the presence of the language faculty in the brain and do not explain what actually initiates the language development process which is a major concern of the
This is why it is important not to consider the intricate neurological details and turn to the psychological and linguistics aspects of the process.

**Psychological Ideas on Language Development**

The neurological terms are still in use for describing the language development process but they are now being used in association with ideas and terms taken from other disciplines. The earliest ideas that were associated with neurological ideas come from psychology.

Till 1920s, psychology was treated as a subdiscipline of neurology, yet the theoretical and practical contributions of some psychologists such as Wilhelm Wundt (1832-1920), B. F. Skinner (1904-1990), Lev Vygotsky (1896-1934) and Jean Piaget (1896-1980) brought considerable changes in the existing approach for understanding human development including language learning though all worked in the domain of psychology, that is, the science of the abstract, inner experience (Wundt, n.d.), all were under the influence of the scientific, empirical tradition as all of them adopted experimental methodology. However later, psychology was established as a separate, independent discipline and new techniques were introduced.

**2.1 Wilhelm Wundt’s Contributions.** Wundt is among the earliest psychologists in the early part of the 20th century who felt the problem in the previous neurological approach for understanding human development. This was due to the obvious divide between natural sciences and social sciences and for overcoming the problem, he initiated the idea of consolidating both (Wundt, n.d.). Thus, Wundt brought in the mind aspect of the Cartesian dualism along with the previous scientific body aspect. This previous view was dominated by the scientific tradition which emphasized the physical, body aspect of human existence thus neglecting the abstract, mind side. Eventually, it turned into a strong scientific belief that mind and body are two separate entities. This misconception was later explained by Descartes who said that mind and body were separate, yet they interacted together in a specific part of the brain called the pineal gland (Kalat, 2004).

**2.1.1 Wundt on Human Development.** Wundt mentioned six interlinked stages in which human development takes place and these are recognition of objects, emotional development, development of spatial knowledge, development of temporal ideas,
development of analytical ability and development of an ability to organize ideas (Wundt, n.d.). Though Wundt does not explicitly include language development in his discussions, latency in his ideas influenced much of the later work done in this domain. Wundt’s idea of the stages of development was later applied by his followers for understanding language development.

Wundt used both the experimental as well as non-experimental methodologies for understanding human growth. For the study of “higher” mental processes, he preferred a non-experimental methodology and called it “the hermeneutic study of cultural products” (Thomas, 2010). In Wundt’s philosophy of human development, there is no mind-body split because he considers the whole human being. Thus, learning is explained as habit formation which depends on the external, visible factors as well as the internal, invisible processes taking place in the mind of the learner (Wundt, n.d.).

Wundt mentioned a critical period for human development. To him, every normal human child undergoes change before seven years of age (Wundt, n.d.) after which human growth is fixed. Wundt’s ideas were later developed under the label social constructionism. Lev Vygotsky contributed most towards developing this theory. The major difference between both is that Wundt considers only the normal individual whereas Vygotsky also discusses the deaf and dumb and the aphasics. Language development forms a major part of Vygotsky’s work on human development and his inclusion of the deaf and dumb and the aphasics gives an expressive drift to the issue of language development in human beings.

2.2 Lev Vygotsky. Lev Vygotsky (1896-1934) worked in the 1920s and is among one of the most influential theorists in the fields of education and developmental psychology (Veer & Valsiner, 1994). He modified Wundt’s experimental psychology (Vygotsky, 1962) and applied the traditional experimental methods on the deaf and dumb children of Moscow in his experimental laboratory to see whether their intellectual or linguistic abilities could be developed or improved (Veer & Valsiner, 1994). After over ten years of collaborative work with his colleagues and friends, he came across the conclusion that they could be taught linguistic skills.

Vygotsky’s work is generally discussed in comparison with Piaget’s yet Vygotsky’s approach is different from Piaget’s for example, where Piaget focused
mainly on systematically observing children or interviewing them without spoiling or disturbing the natural sequence of their activity, Vygotsky used an experimental approach. He used to introduce certain complications in children’s activities to see how they reacted to them (Vygotsky, 1962). His study includes deaf and dumb children as well as adult aphasics along with normal infants, children and adolescents whereas Piaget only studied normal infants, children and adolescents.

Vygotsky tested certain ideas on his own students using a number of experimental techniques. As opposed to Piaget, he did not mention a strict age limit for each developmental stage. He viewed learning as a flexible process and every learner to be unique. He also talked about the importance of the quantity and quality of social interactions with others during development who could be “more capable peers” or teachers and the refinement and adjustments of the concepts as an ongoing process (Vygotsky, 1962). Vygotsky did not talk about which stage came first.

Talking about the intellectual developmental process, he once again mentioned certain stages. His ideas of developmental stages are flexible as there might be overlapping with one another and a particular stage might take longer or shorter to develop in different children depending on their intellectual and linguistic surroundings. Vygotsky views the developing individual as an active participant in the learning process and development as a *dialogical* and *mediated* process (Shaffer & Kipp, 2007). He emphasizes the importance of instruction and training by using the term the *more knowledgeable other* or the mentor who guides the amateur learner in that s/he introduces the existing linguistic ideas, social values and cultural aspects (Lock & Strong, 2010). Thus, s/he can *stretch* the existing body of knowledge by introducing new ideas. This has to be done systematically and thoughtfully. Vygotsky discusses about the possibility of maximizing the developing process whether cognitive or linguistic. He says that every learner has an actual, existing body of knowledge and a possible capacity of achievement (or the *zone of proximal development*) which can be stretched and maximized by an encouraging, skillful knowledgeable other who *scaffolds* or sequences the learning material intelligently (Shaffer & Kipp, 2007).

Vygotsky’s subjects of study vary from pre-school children to adults. For convenience, his areas of study can be categorized as language development in the
child, adolescent’s concept formation, development process in the deaf and dumb children, adult learning and the language revival process in aphasics.

2.2.1 Vygotsky’s Ideas on “Normal” Language Development in the Child.
Vygotsky suggests two broad stages in the development of human intellect: a pre-linguistic stage and a pre-intellectual stage (Vygotsky, 1962). He describes human development on two planes: on the thought plane and on the linguistic plane and considers language to be “the highest form of symbolic behavior”. In the early years of life, a child is without language which is the pre-linguistic stage.

The pre-intellectual stage starts when speech begins to emerge. Initially, it totally depends on visible action (Veer & Valsiner, 1994). Eventually, development of mature speech develops which dominates over action. The action-dependent stage is recognizable through the use of one word sentences. It mainly involves the use of concrete words such as verbs and nouns. The growing form of language involves function words which are harbingers of the symbolic behavior and this indicates the beginning of planned speech.

The pre-linguistic stage and the pre-intellectual stage are not the only stages of cognitive development as there are some other stages as well. These stages are experimentation stage, classificatory or organizational stage and problem-solving or logical reasoning stage (Vygotsky, 1962). These stages follow the pre-linguistic and the pre-intellectual stages.

Vygotsky mentions three stages of speech development: first, external speech develops which involves only taking in language or copying without much understanding followed by the egocentric speech in which individual forms and language use thrive, that is, language use with some understanding. The final stage is the development of inner speech in which a child is able to think silently using linguistic understanding (Vygotsky, 1962). Regarding thought development, he again recognizes three stages. The first is the development of autistic thought which is individual and personal followed by the development of egocentric thought in which the child feels no difference between himself/herself and the world. The final stage is the development of socialized thought (Vygotsky, 1962). The transition from egocentric thought to socialized thought is due to the emergence of creativity and the development of imagination (Vygotsky, 1962).
Vygotsky’s ideas about cognitive development resemble Piagét’s ideas but when Piaget believes that egocentric speech and egocentric thought disappear after becoming socialized, Vygotsky believes that they do not disappear completely as the egocentric speech becomes internalized and turns into inner speech which works through semantics and has less or no connection with phonetics (Vygotsky, 1962).

Vygotsky takes sensory perception to be an important ingredient in the development of intellect which initially depends on visible, concrete objects (Veer & Valsiner, 1994). However after maturation, it can work in abstractions.

2.2.2 Three Elements of Intellectual Development. Vygotsky describes perception, attention and memory to be the three most important elements in the process of mental growth. Perception helps in taking in the external information, attention helps in concentrating during solving a problem and memory helps to organize and link up the past experience with the present (Veer & Valsiner, 1994). These abilities develop through syncretism, that is, through trial-and-error and undergo transition during which the experience is organized, deleting the incorrect ideas and replacing them with the correct ones. This updating of the existing concepts indicates intellectual development. Concept formation happens from concrete to abstract. Vygotsky also talks about the phenomenon of automatism, a stage in the intellectual and linguistic development when things become automatised (Veer & Valsiner, 1994), involving nominal conscious effort.

Piaget views the developmental stages to be fixed for all humans but Vygotsky does not think so. He talks about the basic, rudimentary structures of perception, attention and memory with which every human child is equipped by birth (the idea corresponds to Chomsky’s idea of innateness). However, with the passage of time, they get transformed and thus, intellectual development takes place (Shaffer, Kipp, 2007). All types of “higher” cognitive functioning occur as a result of modifications and transformations in the basic mental functions for example, it can be seen how attention develops from infancy to childhood. Young infants have very brief attention spans (Shaffer & Kipp, 2007) and they get distracted very easily. However, they improve with the passage of time. Perception, attention and memory determine the intelligence of an individual and their development varies from person to person. All
three can be improved through practice. They are interlinked in complex ways and contribute towards each other’s refinement.

Vygotsky suggests that almost every child devises his/her own unique way of memorizing things and strategies for problem solving over time. With experience and exposure, these techniques undergo evolution. So, older children are better equipped with strategies of utilizing their memory (Veer & Valsiner, 1994). Initially, a child is equipped with only the basic, innate reflexes or systems of behavior (reflex actions) which are rudimentary in structure and can change in many different ways. Different reflex combinations and complexes can be formed as a result which means unlimited possibilities of behavior using the same limited number of innate reflexes (Veer & Valsiner, 1994). This is the same as an ability to create innumerable linguistic expressions out of a limited pool of basic phonemes in a language.

The reflex complexes perform higher functions of perception in maturity. The basic, innate reflexes provide the basis for the later complex cognitive activities that are flexible. A human child is born with some natural reflexes and a basic and rudimentary mental apparatus yet it is liable to re-form and transform depending on the quality and quantity of linguistic, social and cultural encounters. This is why the cognitive and linguistic development of every human child is different. A young child can copy what others are saying but is not yet able to use language in his/her own peculiar way as the reflex complexes are not yet fixed.

Every child gets a different linguistic input depending upon the environment which starts from home and ends in school. This process of development and modification of the linguistic concepts continues throughout life and thus there is no fixed age limit for linguistic development.

2.2.3 Concept Formation. Vygotsky views concept formation in adolescents as a transitory process. Nothing new is constructed; rather the already existing thinking pattern undergoes transition through mobility and flexibility (Veer & Valsiner, 1994). Early experiences are important because they provide the basis for the future thinking pattern and linguistic abilities.
2.2.4 Vygotsky’s Idea of Phylogenetic and Ontogenetic Development. Vygotsky views concept formation in children to follow a specific direction. It is from general or phylogenetic to specific or ontogenetic (Vygotsky, 1962).

Concept building is initially a bottom-up process. In maturity, however, the process is reversed. Thus in adolescence, it becomes top-down. So, initially, a child takes in the whole concept without much understanding of its constituent parts and in adolescence, s/he starts reasoning and concentrating on parts and minute details of concepts. Vygotsky’s thesis can be proved through a common children’s school practice: They cram the mathematical tables without any understanding. It is only through advancement in years that they start developing real understanding of such concepts. Logical thinking is flexible and enables the adolescent to use logic and sometimes amend or altogether reject his/her own previous concepts.

An important feature of adolescent thinking and language development is the development of creativity which is missing in a child. Vygotsky describes this to be the result of the ability to combine emotions with thinking. An adolescent’s thinking and language become personalized. They become subjective because the child gets control over them. A child’s concept formation is totally dependent on senses whereas an adolescent’s concepts are based on imagination. Thus, a child’s concept building follows a phylogenetic path (that is, a general path) whereas an adolescent’s concept formation follows an ontogenetic way which is individualistic and subjective and thus, creative. Vygotsky views intellectual development as a shift in the development process that is from phylogenetic development to ontogenetic development.

Vygotsky borrowed ideas from the German Gestalt psychology yet he was against some of its tenets, for example, the Gestalten idea that “the whole is more than the sum of its parts”. To him, such ideas tend to ignore the part (individual) and focus on the whole. In other words, the phylogenetic development is of prime importance and has a totalizing, controlling effect over an individual and the ontogenetic development is only subsidiary, of secondary importance. Vygotsky thinks the other way round and views the individual, subjective development to be the most important as it symbolizes the supreme human faculty. He believes that thought develops in Gestalts (whole) yet later, the child can focus on its details (parts). Thus, thought development is a top-down process and when thought is mediated with language, the
process is reversed. However, language development follows the opposite path, that is, bottom-up.

2.2.5 Language Development in the Deaf and Dumb Children. Vygotsky had observed and taught the deaf and dumb children in his laboratory and believed that their intellect could be improved by training them with linguistic skills. He suggested some ways for doing so. First, they should be made a part of the normal community. Secondly, they can be trained in lip-reading. This can be done only when children have the ability to concentrate and pay attention. Vygotsky always advocated that vocal speech is superior to sign language because in the sign language, there is a limitation for expression (Veer & Valsiner, 1994). Contrariwise, vocal language is limitless. Vocal language can be taught to the deaf and dumb and the chances of sharing and understanding their ideas can be improved.

Note: Vygotsky’s study on the linguistic and cognitive development of aphasics will be discussed in the next section.

As has been pointed out earlier Vygotsky’s work is generally compared and contrasted with Piaget’s. Let’s discover what Piaget has to say on human development.

2.3 Jean Piaget. Jean Piaget (1896-1980) is known for his interdisciplinary approach because most of his work is based on coordinating logic and psychology (Piaget, 1959). His early research was based on intense, systematic observations (Hanfman & Vakar, 1962). Later, he developed interviewing techniques for study purposes. His research subjects included infants, toddlers and adolescents (Wilson, Robeck & Michael, 1974). He devised a framework called the age-stage framework (Wilson, Robeck & Michael, 1974) and studied how a human child develops during different stages of growth.

According to Piaget, there are three basic stages for cognitive growth, that is, the sensorimotor stage (from birth to about two years) followed by an intermediate stage (from two to about eleven years) ending in the cognitive thought stage which is recognizable by the emergence of an organized symbolic behavior. Piaget equates it with the ability to use language (Piaget, 1959).
2.3.1 Piaget on “Normal” Language Development. Language emerges when a child has already mastered his/her structural thought. Initially, a relatively chaotic form emerges out of trial-and-error but later, it becomes organized as the child learns how to derive linguistic rules. This can be seen in a child’s self-correction. S/he thus becomes synchronized with the general, whole language system or the Gestalt (Wilson, Robeck & Michael, 1974).

The intermediary stage is sometimes subdivided into many other stages. Every succeeding stage is a natural outcome of the preceding one. This means that every human child or subject follows the same path towards its formation as a thinking, speaking being.

Like Chomsky, Piaget also believes that the brain of a human child is equipped with certain neurological structures which contain knowledge content (Wilson, Robeck & Michael, 1974). However, there is a possibility of change and modification depending on growth and experience. Piaget calls these mental structures as schemata (Wilson, Robeck & Michael, 1974) that work by grouping themselves into networks. Numerous association chains get constructed during maturation.

Piaget used to carry out long conversations with young school children who were busy in playing different games. This gave him a chance to know children’s ideas about their cognitive make-up such as their ideas about rules, morality and ethics (Piaget, 1932) which was a latent mold for the future adults.

Piaget suggests that a child’s cognitive development can be tested by applying a simple methodology: The first step in the initial stage of development is purely verbal behavior. This stage can be tested by asking children to describe an experience. In the next stage, the child can be asked to explain some action, for example, how to play a game or how to deal with a simple gadget such as a pen, etc. Piaget terms it to be half-verbal and half-practical behavior. At this stage, the child knows how to perform a specific action and also how to verbally explain it. The third and the final stage can be tested by asking the child the possible reason of some event or action. This stage is termed as the direct one (Piaget, 1930) and it is purely logical. During the linguistic as well as the cognitive maturation, the child follows a particular path: S/he starts off with analogy (Piaget, 1930) and believes that all objects that look...
alike are same in every respect. This ability is purely material and not logical. Thus, most children at this stage believe that everything that flies is an airplane or a bird. However, till the end of the third stage, it becomes logical.

Piaget’s thesis is that human cognitive development can be detected from the ability to adapt according to the environment and to overcome the problems of the outside world through organization, adaptation and equilibration (Wilson, Robeck & Michael, 1974).

Adaptation is the result of two opposing forces at work in the human mind, that is, assimilation and accommodation (Wilson, Robeck & Michael, 1974). Assimilation occurs when reality is internalized whereas through accommodation, an adjustment is made between the new and the already existing information. It can be viewed as a process through which knowledge is updated.

Assimilation is a purely subjective force because not everything gets registered by everyone whereas accommodation is objective (Wilson, Robeck & Michael, 1974). Once taken in, the human brain works on each new information. It sometimes involves modification or a complete change over in the already existing knowledge. According to this explanation, it becomes clear that a human child is born with the very basic forms of knowledge and during the early phase of life with almost no experience of the world, it mainly works through the innate reflexes. The knowledge structures in the earliest phase of life depend on reflexes and Piaget names them as reflex schemata (Wilson, Robeck & Michael, 1974). In infants, these reflex schemata work independently and different reflexes have little or no connection. Thus, children cannot do multi-tasking and can concentrate on just one activity at one time. With experience and exposure, they learn how to coordinate different reflexes and it can be seen through their activities in which different reflexes become harmonized and thus more than one activities at a time become synchronized (Wilson, Robeck & Michael, 1974).

Piaget views all (normal) human children to be born with similar reflex schemata but experience and growth modify and change them considerably. The reformulated mental schemata are called cognitive schemata which differ from one person to another. This transition involves organization of different reflex schemata.
A child’s ability to organize objects in an ascending or descending order (or mental seriation) is an example of their ability to organize (Wilson, Robeck & Michael, 1974) which appears at about seven (Piaget, 1959). It helps a child arrange his/her experience and thus, the logical ability emerges. Initially, this ability can be exercised only in the immediate, physical environment. Eventually, it grows and can be used for dealing with abstractions and is termed as formal operations stage.

The ability to see patterns and structural unity is the key element in the development of formal and logical ability. This helps the child control reality outside himself/herself. So, cognitive structures are not inherited (Wilson, Robeck & Michael, 1974). Piaget considers the first nine years of life to be significant (Wilson, Robeck & Michael, 1974) as the experiences during this time period affect the cognitive growth considerably. This can be called Piaget’s idea about critical period because a child is in the process of learning how to think symbolically and is trying to master the language.

While discussing a child’s mental development, Piaget acknowledges the effect of environment. He points out how individual activity lies between the confines of the inherited nervous system and the social environment. In between these two extreme ends, the child or the subject is located. S/he learns with experience how to adapt and balance his/her activities, sometimes according to the inner, nervous system and sometimes according to the outside, social world (Piaget, 1959). This adjustment can be seen through an adolescent’s activities when s/he is learning to adjust according to the futuristic adult duties.

2.3.2 Egocentric Talk and Socialized Speech. Piaget uses certain terminology while discussing the child’s language development, for example, he talks about egocentric talk as well as socialized speech (Wilson, Robeck & Michael, 1974). Egocentric talk is not the same as self-centered talk. In egocentric talk, a child talks loudly as if s/he is talking to himself/herself because s/he thinks that there is no difference between him/her and the outside world. Egocentric talk follows three phases before changing into socialized speech and these are repetition, monolog and collective monolog (Piaget, 1959). In repetition, children repeat whatever they hear without much understanding whereas in monolog, they engage in speech without considering others and in collective monolog, they are engaged in speech collectively but they do not
indulge in dialog as they do not address each other (Wilson, Robeck & Michael, 1974). *Egocentrism* can be seen in children’s language in the direct use of pronouns without first mentioning the nouns. Socialized speech happens when the child has understood that s/he and the world are different and thus, it acquires a purely communicating purpose.

2.3.3 The Development of Thought and Language in the Human Child. Piaget explains how during the first year of life, a child starts off his/her journey towards language by imitating the sounds and syllables s/he hears. This verbalism is usually devoid of true understanding (Piaget, 1959) and it differs from child to child. In the beginning, thought and language develop separately. Thus, thought is without the mediation of language and Piaget calls it the *autistic thought* (Piaget, 1959). The earliest language is based on only copying or repeating thus, it is devoid of thought. Some theorists (like Calparide) call it *ideomotor adaptation* (Piaget, 1959). An adjustment and coordination between the individual and the social is necessary for cognitive as well as linguistic growth. However, this adjustment starts subconsciously and can be seen through *loud thinking* or *soliloquy* (Piaget, 1959). Till the age of three to five, a child is on its way towards mastering language and thus a simple self-talk takes the form of questions yet still, s/he does not expect an answer (Piaget, 1959) because in most cases, s/he already knows it. Eventually, the questions become complicated which demand detailed answers. The child demands an answer as s/he does not know it. Hence, starts the socialized speech with information seeking or information exchange.

A purely socialized form of speech starts at about seven or eight and can be seen through the development of gestures and expressions which are directed towards others (Piaget, 1959). Socialized language follows a track from descriptive language to language used for discussions and ending with an ability to explain phenomena (Piaget, 1959).

Piaget uses the idea of directed or intelligent thought first and then the idea of *undirected* or autistic thought (Piaget, 1959). He explains how *directed or intelligent thought* can be converted into language as it is conscious and objective but an undirected or autistic thought cannot be expressed through language as it is subconscious and subjective. Piaget uses the term *scaffolding* for the child’s trial-
and-error method during development. A child overcomes the challenges of the outside world by suggesting different solutions and reasons for every problem. Through his/ her own experimentation, s/he comes up with the answers. Initially, this reasoning or finding solutions lacks flexibility or adaptation. Through later experiences, s/he discovers the fault and adjusts his/her ideas. The reason for his/her early mistakes is the lack of ability for arranging and ordering the experience as s/he conceives ideas in Gestalts or wholes and disregarding details or parts (Piaget, 1959). Thus, s/he pays attention only to the overall image. In terms of language, this can be seen in a child’s reliance on single words for communicating about many ideas (the telegraphic speech) and his/her misconception that others are getting the whole message. Piaget views a child’s linguistic as well as cognitive development to be complete between eleven and fifteen.

Piaget discusses the human cognitive development at length. He uses Wundt’s ideas to talk about human development by bringing in Wundt’s stages of human development in his own discussions yet he completely overlooks the emotional aspects in the development process. This aspect is discussed by one of Piaget’s contemporaries, John Bowlby who actually devised a theory on the same idea.

2.4 John Bowlby. John Bowlby (1907-1990) is known for his ideas on child development in the form of his Attachment Theory. His work is significantly different from Piaget’s as he solely discusses the importance of emotional charge during growth. Bowlby discusses how emotions play a vital role in the development process whether physical or psychological. He is different from other psychologists and theorists in that he does not demarcate development into well-defined stages and also because he highlights the importance of the satisfaction of emotional needs of a growing individual. His basic idea is that most of the physical and psychological problems of children’s development are due to a deprivation of a mother figure in their lives and that for mental growth and health of an infant, “s/he should experience a healthy, warm, close and continuous relationship with his/her mother or a caregiver which should give happiness and satisfaction to both of them” (Bowlby, 1973). Synchronization between the infant’s needs and the caregiver’s responses ensures a healthy mental development (Bowlby, 1982) which eventually results in a healthy physical development. Thus, for a holistic development of an individual, a positive and satisfying early emotional experience is of prime importance. This helps an
individual feel secure and confident for exploring the challenges of life as an independent, self-reliant individual.

**Note:** This chapter mainly focuses on linguistic development and Bowlby does not discuss linguistic development of a child. He only talks about the “normal”, socio-emotional development through his Attachment Theory. His ideas will be discussed at length in Section III as they will be partly used as the theoretical framework for this study.

**Recurring Ideas in Psychology on Language Development**

Human cognitive growth can be seen in terms of different strategies adopted during different stages of language development. In a child, it indicates a steady growth pattern. Infants’ language sensitivity can be detected in the prelinguistic stage (at about 10-13 months of age) at which, infants produce regular sound sequences which are called cooing and babbling (Shaffer & Kipp, 2007). Same is the case with the next phase called the holophrase period (Shaffer & Kipp, 2007). Children at this stage think that the one word used by them contains the whole communicative content (the idea of the Gestalt).

On their way towards word acquisition, children adopt certain techniques, for example, imitation of expressions without much understanding, a phenomenon which is known as fast mapping (Shaffer & Kipp, 2007). Many words are acquired during this phase but most of them disappear after some days of acquisition. The process, however, improves as a rudimentary understanding appears. Eventually, toddlers start associating meanings with the words that they use and this process is idiosyncratically done. Usually, whatever is attached with the words as meaning is not necessarily what the adults associate. There might be overextension or underextension. The child’s linguistic journey is termed as bootstrapping or booting (Shaffer & Kipp, 2007). It enables the child to develop his/her phonetic, lexical, syntactic and semantic knowledge in his/her own individual way using trial-and-error strategies. The child, however, soon realizes his/her misconception and amends it by shifting towards another stage which is called the telegraphic period. This is a shift from single-word utterances to simple sentences. These sentences usually consist of single-clauses and just content words (Shaffer & Kipp, 2007).
At about three to four years, children become more conscious about their language use and somehow start realizing that their language differs from the adults’. This consciousness can be detected through their hard efforts of making their meaning understood to the adults involving a lot of demonstrations, gestures, pointing at things or sitting closer to the interlocutor. They realize that there exists a difference between their language use and the adults’. Initially, they want the adults to converge with them towards their language. However, by the end of age three, a self-evaluative system starts developing which leads the child to realize the limitedness of his/her personal language system (Shaffer Kipp, 2007). It involves a lot of effort every time on the part of the child to make himself/herself understood. Thus, the next phase involves a change when the child becomes ready for converging with the adults’ language system which is general and provides better chances of being understood. Thus, a shift from a personal language system to a general, conventional language system takes place.

2.5 Cognitive Development / Intelligence. Depending upon different factors and ontogenetic growth, intelligence can develop differently in different individuals. This is what Howard Gardener talks about through his concept of multiple intelligences in his work published in 1983 and 1999 (Shaffer & Kipp, 2007). He recognized about nine different types and these include linguistic, spatial, logical, musical, kinesthetic (the ability to use body effectively for successful survival), interpersonal, intrapersonal, naturalist (the ability to deal with the natural factors) and existential intelligence (the ability to understand the issues related to existence, for example, growth, life, death) (Shaffer & Kipp, 2007).

Recently, there has been an addition to this list as Peter Salovey and Jack Mayer introduced the tenth type of intelligence which is termed as emotional intelligence (Oatley, 2004). It is an ability to understand one’s own and others’ emotions.

Creativity is believed to be an important element of cognitive development. It displays an individual’s ability to deal with one problem in more than one different ways. Sometimes, the term divergent thinking is used for the same phenomenon (Shaffer & Kipp, 2007).
Language development is the human prerogative as no other species is gifted with such ability. A normal human being can acquire any number of languages and this ability to understand more than one languages is a sign of supreme cognitive abilities. Seen this way, multilinguals and bilinguals enjoy more cognitive advantages than the monolinguals as they have more mental structures (Shaffer & Kipp, 2007).

2.6 Emotional Expressivity and the Developmental Process. Vygotsky claims that the neuron specialty is a matter of experience. A neuron can be trained to work in many different ways as it is flexible. Thus, the innate reflexes which are fixed, become flexible or plastic through experience and can perform myriad different functions. This plasticity in reflexes enables a normal human to learn unlimited motor skills (Veer & Valsiner, 1994).

It is to be noted that the adults around the developing individual play a very important role. The social constructivists like Vygotsky believe that the environment has sometimes a conditioning and shaping impact. The emotionally competent adults know the importance of a timely response and encouragement. Emotional intelligence enables a person to know the worth of a timely response. For a language learner, an overt appreciation of a correct performance and covert correction of a wrong one is of prime importance. Emotions serve as impetus behind behavior and there is a close relationship between emotions, motivation and the developmental process (Hulse, Deese, Egeth, 1975). Emotions can be turned into motivation for learning and this significant feature about human cognitive make-up can be utilized in the linguistic developmental process of the learner at any age.

Psychology has generated many ideas for understanding the process of language development yet it is not the sole contributor. There have been parallel significant studies in linguistics as well.

Linguistics on Language Development

Understanding about language is central to this research as this will help us comprehend how different aspects of language are recovered. These aspects include the language structure, language learning process and the language user or the agent. The studies done in linguistics to understand language development between the end
of the 19\textsuperscript{th} century and the beginning of the 21\textsuperscript{st} century have adopted either of the following approaches:

- Language-centered approach (focus is on the language structure).
- Learning-centered approach (focus is on the language development process).
- Learner-centered approach (focus is on the language user or the agent).

All these aspects are going to be discussed as all are relevant to this study.

2.7 Language-centered Approach. The linguistic studies during the 19\textsuperscript{th} century, sometimes termed as philology, focused either on tracing the historical origins of languages (Yule, 1999) or aimed at standardizing languages and norm fixing (Baugh, 1963). The past languages existed only in written form thus, there was a neglect of speech as a language form. In this study, we are concerned with the language recovery of the research participant after aphasia. She was undergoing speech recovery when this study was undertaken. Writing had not emerged. Thus, the studies that deal with writing are not relevant for this study.

The first person who involved speech along with writing as a subject of study is Ferdinand de Saussure in the beginning of the 20\textsuperscript{th} century. Saussure dichotomized linguistic studies as historical or diachronic linguistics and synchronic linguistics (Strazny, 2005). He excluded the historical studies altogether from his discussion and focused only on studying language synchronically, that is how it existed at one particular time. He also introduced two separate terms langue and parole for the objective language system as well as the subjective, personal language use respectively (Trask, 2004). Saussure’s concept of langue can be used for understanding the written medium of language whereas parole can be used for comprehending speech as a form of language, which he defines as the “basic form of communication” (Bally & Séchehaye, 1915).

2.7.1 Saussure’s Ideas about Language. Saussure describes language as an organized whole structure with interlinked parts which he calls signs. He talks about a broad communication system of signs or semiology which can be linguistic as well as non-linguistic (Jakobson, 1980). Thus, linguistic signs form only a part of the whole system of communicative signs yet Saussure declares that he will include only the linguistic signs in his discussion. A Saussurean sign draws its identity from the whole
linguistic system of which, it is only a part. Outside the whole language structure, a linguistic sign becomes meaningless. It exists only in relation to and in opposition from its neighboring signs.

In the Saussurean tradition, each linguistic sign is composed of the *signifier* or a linguistic label and the *signified* or the idea that it represents (Strazny, 2005). The relationship between the signifier and the signified is not natural and is initially *arbitrary* yet through social agreement of the linguistic community, it becomes fixed and almost unchangeable. Saussure treats the signifier as the exact representative of the signified thus, both are equal. The unity between both is achieved through *signification* and is expressed through the concept of sign (Barthes, 1986). Saussure takes a sign to be unchangeable thus, it will remain the same in every situation and every time it is used, it will mean one and the same signified.

(i) **Paradoxes in Saussurean Discussions on Language.** Saussure started off by detecting the weaknesses in the previous trend in linguistic studies which concentrated only on the historical origins and the written version of languages. He mentioned how this resulted in an incomplete understanding about language yet in his discussion, he himself did the same by solely focusing on the synchronic studies considering only langue. Similarly, he mentioned a broad system of communication signs or semiology but solely discussed the linguistic signs in his discussions. These paradoxes reveal the weaknesses in Saussure’s approach. His ideas about language appeared only once in a posthumous work by Charles Bally and Albert Sechehaye in 1915 yet he was very influential and initiated a new trend in the linguistic studies which is termed as *structuralism*.

The post-Saussurean era in linguistic studies is termed as *structural linguistics* (Aitchison, 1986). Saussure created binary pairs in linguistics such as synchronic/diachronic, langue/parole. His preference for discussing just one component in each pair caused certain bias and rigidity which had grown out of the scientific tradition.

(ii) **Linguistics after Saussure.** Saussurean concepts remained dominant for understanding language till the 1960s (Trask, 2004). Roman Jakobson (1896-1982) is among the theorists after Saussure who pointed out the weaknesses in Saussurean structuralism. Jakobson started off as a structuralist but in his later approach, he
differs considerably from his contemporaries (like Saussure). Like the structuralists, he also viewed language as a structure which was organized at different levels and the child’s first language acquisition process as a means of studying all those levels (Jakobson, 1980).

2.7.2 Jakobson’s Point of Departure from the Structuralist Tradition. Prior to Jakobson, the syntactic level was taken as the ultimate level for analysis in the linguistic hierarchy. Jakobson brought in the semantic level as well. Thus, he is the one who deviated from the empiricist tradition by including the abstract aspect of linguistics. Jakobson does not talk about the language structure only; he also talks about language use through his concepts of metonymy and metaphor as well as language development process through his concept of metalanguage (Jakobson, 1980). Metalinguistic development of a language learner displays an important fact that the learner is better equipped with communicative skills as s/he has a large vocabulary which makes him/her creative. As opposed to Saussure’s concept of semiology, Jakobson’s semiotics is a much more flexible idea which accommodates the verbal and non-verbal signs used by humans as well as the cries and calls of animals even music and art which could convey some message (Barthes, 1986). Jakobson’s idea of semiotics is a Gestalt sign system, the whole set of all sign systems in the world. Human language forms only a part of this whole.

The fundamental difference between the approaches of de Saussure and Jakobson is that where de Saussure gives sole attention to discussing language structure, Jakobson also discusses the language development process as well as the language user or the agent. Both Saussure and Jakobson contributed considerably towards language study but somehow Saussurean structuralist concepts took precedence. The reason is that when Jakobson includes human agency in language use, he invites variety and novelty in theory building. This is a phenomenon not favored by the scientific, positivist tradition which propagates fixation and organization by focusing on similarities and overlooking variety by treating them as irregularities.

Jakobson seems to have initiated a new trend for dealing with language. The popularity of his ideas can be seen in the works of his contemporaries like Roland
Barthes (1915-1980) who use Jakobsonian ideas in their works. The only difference is that of terminology.

Barthes himself contributed towards linguistic studies by extending the explanation of a linguistic sign. He viewed it as a dynamic entity. Though Jakobson had already mentioned the rigidity in the Saussurean treatment of a communicative sign, it was Barthes who refined the concept for the first time. He explained a linguistic sign as having two types of meanings: a *denotative* or dictionary meaning which is objective and fixed and a *connotative* meaning which is subjective and changeable. Thus, with Barthes's idea of a connotative meaning, the flexible and plastic character of linguistic signs is introduced (Barthes, 1982).

Barthes agrees that a linguistic sign is a combination of a signifier and a signified and through signification, the signifier and the signified become unified (Barthes, 1986) yet where Saussure takes the signification process as fixed, Barthes views it as flexible.

The linguistic studies prior to Saussure were historical in nature. Their focus was only on the *formal* aspects of language. Saussure did the same by solely discussing the *form* or language structure. However, Jakobson and Barthes introduced the *functional* aspect by bringing in agency in language use. This functional aspect of language was further improvised by Michel Halliday. He mentioned how both these aspects exist side by side within the *mental lexicon* of every language user. In the child’s language use, both are separate and very obvious. Through development, however, a harmony between both is achieved (Webster, 2004).

Halliday (1925- ) presented his ideas in the form of *Systemic Functional Linguistics*. He used the word *systemic* to refer to the broad *system* of language which consists of not only the rules and regulations of a language but also an understanding about the correct application of these rules in different social contexts (Webster, 2004). Halliday’s approach towards language is closer to Jakobson’s as he used the term *semiotic system* for talking about language as a way of communication and viewed communication to be much more than just an application of linguistic signs. He even advocated that all theorists should come out of the fixed idea of language as a system and should use the term semiotics instead (Webster, 2004).
Halliday believes that human communication has social and dialogical functions and both can be achieved through language. Halliday differentiates between the linguistic and the non-linguistic signs. He mentions how non-linguistic signs almost always carry a single meaning. Thus, facial expressions and gestures can never be misinterpreted yet this is not the case with linguistic signs. They are much more complicated and multifaceted. Meaning of a text is an ambiguous entity, liable to be misinterpreted and misunderstood by its recipients (Halliday, 1994). Although there is no surety that language will convey the essence of the message, an understanding of the linguistic make-up furnishes one with techniques of being able to uncover some of the mysteries inherent in a text and this understanding can further provide some control over language use which contains less ambiguities.

Halliday discusses the complexity of human communication through his concepts of *field, tenor* and *mode*. Field refers to the context in which language is used whereas tenor stands for the relationship between the interlocutors and mode is the medium of communication (Webster, 2004).

### 2.7.3 Halliday’s Concept of Language Development

Halliday views language development to take place in well-defined stages. He recognizes three such stages: *pre-symbolic stage, proto-linguistic stage* and *symbolic stage*. The pre-symbolic stage is purely individualistic as it symbolizes personal growth. At this stage, the child is self-centered yet eventually, s/he starts exploring the world around him/her. This encounter poses challenges one of which is language use. S/he wishes to win this challenge and this can be done only by learning how to use it effectively (Webster, 2004).

*Proto-language* is the broad communication system which consists of non-linguistic signs such as facial expressions, cries and bodily gestures. It is a system that is also present in other non-human higher order primates (Webster, 2004). The difference between the non-human and the human communication system can be seen in the next stage of human development which is marked by the development of linguistic signs. In other species, the communication system does not develop beyond the proto-linguistic stage whereas the human communication system keeps on developing and evolving. This happens in the stage called the symbolic stage which
should not be misunderstood as purely linguistic because mature human communication involves both linguistic and non-linguistic symbols (Webster, 2004).

2.8 Learning-centered Approach. It has been pointed out earlier that the linguistic studies towards the end of the 19th century till the beginning of the 20th century focused on language structure and thus were language-centered. The next trend in linguistic studies focused on the learning process and thus was learning-centered.

The purpose of this study was to discover the processes involved in the language recovery process of the research participant and also to investigate how much agency did she have in this process. For these reasons, an understanding about the learning-centered as well as the learner-centered approaches was obligatory. During the 20th century, there has been considerable activity in both these domains. First, the learning-centered approach will be discussed which involves an explanation of what goes on when the language learning process takes place.

2.8.1 Major Learning Theories. Different theories have been used for achieving the purpose. Among them, the most widely used have been taken up from psychology, such as behaviorism, cognitivism and social constructionism. All three theories were presented from early part of the 20th century to the middle of the 20th century. They were originally used to describe human development in general yet they were later taken up by the linguists to explain the language development process. The earliest influence was that of behaviorism.

(i) Behaviorism. Behaviorism dominates the 20th century for talking about the language learning process (Donohue & Kitchener, 1999). Within this tradition, almost fifteen different strands have been proposed yet the most influential ideas were contributed by an American psychologist Burrhus Frederic Skinner (1904-1990). Skinner’s technique involved data-driven analyses and interpretations. He admitted that human behavior is very complicated and cannot be completely understood (Skinner, 2005) and there exists a purely individual, subjective aspect of learning which is different for everyone.

(a) Behaviorist Ideas on Language Learning. The behaviorist accounts of the language learning process explain it to be an automatic reinforcement of a response to a stimulus in the visible, outside environment (Skinner, 1957). Reinforcement is the
final phase of taking in the environmental *input* in the form of language and thus is responsible for establishing and maintaining the linguistic behavior (Skinner, 1957).

At every level, language learning follows a specific path, that is, there is a stimulus followed by a response followed by reinforcement (Malmkjaer, 1995). In the earliest phase of language development, every learner is a *tabula rasa* (Shaffer & Kipp, 2007). Eventually, the *output* phase occurs which involves the use of the acquired language. The language learner is passive and the stimulus for language development comes from the environment. It emerges out of the desire or need to communicate. This results in a particular linguistic response in the recipient. If the response is correct, it is likely to be repeated in future as well and thus will turn into a *habit* and will become automatic. The sequence of stimulus-response-reinforcement is a recurring one in language learning and has a deterministic influence on the developmental process.

(b) *Misunderstandings about Skinner’s Ideas.* Skinner’s ideas have been often misinterpreted. He is portrayed as the one who holds the external factors (stimuli) to be totally responsible for a specific form of human behavior. It has also been believed that he does not believe in human agency in habit formation. This is only partially true. He does talk about human learning as a result of a stimulus in the environment but at the same time, he also mentions the incompleteness of a stimulus. He says that a stimulus in the environment does have a strong orienting effect yet it is never complete and this leaves room for human agency (Skinner, 1957, p. 147). He also talks about *reinforcement schedules* which have a molding and sometimes determining effect on the learning process (Skinner, 1957) and the more frequent they are, the more likely it is that a habit will be reinforced. The reverse is also true.

Skinner also discusses an autonomous learner who can regulate his/her behavior. A mature learner who has undergone the same situation many times becomes attuned to it and a time comes when s/he shows his/her autonomy and individuality by self-correcting as well as correcting the behavior of others around him/her (Skinner, 1957). This shows that Skinner does consider human agency as an important factor in the learning process and also views development as a unique individual process. Skinner’s ideas continue to affect the language learning theories even today (Donohue & Kitchener, 1999).
Unfortunately, his ideas have often been misinterpreted and thus are applied in a very rigid way. This rigidity was criticized by Noam Chomsky. Chomsky also contested the behaviorist idea of a language learner as a tabula rasa or a passive recipient. He presented a new concept of a language learner. His concepts towards explaining human development eventually resulted in an approach called *cognitivism*.

(ii) *Cognitivism*. Chomsky (1928-) proposes the idea that learning is a complex mental process in which the learner is actively involved. Learning is not always observable. Chomskyan cognitivism views human mental abilities to be flexible as opposed to the strict behaviorist ideas which view it as a fixed entity, biologically ingrained in the human brain (Chomsky, 2009).

(a) *Cognitivists on Language Development*. Chomsky initiated the idea of a *Universal Grammar* which is innately present in every normal human brain and is similar for all human beings (McGilvray, 2009). It is universal as it contains features of all possible human languages in terms of phonemes, morphemes and syntax yet it is liable to become particular as a result of exposure to one particular language. The reason why children eventually can understand and produce only one or two languages is that they have been given a linguistic, cultural and social exposure to just those languages. All languages in the world have sentences and every sentence has *constituents*. The overall essence of a sentence is distributed among these constituents and thus, to decode the meaning of a sentence, an understanding about its constituents is obligatory. This idea of a Universal Grammar was generated in 1960s but it still prevails in linguistic studies.

Chomsky also talks about the idea of *Transformational Generative Grammar* which can be taken as a modified form of Universal Grammar. He mentions two levels of structures in every sentence: a *surface structure* and a *deep structure*. Both these levels are connected to each other through invisible rules which he calls the *transformational rules* (Aitchison, 1986). Chomsky does not discuss whether these transformational rules ensure a rhythmical relationship between the surface and the deep structures. Thus, there might be a difference between both which can cause misunderstandings. Michel Foucault used the term *discontinuity* for talking about such misunderstandings (Chomsky & Foucault, 2006).
Chomsky analyzes language at the sentence level (this is why the title of his book is *Syntactic Structures*). Many of his predecessors and contemporaries preferred to study language at the word level such as Jakobson and de Saussure. Chomsky does so because it enables him to discuss all the linguistic levels in a top-down way (Chomsky, 2002). Chomsky’s basic idea is that every human language consists of a limited range of sources in terms of phonemes and the alphabet out of which, an unlimited number of sequences in terms of words, clauses and sentences can be created (Chomsky, 2002). Every language user is creative in that s/he can use language in an idiosyncratic way (McGilvray, 2009). There are myriads of linguistic choices yet there is an internal simplicity measure active in every language user’s brain which orients it to go for the simplest possible structures (McGlivray, 2009). This preference for relatively simple and short linguistic expressions is naturally present in everyone. Thus, it can be said that like animals, birds, insects as well as the higher order primates, human beings also have an innately designed mold of communication in their brains.

The biggest difference that puts the human language usage on the top of all other types of non-human ways of communications is creativity. This is a feature absent in all other types of communications. Although human communication also starts like other non-human communications as it heavily depends upon concrete and visible experiences in the immediate context. Chomsky uses the Skinnerian terminology to explain his idea. He says that if language production is called a response, it needs a stimulus in the immediate physical environment yet with maturation, it tends to become abstract and thus, stimulus-free. This shift from a visible stimulus is necessary for higher-order elaborate human communication which is a mixture of signs and symbols (McGilvray, 2009). In the basic forms of animal communication, it can be observed that there is total reliance on gestures (like in the honey bees) or a complete dependence on sounds (as in crabs). A combination of both is rare and comes after much cognitive and intellectual development. A departure from the basic, instinctive communication way lays the foundation for a purely human communication system led by internal logic and reason (McGilvray, 2009). Human communication always oscillates between the universal and the personal, that is, a Universal Grammar and an individual, independent and unique languages use.
(iii) Social Constructionism. The behaviorist point of view highlights the *body* aspect of the developing individual and the cognitivists seem to give sole attention to the *mind* aspect. Together they both emphasize the Cartesian *duality*. It is in Vygotskian social constructionism that one finds a holistic description of human developmental process. It is with this theory that human subject gets agency over language use.

(a) Social Constructionists on Language Learning. The cognitivist idea of active human participation in the language learning process is further modified by the social constructionists as they describe language learning as an interactive and dialogical process (Schwandt, 1997). The difference between both is that where the cognitivists focus only the learner, the social constructionists also discuss the role of the society in the language learning process. They view it as a two-way process in which the learner acquires language by actively participating in the experience and develops language under the guidance of a mentor who is better equipped with the linguistic knowledge (Lock & Strong, 2010) and thus can help the learner grow in a systematic way as s/he *scaffolds* the linguistic input by introducing the easiest linguistic items first and eventually moving towards the more challenging ones. The linguistic input needs to be provided in a non-threatening and enjoyable way yet for a consistent improvement, the mentor should keep on introducing new and challenging linguistic activities so that the existing body of knowledge can be stretched.

2.9 Learner-centered Approach. In this approach, the learner is central in the language development process. This aspect comes to be discussed towards the end of the 20th century and in the beginning of the 21st century. The learner-centered approach is used in two domains: first language acquisition and second language learning. In the former, the theorists try to explain what happens when the child acquires his/her mother tongue and what strategies s/he adopts to overcome the barriers in his/her way. In the latter, an adult’s learning experiences in terms of some language other than his/her mother tongue are discussed. For clarity, we will first discuss the phenomenon of first language acquisition and then the second language learning.

2.9.1 First Language Acquisition. The most influential theories on child language acquisition during the 20th century were contributed by Lev Vygotsky and Jean
Piaget. Their ideas have already been discussed. These ideas continue to dominate even in the 21st century (Bowerman & Levinson, 2003) but with a tilt in the focus as they place the language learner in the middle of their discussions. Vygotsky’s and Piaget’s ideas about different stages of development are popular in the 21st century as well. Thus, first language acquisition is thought to take place in well-defined stages. Tomasello (2005) suggests four such stages of language acquisition: The listening stage in which the child gets the linguistic input from adults, the understanding stage in which the child discovers the intention of the adult speaker, the parsing stage in which the whole utterance is divided into understandable parts and the storing stage in which the child stores his/her understanding which can be retrieved afterwards (p. 297). It is through analogy and comparison that the child discovers the correctness or falsity of his/her stored concepts.

The first language acquisition theorists can be divided into two groups: Those who talk about nature (a natural mechanism in the human brain) and those who talk about nurture or socialization. Often the two groups do not agree with each other’s point of view and the disagreement still exists (Clark, 2009). There is a newer and moderate approach as the recent theorists believe that nature and nurture both are at work during the process of language development and a divide between both is next to impossible (Clark, 2009).

(i) First Language Acquisition: Some Dominant and Recurring Ideas. There has been a boost in the knowledge about first language acquisition in terms of a child’s cognitive abilities since the mid 1980s (Bowerman & Levinson, 2003) which is in contradiction with the idea of a child’s brain as a tabula rasa at the time of birth (Shaffer & Kipp, 2007). Although first language acquisition studies have been carried out in linguistics as well yet the real impetus and theory generation has so far been contributed by the psychologists. A strong relationship between language development and cognitive abilities has been considered by almost all of them (Gentner & Meadow, 2003). The latest research generates the idea that the relationship between language and cognitive development is not one way and not only language development depends on cognitive development but also cognitive development eventually depends on linguistic development (Bowerman & Levinson, 2003). The innate idea of language which views the language ability to be inborn is initially true for infants. It talks about communication which purely depends on
perception and sensation and till this point, human cognitive ability can be compared with that of other primates yet by the age of six months, a human infant starts showing his/her sensitivity towards culture-specific communicative content through his/her responses to those around (Gentner & Meadow, 2003). This is the point of departure of the human species-specific cognitive growth from a general cognitive growth of other higher-order primates.

Primates’ cognitive development has been recognized in terms of the ability for understanding and dealing with the physical, visible environment as well as an ability of dealing with abstractions using the analytical and reasoning abilities (Bowerman & Levinson, 2003). This involves an ability to draw conclusions from the available experience and apply it to unforeseen situations. In case of language acquisition, this idea can be used to explain the concept of bootstrapping (Shaffer & Kipp, 2007) which is the trial-and-error language acquisition process of the child. The child does not use the tried and tested methods of adults for language acquisition or for any other kind of learning rather s/he follows his/her own instinct and idiosyncratic preferences.

The relationship between language and thought is a tricky one and Whorfianism (the idea that “language determines thought pattern” as cited in Yule, 1999) is still prevalent in the psychological circles. There is no consensus about Whorfian ideas yet the cognitive theorists now believe that language does affect the thought pattern (Gentner & Meadow, 2003). Thus, there still exist strong supporters of Whorfian ideas or linguistic determinism and also those who favor a moderate version of it or linguistic relativity (Gaynor, 1995).

Human innateness in terms of language acquisition is a recurring idea in the psychological theories related to language structure and language acquisition. However, some modifications have been made, for example, Chomsky’s surface and deep structures are now used to explain the idea of universal cognitive processes and that the semantic core of a sentence or the deep structure actually provides the language of thought which is a feature of the Chomskyan idea of Universal Grammar (Gentner & Meadow, 2003).

It has also been suggested that there exists a distinct language for carrying out thought processes and it has been named as mentalese (Gaynor, 1995). This idea was
first suggested by Jerry Fodor (Kaye, 1975). Care has to be taken not to mix up the Chomskyan idea of a Universal Grammar with mentalese as Universal Grammar is a much more restricted idea. It is hypothesized to be innate which starts diminishing after seven and then is lost as once exposure to a particular language happens; Universal Grammar goes in the background (Gaynor, 1995) and is never retrieved afterwards. Mentalese is also an ability genetically acquired and always remains with every human, much before even the emergence of language. It is with humans in infancy and remains intact even in aphasia.

Most first language acquisition theorists agree that language acquisition adopts a top-down route as far as the input is concerned and it follows a bottom-up route as far as the output is concerned (Clark, 2009). Thus, language input and language output in a child are inversely associated. Top-down acquisition of language occurs at all levels of language, that is, at the phonetic level, at the morphological level, at the lexical level, and at the syntactic level. This idea is seconded by Tomasello (2005).

The idea of the Gestalt from psychology still dominates the first language acquisition discussions. It is believed that children tend to deal with the complexities of their target language by finding patterns and regularities in it (Clark, 2009). This can be seen in the frequent use of overextension and overregularization in the early speech of children. They do it at every level of language acquisition. Thus, pattern finding takes place in case of learning vocabulary as well as comprehending grammar. The process is heuristic or trial-and-error and starts off with the simplest and the smallest utterances when a child is almost one and a half year old (Tomasello, 2005). During this process, children might take up whole utterances and even use them afterwards without true understanding, a phenomenon which is sometimes called performance without competence by Clark (as cited in Tomasello, 2005). The next step is to compare and contrast the conclusion drawn from the experience with the existing understanding about language. Then after making adjustments and amendments in it, the child stores it till the next time when this stored information is exercised and its effects are once again scrutinized.

The processes of formation and refinement of linguistic concepts never ends and goes on. Children’s sensitivity towards language acquisition can be detected. Children as young as one and two years adjust their speech according to the situation.
They frequently mend and amend their speech if not understood (Clark, 2009). With advancement in linguistic competence, children become more conscious and more careful about their language use. Language production follows language understanding and in children’s language production, their sensitivity towards language can be easily seen. The more complicated the communicative situation, the more these features and the more disfluent the speech becomes. Seen this way, it seems as if there does not exist any such thing as a Universal Grammar as every child has a unique linguistic experience (Tomasello, 2005).

Development, whether physical or cognitive, follows a certain sequence and the psychologists agree that it is a universal phenomenon in the sense that development takes place in every living species yet there are differences between the number and the nature of stages (Bowerman & Levinson, 2003). If the focus is restricted only to the primates, the initial development for physical cognition is the same among all primates yet in the advanced stages of development, only human child develops the analytical and logical cognition and this is where the human ontogeny adopts a different route. This can be seen in the linguistic development of a child (Bowerman & Levinson, 2003). Human cognitive development is unique. The primates have only a phylogenetic, cognitive development that is physical and do not develop beyond this. Human cognitive development initially develops in the same way yet eventually it takes a more refined form and this is an unending process. One thing that makes it even more complicated is that it takes place differently in different human beings as every human child is unique and has his/her own way of proceeding in language development (Allwright & Hanks, 2009). The phylogenetic cognitive development can be observed in how children all over the world acquire the same initial language items. Roger Brown (1973) mentions in his morpheme studies how first language acquisition consistently involves acquisition of similar fourteen morphemes in the same order by all children (as cited in Mitchell & Myles, 2004).

Pinker (1984) in his idea of semantic bootstrapping and Landau and Gleitman (1985) in their idea of syntactic bootstrapping talk about how children acquire the general patterns of language first without much understanding and later turn them into more individualistic and specific ones (as cited in Allwright & Hanks, 2009). The development of social and cultural understanding is something that further adds to the complexities of human cognition. Although Chomsky’s innate hypothesis suggests
that human child is biologically equipped for language acquisition and that there are linguistic universals (Bowerman & Brown, 2008), the process of language acquisition is still a mystery.

A complete mastery of all aspects of a language is unthinkable. However, the idea that there is a timetable for the outset of language acquisition still exists and is controversial. It is termed as *critical period*. Some theorists refute the idea of a critical period in language acquisition. However, recent experiments problematize this idea as for some aspects of language acquisition; there is a critical period (Clark, 2009). During this period, exposure to a language is crucial because language output or production follows language input. Linguistic input serves as a *stimulus* without which no *response* can be expected. The constant absence of an output means a total deprivation and an exposure to poor linguistic input results in either a slow or a faulty language development. Recently, a group of theorists has emerged who talk about social and emotional support during language acquisition. These theorists say that these non-linguistic factors provide security to the child and serve as catalysts whereas their absence causes insecurity which ultimately either slows down the developmental process or stops it altogether. Thus, in terms of emotional safety and social security for language acquisition, there does exist a critical period. A continuous deprivation might terminate the developmental process. The reality about the biological and the social foundation of language in a human child is still controversial; maybe it is a mixture of both nature and nurture (Tomasello, 2005).

**2.9.2 Second Language Learning.** Different theories have been suggested for second language learning. Generally, they discuss different levels of linguistic complexity during second language learning and the learner’s ways of coming into terms with these levels is highlighted (Mitchell & Myles, 2004). One thing common between theorists on first language acquisition and second language learning is that they all emphasize that language and cognition are intricately interlinked and perhaps develop side by side each contributing towards the development of the other (Robinson & Ellis, 2008) yet there is no consensus about how a learner acquires a language other than his/her first language. The second language learning theorists have always tried to describe the process yet paradoxically, most of them have further complicated the situation. In the domain of second language learning, Stephen Krashen’s (1941-)
work is very prominent. Krashen suggests five hypotheses to describe the language development process:

(i) **Acquisition-Learning Hypothesis.** Krashen distinguishes between the terms acquisition and learning. Acquisition refers to the child’s language development in case of first language (Krashen, 1982). At the same time, it can be used for an adult’s language development as well, provided the process takes place unconsciously. It does not involve explicit instruction and error correction. Language learning on the other hand, is a conscious process and is associated with the adults. It involves overt coaching and explicit error correction (Krashen, 1981).

(ii) **Monitor Hypothesis.** Monitor is a self-correcting process or an “editor”. Its job is to check the language produced by the speaker and correct the mistakes. The monitor can simply be called the grammar of that language (Krashen, 1982).

(iii) **Natural-Order Hypothesis.** The natural-order hypothesis claims that the learning process takes place in a predictable manner because the simpler forms develop first and then the complicated forms (Krashen, 1982). Initially, a child starts off only as a listener during the so-called silent period (Krashen, 1982). Every language learner whether a child or an adult, needs to have a silent period because it helps concentrate on language without having the anxiety to speak. This helps in competence building (Krashen 1989). The first two to six months of second language learning are sometimes called the silent period which is actually the first stage of second language learning (Foppoli, 2008). The existence of a silent period is helpful as it gives ample time for the language input to settle down into the mind of the learner (Tomioka, 2007). If a learner delays language production in the beginning, it is not alarming (King & Mackey, 2007) as s/he is already working on language in a silent way. Krashen mentions how the natural order hypothesis is at work in case of second language learning as well as in the people suffering from Broca’s aphasia, that is, the speech disorder (Krashen, 1981). During the silent period, the child either speaks nothing or speaks very less. In case, s/he starts speaking, the initial language produced is automatic or non-creative (Krashen 1981).

(iv) **Affective Filter Hypothesis.** Factors such as self-confidence, high motivation and positive self-image positively contribute towards the process of language learning whereas stress, anxiety, frustration and nervousness affect it
negatively and thus are counterproductive. The affective-filter hypothesis stresses that for learning to take place, it is important that the factors that negatively affect the process should be dealt with first so that the learner develops a positive self-image (Krashen, 1982).

(v) Input Hypothesis. This hypothesis assumes that acquisition takes place by developing an understanding of the language that is a little above the current level of the learner. This idea is the same as Vygotsky’s idea of the *zone of proximal development* (Shaffer & Kipp, 2007). Acquisition takes place in the natural settings and usually comes from the environment in a subconscious manner. The input can be in the form of language, gestures or other non-linguistic information (Krashen, 1989). For the development of the learner, the input has to keep on coming; otherwise, no progress takes place (Krashen, 1982).

(vi) Critical Period and Automatic Speech. Krashen believes that the process of lateralization gets fixed by age five (Krashen, 1981) and once fixed, it becomes almost impossible to change. Thus, the early language habits have a strong impact upon the future language developments. After the critical period is over, language production as well as the behavioral patterns become automatic as they involve nominal conscious efforts.

Automatic language is almost the same for all the individuals in a language community yet not all of the language developed in a person becomes automatic and there also develops an ability to express individually and subjectively. This ability is different in different individuals and is termed as creative language. This creative language emerges in the later phases of development when language can be used for personal purposes. The creative feature of language development indicates that the learner is now in a position to use language subjectively and has got some control over it. It is, however, vulnerable as compared to the automatic language. The reason is that it develops only in the right hemisphere whereas the automatic language develops in both hemispheres. Any damage to the right hemisphere can affect the creative ability. In case of a brain damage on any one hemisphere, the automatic ability starts developing on the other, intact hemisphere. This can be detected in the language of the aphasics. In case of right hemisphere damage, the creative ability gets severely affected (Krashen, 1981).
Second language learning theories have been modified and the focus now is on the functional side of language development instead of the previous focus on the formal side (Robinson & Ellis, 2008). The expression functional is the same as performance in Chomsky and formal is what competence is in Chomsky. This clearly indicates a shift from a limited area of study towards a much broader and challenging one.

(vii) Second Language Learning: Newer Trends in Theory Generation. In the 20th century, the main concern of the language theorists was to devise syllabuses for the learners that is why; their research was mainly in the confines of traditional classrooms and the discussions focused on the first language acquisition and the second language learning processes. This gave rise to some specific trends in language research such as contrastive analysis, error analysis and interlanguage studies (Mitchell & Myles, 2004).

In a fast growing world today, people from all over the world are coming closer. Language learning is no more only an academic concern. In case of second language learning, there are many reasons for knowing languages other than one’s first language. It is obligatory now, for example, as a result of international trade, knowing other’s languages insures success. The ability to communicate in more than one languages furnishes one with better chances of survival. It is proven now that people who know more than one languages are more tolerant than those who know just one language (King & Mackey, 2007). Contrary to the previous teacher-centered approaches in the 20th century, the newer theories are learner-centered and learning-centered.

Most recently, during the first decade of the 21st century, new ideas have been generated as a result of interdisciplinary research. Consequently, insights from linguistics, psycholinguistics and sociolinguistics have entered into second language learning research. Still no final conclusion about the process of second language learning has yet been drawn (Mitchell & Myles, 2004). The recurring themes are still the old ones, that is, Krashen’s, Vygotsky’s, and Piaget’s (Mitchell & Myles, 2004). Skinner’s behaviorism as well as Chomsky’s cognitivism are being revived with modifications in some basic tenets of these theories (Mitchell & Myles, 2004).
(viii) *Controversial Ideas in Second Language Learning Theories.* The old argument of nature-nurture in terms of language development continues to exist (Mitchell & Myles, 2004). Chomsky’s idea that human brain is innately designed for language learning is only partially accepted today. Changes have been made in it and most theorists now believe that the innate hypothesis is acceptable only in case of just some aspects of language.

The debate about a critical period in second language learning still persists and is far from being resolved (Mitchell & Myles, 2004) as for certain aspects of language learning, there does exist a critical period, for example cultural understanding and motivation (King & Mackey, 2007). The process of language development has been explained differently by different theorists. Many aspects have been explored yet a lot is still a mystery. The question of human *agency* or control over language use is among those unexplored or partially explored aspects. In the above mentioned literature there is considerable discussion about the structure of language and the language learning process but an explicit discussion of the language user (*agent*) is missing.

It is in the late 20\textsuperscript{th} and 21\textsuperscript{st} century developments that human agency over language use is explicitly discussed. Human agency over language use is an indispensable feature of this study but the disciplines reviewed so far seem to have given it only secondary importance. In philosophical discussions on language use however, ample attention has been given to the issue of human agency. For this reason, we turn to philosophy for further discussion.

**Philosophy on Language Use**

The questions of language user and agency in language use are vital aspects of this study. Philosophers have approached these questions in their own way.

**2.10 Lacan’s Concept of the Subject.** Lacan (1901-1981) defines the *subject* as “a product or an effect of language” (Pluth, 2007). This implies that the subject gets constructed through language and thus, language is *omnipotent*. It has a patronizing and controlling effect. No subject is ever exposed to the *whole*, complete language. Thus, s/he remains incomplete. That is why Lacan uses the terms *split, barred* or the *divided subject* for the phenomenon (Fink, 1995). The subject is not a stable or
complete entity (Homer, 2005). Every representation of the subject through language is partial and incomplete because it will be based on selection of certain words at the expense of all other words which had an equal chance of being selected. It gets constructed through “a chain of signifiers” and thus, has no place as a conscious thinker or language user (Muller & Richardson, 1985).

2.10.1 Lacan on the Idea of the Sign. Lacanian concept of the sign is close to Jakobson’s semiotics (Pluth, 2007). Thus, it is not fixed. A subject is never synonymous with any signifier. It can be described using any signifier but no signifier can ever describe it in its entirety (Pluth, 2007).

Lacan views the signifier as changeable and in combination with other neighboring signifiers. An understanding of a signifier is not a guarantee that we will understand the signified as well because no signifier exactly represents a signified.

In Lacanian terminology, the Real (the sign) is the ideal situation where the Symbolic (the signifier) and the Imaginary (the signified) become one and the same thing. The sign or the Real is a unified whole or the Gestalt. It represents the unity between the Symbolic and the Imaginary which is impossible. That is why; Lacan does not include the Real or the sign in his discussion of language and only focuses on the signifier or the Symbolic and the signified or the Imaginary.

Lacan views the signifier or the Symbolic on the horizontal plane and the Imaginary or the signified on the vertical plane (Chiesa, 2007) and the balance between these three is achieved through the orders. A harmonious relationship between the Symbolic, the Imaginary and the Real ensures the order or balance in the psyche of the speaking subject (Pluth, 2007). In case of any disbalance, the outcome is madness. Taken this way, no speaking being is completely sane because such order is an illusion. Thus, there is no concept of a consciously thinking, speaking subject (Fink, 1995).

Entry into the symbolic order occurs the moment a child is given a name (Chiesa, 2007). It is assumed that language reflects the child’s identity. Lacan discusses this phenomenon through the concept of the mirror stage. The mirror stage occurs at about six years of age (Fink, 1995) which is a critical period, the most
vulnerable age to the linguists and psychologists, during which the symbolic identity of a subject gets established.

2.10.2 Does Human Agency over Language Use Exist? When a child looks into the mirror for the first time, s/he is disillusioned that s/he is complete and that this is the whole image (Pluth, 2007) because previously s/he has been accustomed to seeing himself/herself in parts or fragments. Thus, the mirror stage creates a false conception about the self. The reality is that no image in any mirror is ever complete. The entry into the linguistic realm is the same. The child enters into language as s/he thinks that language will completely convey his/her ideas which is a misconception. The child can never master the language in its entirety. The incomplete mastery or agency over language use causes a lack. Lacan uses the Freudian term castration to mention this lack yet the Lacanian concept of castration is not a physical one, it is symbolic (Chiesa, 2007) and is purely linguistic. Thus, every human subject who uses language is incomplete.

2.10.3 Lacanian Concepts of Need, Demand and Desire. In Lacanian terminology, need is a stage in which communication can take place without the intervention of signifiers (Pluth, 2007). It is the same as Vygotsky’s idea of a prelinguistic stage in human development in which thought develops without the intervention of language. As soon as the child enters into the linguistic realm, the needs have to be verbalized through mediation with signifiers which were invented by others. Thus, need clothed in language is different as it is made understandable to others and is now termed as demand. A demand can never be completely satiated as satisfaction of one initiates the other. Thus with demand, the speaking subject enters into a never ending linguistic circle (Pluth, 2007). Desire is the ideal situation when all demands of the subject are fulfilled which is impossible. In Lacanian terminology, there is no sign which is perfect and there is no subject in the world that is complete and has complete agency over language use.

The discussion so far reveals that every speaking being acquires language from the community to which s/he belongs and during this process, submits to its linguistic Law. Language has a taming and controlling effect that is why it is called the Law, the Law of the Father or the Father (Chiesa, 2007). All “normal” linguistic communication is thus patronized, conditioned and influenced by language per se.
Thus, there does not exist any individual who has a complete control or mastery over language use no matter how normal s/he is.

Section II

“Abnormal” Language Development after Aphasia

Aphasia is a situation in which the link between the brain areas controlling language production and comprehension and the articulators is broken or impaired as a result of brain damage or shock. An important question that has perplexed and vexed the philosophers, psychologists and neurologists throughout history is whether this broken link can be repaired and language be restored or not. An overview of the past literature presents contradicting and conflicting theories. However, there is a consensus among neurologists that language recovery after aphasia depends on the severity of brain damage. Thus, the language faculty can be permanently damaged or partially damaged. In case of partial damage, it can be restored. Aphasia is not a disease; it is a condition of the brain (Dwidar, Alloush, Ella, Ahmed, Maher, Nada & Ibrahim, 2014) and thus, it seems to have strong psychological and emotional underpinnings along with the linguistic ones. This recognition gives room to the psychologists and linguists to explore the once purely neurological domain.

Language Disorders in the Brain-damaged People or Aphasics

It is claimed that language related areas are located on the left hemisphere and these areas have been named as Broca’s area and Wernicke’s area (Jacyna, 2000). Broca’s area is connected with speech production whereas Wernicke’s area is associated with speech comprehension. Any harm to the left side of the brain would result in aphasia. The phenomenon has been classified broadly as fluent aphasia or Wernicke’s aphasia and non-fluent aphasia or Broca’s aphasia. In the former, the aphasic speaks fluently but usually his/her speech makes no sense as it is grammatically correct but out of context. In the latter, the sufferer speaks non-fluently but the speech makes sense as it is context-relevant. We are here concerned about the language recovery process of the research participant after the outset of Broca’s aphasia. To achieve the purpose, it is necessary to first know what aphasia is.
The Earliest Discussions on Aphasia

Modern medicine dates back to the last years of the 18th century (Foucault, 2003). This is a time termed as Enlightenment in history which disillusioned human beings to be superior and complete. This misconception prevailed till the beginning of the 19th century. At times, developments in psychology were used to emphasize the same idea. The popularity of the German Gestalt Theory in 1920s is one of them. The idea was molded to suit the purpose and to explain the idea of human wholeness.

During the 19th century, neurology was on the top in medicine due to many substantial discoveries. The recognition of the exact locations of the language faculty was one of them. Till the beginning of the 20th century, neurology had remained dominant in dealing with all kinds of mental illnesses including aphasia. Major focus was on theory building and organizing the knowledge in an objective way. This resulted in partial understanding about the phenomenon. The situation persisted till the end of the 19th century.

The discovery of aphasia in the 19th century for the first time made Paul Broca famous all over the world. A focus on its physiological aspects caused a neglect of its psychological side. The patients were taken as the objects of examination and observation. Neurology is replete with adventurous new techniques and surgeries like lobotomy, medicines and computerized techniques like fMRI, CAT scanning, etc. which brought awards and rewards for the creators but little help for the aphasics (Sabbatini, 1997). Once again, the techniques used provided an incomplete understanding about aphasia.

The first person to talk about curing aphasia in neurology was a French Pierre Marie in the early 20th century (Cohen, 1953). He suggested to treat aphasia considering both the physiological as well as the psychological aspects and most importantly, treating every aphasic as an individual yet his ideas could not attract his fraternity.

Neurology remained dominant till the beginning of the 20th century. The aftermath of the First World War produced scores of mentally ill people including the aphasics. Despite the popularity of the neurological ideas, the discipline actually failed to provide any substantial help to the war victims who were suffering from
emotional and psychological problems. The main reason behind this was an overemphasis on the physical treatment of illnesses whether physical or psychological. A disappointment with the tried and tested neurological techniques resulted in a shift with the popularity of the psychological techniques introduced by Sigmund Freud (Starchey, 1961). Thus, an era in treating mental illnesses began with contributions from psychology.

**Contributions from Psychology for the Mentally Ill People**

Freud introduced some brand new treatment methods such as the *couch therapy* (Starchey, 1961) and *talking cure* (Glowinski et al., 2001) or *chimney sweeping* (Perelberg, 2006) along with his theory of *Psychoanalysis* (Homer, 2005). He had worked on the subject previously in 1891 by writing a monograph on a possibility of treating aphasia using the psychological treatments (Jacyna, 2000) yet his ideas were not registered.

He introduced his ideas once again in 1920s for curing mental diseases through psychological methods (Perelberg, 2006). The proposed psychoanalytical process started with a *dialogical* verbal communication (Muller & Richardson, 1985). It involved many sessions of the *analysand* or the subject (Fink, 1995) with the *analyst* or the psychiatrist. This provided the patient with a chance to build trust and rapport and a close emotional relationship with the psychiatrist. Through talk and discussions, the patient could share his/her disturbing past memories with the psychiatrist and could feel relaxed and relieved. It was an intersubjective approach which shifted the focus of the clinical process from the physician to the patient. Freud devised his theory of helping out the mentally ill people and the aphasics and termed it as Psychoanalysis. His mentor Dr. Breuer also contributed substantially towards dealing with mental diseases yet somehow Freudian ideas became more popular.

It is with Freud’s Psychoanalysis and Dr Breuer’s *Trauma Theory* that substantial contributions come from psychology with a vision to help out the individuals suffering from aphasia and other mental illnesses (Perelberg, 2006). So in the 1920s, the psychological approaches towards handling mental diseases first emerged.
In North America and Britain, Psychoanalysis was welcomed in the neurological circles but in France it was rejected at all levels (Homer, 2005). That is why; Freud sometimes called his theory of Psychoanalysis the modern plague (Homer, 2005) as it challenged and shattered many well-established scientific views.

France rejected and resisted Psychoanalysis till late 1950s and early 1960s. By the late 1970s however, Psychoanalysis started acquiring negative connotations and was accused of reductionism, that is, of reducing all types of psychological and physical problems to psycho-sexual explanations (Homer, 2005). It was with Jacques Lacan that Freudian ideas entered into France for the first time.

2.11 Psychology on the Language Revival Process of Aphasics. It has been previously mentioned, psychology is the discipline that has contributed most on human development in terms of theory building. Wundt, Vygotsky and Piaget are among the pioneers of another discipline that has emerged out of psychology, that is, developmental psychology. In the second half of the 19th century another discipline emerged in psychology in the name ‘cognitive neuropsychology’ which specifically studies the impaired language of the brain-damaged people or the aphasics. The cognitive neuropsychologists believe that each aphasic is unique and hence, the understanding gathered from studying the recovery patterns of one aphasic cannot be generalized. It can only help in comprehending the phenomenon in one particular situation but if same insights are drawn by different researchers with different aphasics with similar problems, some point of convergence might be arrived at (Vanniarajan, 2011).

The influence of the scientific empiricism is evident from the works of the developmental psychologists as they based their theories on first hand observations and experience. Wundt is the forerunner of the most commonly employed theories in developmental psychology. However, in his work, language development is not directly discussed. It is with Vygotsky that language development becomes discussed in detail.

Vygotsky compared the speech recovery process in an aphasic with the speech development of a child and with the problem solving ability of the apes. Talking about the language development and cognitive development in a “normal” human child, Vygotsky mentioned that there existed two broad stages: the pre-intellectual
stage and the pre-linguistic stage. Initially, both develop independently and on parallel planes (Vygotsky, 1962). In maturity, both become synchronized and this can be observed through one’s control over language. In aphasia, this coordination is either lost or damaged. Thus, an aphasic’s language behavior becomes chaotic.

Vygotsky views speech development to be indicative of cognitive development and the aphasics’ speech deterioration indicates the opposite (Veer & Valsiner, 1994). He says that the history of every word and every linguistic expression reveals that all of them are arbitrary as they emerged out of a need to communicate and there is no logic behind why a certain linguistic concept was given a specific linguistic label then why it is so that when a child treats a linguistic concept idiosyncratically, s/he is corrected and is forced to follow the already set pattern (Veer & Vlasiner, 1992). The same is true in terms of the individualistic language use of aphasics.

One of the most talked about ideas by Vygotsky is the idea of reflexology. He had studied the deaf and dumb children and had observed how their reflexes worked. He initiated the idea that the natural, inborn reflexes (automatic responses to stimuli that do not involve much cognitive functioning) can be trained as they have the capacity for modification (Veer & Valsiner, 1994). In this case, Vygotsky seems to use the behaviorists’ idea of stimulus-response-reinforcement but he explains the idea in a different way.

2.12 Vygotsky’s Idea of Reflexology. Vygotsky’s idea of a response (or reflex) is not necessarily visible or concrete. He talks about manifest reflexes and non-manifest reflexes (Veer & Valsiner, 1994). The manifest reflexes are those in which the response or behavior is obvious and similar in all human beings. The basic or manifest functions of organs are evident in our reflex actions yet the reflexes can be trained for performing other functions as well. Thus, lungs also serve as wind providers during speaking and singing. The tongue serves as a flexible organ during speaking in that it helps in controlling the air coming from the lungs by creating different configurations. This feature of non-manifest reflexes can be seen in learned skills or motor skills. The functions of the organs which are natural are the manifest reflexes and the ones assigned afterwards by humans after training are the non-manifest reflexes. The non-manifest reflexes are not fixed as they are flexible and can
be attained through practice and training. Thus, in case of losing some of the learned skills or motor skills, some other non-manifest reflexes can be trained to perform the same function.

Opposed to the traditional rigid behaviorist concept of a visible, mechanical response, Vygotsky talks about a flexible response. It depends on a number of factors and has the capability to be molded. In the physically handicapped people, the inborn non-manifest reflexes can be trained in special ways. Moreover, the inborn reflexes, if once damaged, are difficult to repair but the motor skills once damaged have the chances of recovery because their production is all a matter of training the already existing reflexes. So, if linguistic abilities are lost or damaged, it means that some problem has taken place in some particular trained reflexes and the language-related responsibilities can be assigned to the intact reflexes. This idea of re-training the reflexes is termed as reflexology (Veer & Valsiner, 1994) and here Vygotsky focuses on speech because he considers it to be the most sensitive reflex (Vygotsky, 2010).

Vygotsky studied and discussed the linguistic behavior of many people who were paralyzed and could not assimilate thinking and speech. He agreed with Jakobson’s idea about the aphasics’ language recovery process which favored an abstract semantic language recovery followed by a recovery of the form (Vygotsky, 1962). This means that thinking and speech are recovered separately after aphasia. Thus, aphasics recover the thinking process first and then speech. He discusses how the aphasics he studied could handle only the immediate present, concrete situations but had lost the ability to integrate thought and language and to discuss abstractions (Veer & Valsiner, 1994). He suggests that such damaged connection can be repaired through reflexology by re-training the intact reflexes for speech production. Vygotsky believed that through the application of reflexology, even the deaf and dumb can be trained and motivated to speak. If so, the chances of repairing this damaged or lost connection in the aphasics are much brighter.

**Linguistic Discussions on Aphasia**

Since the early part of the 19th century, the phenomenon of aphasia in linguistic discussions has been approached from two different angles:

- With a focus on the language structure (using a language-centered approach).
• With a focus on the strategies used with language during the recovery process (using a learning-centered approach).
• With a focus on the aphasic (using a learner-centered approach).

The linguistic discussions on aphasia towards the end of the 19th century start with Saussure’s work whose sole focus is on the language structure and he totally ignores the other two aspects.

2.13 Saussure’s Ideas on Aphasia: A Language-centered Approach. Saussure does not discuss aphasia in detail. He only mentions it as a disorder taking place due to a lesion in the brain which disturbs language related areas especially *langage* (speech) but it rarely affects *langue* (language as a system) (Bally & Sechehaye, 1915). There is no discussion in his work about the concept of *sign* in the aphasics. He talks about the aphasics’ loss of language but does not discuss their language use or the language recovery process.

He mentions certain “disorders of the oral speech” in the aphasics for better explaining the lateralization and localization of language areas in a “normal” human brain (Bally & Sechehaye, 1915) but claims that all aphasics suffer from the same language disorder. Thus, he overlooks the individual differences between aphasics for the sake of systematizing aphasia as a knowledge form and thereby, supports the contemporary neurological practices.

2.14 The Studies on Aphasia: A Learning-centered Approach. There are only three theorists with a learning-centered approach who include the aphasics language recovery process in their works namely, Skinner, Krashen and Vygotsky. Skinner and Krashen discuss briefly about the topic only for the sake of contrasting and clarifying the “standard”, “normal” language learning process from the “non-standard”, “abnormal” language recovery process of the aphasics. To Skinner, aphasia is “an ill possibility of response to a stimulus” (Skinner, 1957). He also describes aphasia to be “a hysterical verbal behavior” (Skinner, 1957). In Skinner’s discussions, the thinking processes in the aphasics become abnormal (Skinner, 1957).

Krashen points out the commonalities between the early phases of second language acquisition process and the language recovery process in the aphasics with a damaged left hemisphere. He recognizes certain features in the languages of both, for example, both begin with a simple form of language just like a *pidgin* (Krashen,
1982), both depend heavily on extra-linguistic features or the context (Krashen, 1982) but beyond that, he does not discuss the language recovery process of the aphasics.

2.14.1 Roman Jakobson. In the early 20th century, the only in-depth discussions of aphasia exist in Jakobson’s writings. Jakobson describes aphasia as a disturbance in the metalinguistic ability (Jakobson, 1980). The aphasic lacks in vocabulary and this causes either speech impairment or comprehension disturbance. It is obvious from this categorization of aphasia that Jakobson recognizes the fact that there are multiple forms of aphasia and he does not believe in generalizing all the linguistic disorders in the similar fashion. He points out that the metalinguistic development in any person is a life-long process and is always in a state of flux (Jakobson, 1980). It is never complete and is never same in all individuals of a linguistic community. If so, then the metalinguistic ability of the aphasics should not be underrated and underestimated. It should not be equated with that of a normal speaking being because it can never be the same even in any two “normal” individuals.

(i) Jakobson’s Discussion on the Aphasics’ Language Recovery Process. Jakobson says that the language recovery process after aphasia begins with imitation (Jakobson, 1980). This is exactly what children do yet the aphasics deviate from the normal language use and start using it in an idiosyncratic way which involves changing of meanings of certain words, regularization as well as overextension of certain grammatical rules for the sake of convenience. Jakobson calls this phenomenon idiolect which does not exist in the speech of normal speakers. It only exists in the aphasics’ language (Barthes, 1986). He categorizes aphasia as similarity disorder and a contiguity disorder (as cited in Hawkes, 1977). Thus, similarity disorder causes problems on the metaphoric plane (problematic associations between words) whereas contiguity disorder results in problems on the metonymic plane (problematic word combinations). Hence, he recognizes at least two forms of aphasia, that is, non-fluent aphasia and fluent aphasia.

The discussions about aphasics’ language recovery process in the realm of linguistics describe how most aphasics show an over-reliance on non-linguistic, visible features of communication. Their communication involves a mixture of linguistic signs, gestures, facial expressions, pointing at things, actual demonstrations of actions, etc. Taken this way, the speech of the aphasics is usually conditioned.
Thus, the aphasic’s language use resembles with the child’s language use. However, a child’s speech is conditioned (planned) only initially and soon becomes automatized or spontaneous (Jakobson, 1980). Moreover, a child’s acquisition follows the bottom-up strategy in the linguistic hierarchy in which the simplest language forms are acquired first then come the relatively difficult ones and the complex forms are acquired in the end (Jakobson, 1980). In case of semantic development, children adopt the opposite route. In an aphasic, the linguistic recovery procedure follows an opposite path because the semantic understanding in aphasia usually remains intact (Jakobson, 1980). The aphasic communication system is composed of semiotic signs and thus, is much broader as compared with normal communication which merely consists of linguistic signs and rarely involves non-linguistic signs. Taken this way, Jakobson’s semiotics provides a better chance of studying aphasics’ language. Linguistics is much narrower and limited because it includes only linguistic signs.

Jakobson points out that the language abilities acquired last are the first to disappear in aphasia (Jakobson, 1980). Thus, after aphasia, writing disappears first, followed by reading, speaking and listening. Still, the overall procedure that an aphasic adopts in language recovery is the same as the one adopted by a child in first language acquisition (Weijer, Heuven & Hulst, 2003).

The aphasics’ language recovery process is a journey from semantic understanding towards ability for linguistic expressions (Jakobson, 1980), that is, from the abstract to the concrete. Jakobson’s contemporary Roland Barthes also uses the same ideas to talk about the language recovery process of the aphasics.

2.14.2 Roland Barthes. He compares the language recovery process of aphasics with the language acquisition of children and also believes that the linguistic concept of idiolect can only be explained through the language use of the aphasics (Barthes, 1986). Aphasics’ language recovery process follows an opposite route to what a normal person’s speech does. It requires a convergence of the interlocutors’ speech with itself. Thus, in an aphasic’s language use, parole occupies the central position in the communicative process and langue is on the periphery. It means that while talking to an aphasic, the aphasic’s language use (parole) determines meaning and not the language system (langue). If the interlocutors of an aphasic do not realize this fact, no
communication takes place. So, in case of talking to an aphasic, the part determines the whole.

2.14.3 Michel Halliday. Halliday (1994) talks about two types of word meanings depending on the formal and the functional nature of language use (p. 54) yet he also mentions that this duality of meaning is not found in the aphasic speech. Thus, the aphasic speech is monosemantic. It has only one possible meaning which is purely personal and individual. Jakobson, Barthes and Halliday all three agree that the aphasic’s language use is the perfect example of idiolect. Halliday (1994) mentions another prominent feature of the aphasic speech which is the use of agentless active sentences (p. 39). This feature resembles the egocentric speech in Piagetian terminology in which the child directs speech to himself/herself, disregarding the people around, considering that they are naturally following him/her (Piaget, 1959). Halliday’s theory of Systemic Functional Linguistics has a broad objective of enabling the language developer to understand language with its grammatical as well as social and cultural rules and regulations. This understanding can further be converted into a capability of uncovering the problems associated with language use which can eventually serve to help out the people suffering from linguistic disorders whether physical or academic (Webster, 2004). Therefore, Halliday’s theory can be used for dealing with the linguistic disorders after aphasia whether related to form (speech production) or function (speech comprehension).

2.15 Aphasia: Learner-centered Approach. An understanding about the language structure, the language recovery process and the aphasic is integral for the present study. In linguistics, the discussions on aphasia center around only the language structure and the language recovery process after aphasia but there is almost no discussion on the aphasic as the language user yet the philosophers have discussed it. In the 20th century, the most insightful discussions on the aphasic as a language user exist in the works of Lacan.

2.15.1 Lacan. For Lacan, language functions on two planes at the same time: the horizontal plane and the vertical plane. The horizontal plane gets formed due to the word combinations whereas the vertical plane gets constructed because of the word choices. The harmony between both is called the order which can be achieved only by a normal language user or the subject. This is the same as the linguistic concept of a
sign which represents the unity between the signifier and the signified. This order becomes disturbed in an aphasic’s language use. Thus, the aphasic suffering from a problem on the vertical plane finds it difficult to make selections of words. Thus, s/he can speak fluently but it is usually meaningless. The aphasic suffering from a problem on the horizontal plane has a problem with fluency (Glowinski et al., 2001). So, it results in problematic combinations. The aphasics of this kind use a telegraphic speech (Shaffer & Kipp, 2007), that is a speech which heavily depends on single words or phrases just like the language of telegrams. Philosophers like Lacan do not think that there exists any language user in the world who has full control over language use and there is no signifier in the world which exactly represents the signified. Seen this way, there is not much difference between the “normal” language user and the “abnormal” language user or the aphasic (Fink, 1995). Thus, the language use by aphasics should not be discussed in a derogatory, negative way.

2.15.2 Foucault. Foucault discusses how the physical aspects of the human subject have been focused throughout the 18th and the 19th centuries emphasizing the Cartesian mind-body split. Enlightenment created the illusion of a complete human subject and thus those suffering from mental illnesses were taken as the failure of human intellect and as a result, were hidden as stigmas for the whole society (Foucault, 2003).

Foucault describes how medicine evolved during the 18th and the 19th centuries in a planned way. If a normal human subject in Foucauldian philosophy has only partial or no control over language use, then an aphasic’s control is even less.

The existing research on aphasia in Pakistan (in different disciplines such as in medicine, neurology and psychology) also gives only a partial understanding of the subject as it either serves as a tool for gauging the mortality rate due to stroke or talks about the linguistic problems as the aftermath of aphasia or aims at giving precautions about how to avoid the dangers of stroke and aphasia (see articles by Khealani, Hameed, Mapari (2008), check the reports by Ahmad, Owais, Siddiqui, Maimuna, Rao & Yousufzai (2013) and also see the work by Khan (2006). It does not talk about the language use of an aphasic or the linguistic recovery process of the aphasics.
Overall Analysis of the Literature on Aphasia

It is clear from the discussions above that the aphasics’ language use is almost always discussed in comparison with the child’s first language acquisition and an adult’s second language learning processes. However, where the other two processes are discussed in a positive way, the aphasic’s language recovery process is always described as a derogatory process. Though constructive, the process appears in sheer pessimism.

In the discussions about human control over language use, theorists from almost all disciplines agree that a normal human subject has only partial agency and so is the aphasics’ agency over language use. The point of commonality is that the normal language user as well as an aphasic both have incomplete control. Taken this way, both are incomplete and thus treating the aphasics’ language use in negative terms is not just.

The only person who brings in optimism while discussing the phenomenon is Vygotsky. He stresses on the importance of early childhood linguistic training and the role of love and emotional attachment that can work as catalysts in the process of learning (Veer & Valsiner, 1994). He himself had seen the miraculous impact of emotional association which could speed up the learning process. He had observed how emotional charge motivated even the deaf and dumb in his laboratory and how the desire to know and use language could be awakened even in the physically handicapped children (Veer & Valsiner, 1994). It is with Vygotsky that a positive tone enters into the studies related to aphasia. This is why; his ideas have been used in this study which deals with the language recovery process of the research participant after aphasia.

Implications for the Aphasics’ Language Retrieval Process

Language recovery after aphasia is always discussed in comparison with first language acquisition and second language learning. The point to remember is that an aphasic’s brain is not totally blank as a child’s while recovering language. In many cases, it is fully saturated with language. So, it cannot be compared with a child’s first language acquisition process. Same is the case with an adult’s second language learning process. Both these processes are presented as “standards”. In comparison,
the language recovery process of the aphasics appears as a non-standard or a substandard process. All three situations are purely independent. There can be points of coincidence but total similarity is an illusion and thus, imposition of ideas from one domain onto another is not appropriate. For understanding some of the purely individual features of aphasics’ language recovery process, it is imperative to devise fresh terminology and revise some of the existing ideas associated with the phenomenon, for example, treating the process in negative, derogatory and pessimistic ways, if betterment of the aphasics is desired.

The Role of Emotions in the Language Recovery Process of Aphasics

Emotions are an integral part of every living being and historically, psychologists have recognized two broad categories of emotions with all normal human beings: primary or basic emotions such as aggression, anger, happiness, and secondary or modern emotions such as shame, empathy, depression, sadness, embarrassment (Oatley, 2004). With the establishment of the self-evaluative system, children become sensitive about their performance and feedback from others. Thus, if mistake in language use results in criticism or scolding from the linguistic superiors, it causes shame or even guilt. To avoid a negative feedback from the adults, children try hard not to repeat the mistakes. An overt emotional display by the adults at this stage is crucial. Emotional concern and expressiveness have profound impact on the developmental process of a child and an adolescent. It has a much deeper effect on aphasics’ language recovery process.

Foucault talks about the “natural locus of life” which he defines as gentle, pure love and expressivity. A genuine concern for the ill and care (in the caregiver) are synonymous with a natural desire for cure (in the aphasic) and if they coexist, the healing process can be activated (Foucault, 2003). A loving, caring attitude of the caregiver can start the desire for improving in an aphasic and change his/her status from a passive object of gaze (Foucault’s term) to an active subject and language user.

2.16 Emotional Intelligence of the Caregiver and Linguistic Development of the Aphasic. The neurologists localize emotions on the right hemisphere in the human brain (Lorch, Borod & Koff, 1998). In case of a left hemisphere lesion, the emotions remain intact. This understanding has been used in studying the linguistic recovery
process of the research participant who had been suffering from the left hemisphere lesion but had intact right hemisphere. Her primary caregiver was the researcher who is the participant’s daughter as well. The researcher had an understanding about the nature of emotional attachment of the research participant with certain ideas. This understanding made her emotionally intelligent and helped her in scaffolding the linguistic input for practice. Thus, the ideas with which the research participant was positively attached were preferred and those which could annoy her were avoided.

Emotional attachment helps in arousing positive and healthy emotions in the aphasic (Bowlby, 1982). Likeness for a specific idea can be used to initiate happiness in the aphasic which can work as a motivating factor for acquiring language items related to that idea (Hulse, Deese & Egeth, 1975). Similarly, negative emotions like depression, sadness and helplessness can be suppressed as they hinder the learning process by demotivating the aphasic. An emotionally intelligent caregiver possesses two important qualities: responsivity and expressivity. S/he is the social, linguistic superior of the recovering individual who can regulate the emotional life of the aphasic. A strong sense of attachment with an emotionally concerned superior or the more knowledgeable other (Vygotsky’s term as cited in Lock & Strong, 2010) who is ready to take care and provide physical, emotional and linguistic assistance provides a secure base to the recovering individual from where s/he starts off his/her linguistic and other explorations (Shaffer & Kipp, 2007). Although men and women both can adopt the role of a caregiver for an aphasic, females can be potentially better caregivers as they are also commonly known as emotional beings (Oatley, 2004). This emotional intelligence equips them with enough empathy desirable for helping out an aphasic in recovering language. An understanding about the importance of the emotional factors in the language recovery process after aphasia is imperative for the caregiver. In the present study, this understanding was the guiding force.

The next section deals with the theoretical framework for the said study. Language development after aphasia has strong emotional underpinnings. That is why; Vygotsky’s ideas about language development after an amalgam with Bowlby’s Attachment Theory have been incorporated.
Section III

Theoretical Framework

This study aimed at exploring the language recovery process of one aphasic. It also intended to understand the effects of emotional attachment (between an aphasic and his/her caregiver) on the recovery process. The researcher also intended to explore the effects of inclusion of topics with which the research participant was attached (in speaking practice) on her language retrieval process. It asked for a combination of Vygotsky’s ideas on language development and Bowlby’s Attachment Theory as the theoretical framework. This helped the researcher understand the effects of positive emotions on the language development process of the research participant.

Language recovery after aphasia is a socially constructed, dialogical process. The principal caregiver initially invests more in that as s/he does most of the interpreting for the aphasic. S/he has a comparatively better control over language and thus, serves as the linguistically more knowledgeable other for the aphasic (Vygotsky’s term as cited in Lock & Strong, 2010).

Every aphasic immediately after language loss is vulnerable and thus, can be compared to an infant. An early affection bond with an intimate caregiver provides a solid foundation to the aphasic on which, his/her physical as well as linguistic future depends (Oatley, 2004). If the aphasic has experienced love and care during the early phases of aphasia, s/he will be secure and will be ready to undertake the linguistic as well as physical challenges on his/her own.

The aphasic is not a passive recipient of language or a tabula rasa as the behaviorists think (Shaffer & Kipp, 2007). The desire to become linguistically independent can be seen from the active participation of the aphasic in the communication process. In many cases, the aphasic’s brain is fully saturated with linguistic, cultural and social knowledge. This can be detected from his/her consciousness about his/her faulty language performance. This awareness of the aphasic about his/her language problems can be utilized by the caregiver in starting the remedial process. Factors like the mental state of the aphasic, emotional support provided by the caregiver and the overall external environment affect the motivation level of the aphasic. This level of motivation eventually determines the language
performance of the aphasic. If the aphasic is emotionally secure, the performance will keep on improving because the aphasic will be open to take up challenges. This implies that depending on the social environment and the mental condition of the aphasic, every aphasic is unique and thus, has a different zone of proximal development (Shaffer & Kipp, 2007) which can be stretched to its maximum with the help of a more knowledgeable other, the one with whom the aphasic generally forms a close attachment.

2.17 Attachment Behavior after Aphasia. Every aphasic feels distressed and endangered after losing the linguistic faculty. This feeling is very intense in the beginning. Any person around the aphasic who initially takes care of the aphasic and does interpretation of messages can become the most trusted one for the aphasic. This results in preference of that person over all the others and a proximity seeking behavior. This can be seen in the situations of linguistic and physical need. The most trusted person eventually turns into an attachment figure. The proximity seeking behavior persists as long as this particular person remains the principal attachment figure for the aphasic. The person who is capable of providing care, is responsive and is easily accessible. Thus, the attachment figure or the caregiver of the aphasic does the same as a mother does for an infant.

Most aphasics are adults and generally, the caregiver is a female. It can be a daughter, a granddaughter or a paid nurse. If the principal attachment figure or the caregiver is a female she will easily transform into the maternal role. In the early phases of aphasia, the emotional bond between the aphasic and the caregiver is extremely important as it ensures the physical as well linguistic security of the aphasic. However, in the coming times, it turns into seeking emotional support from the caregiver. For the aphasic to become linguistically independent, a close and continuous attachment bond has to be cultivated. Being the more knowledgeable other, the caregiver has to be vigilant about where his/her linguistic intervention is required in the communication process with the aphasic. An occasional lack of responsivity in the situations of linguistic need on the part of the caregiver can affect the confidence of the aphasic. The aphasic expects the caregiver to automatically know where and how his/her help is required. In case the caregiver is not providing the required support, s/he might be explicitly asked for linguistic help. A continuous non-availability, unresponsive attitude or indifference of the caregiver may lead
towards changing the focus of attention and attachment (Bowlby, 1980) and consequently affect the course of linguistic performance and development.

Depending upon the nature of relationship developing between the aphasic and the caregiver, different patterns of attachment can form for example:

(i) Secure (ii) Anxious-avoidant (iii) Anxious-resistant (iv) Insecure

The formation of early attachment between the aphasic and the caregiver provides the mold for the future patterns of all types of social bonding and linguistic behavior (Bowlby, 1982). An emotionally secure aphasic is confident and thus, ready to take up all types of linguistic and non-linguistic challenges and has bright chances of becoming linguistically independent. On the other hand, anxious-avoidant, anxious-resistant and insecure aphasics are not sure of linguistic help and so are devoid of confidence. The chances of their becoming linguistically self-sufficient are bleak. If it occasionally happens and the caregiver provides the linguistic help afterwards, the attachment is restored but if the aphasic frequently experiences linguistic apathy from the caregiver, the situation becomes very painful as there is no hope for help. This causes an aberration in the linguistic and emotional behavior of the aphasic and an ambivalent behavior about the caregiver develops. If a substitute caregiver on permanent basis is not immediately provided, the deviant behavior becomes fixed.

A warm response on the part of the caregiver is of prime importance as it insures the availability and access to physical and linguistic help which is necessary for physical and emotional security. The caregiver can show his/her warmth through his/her sensitivity towards the linguistic performance of the aphasic. This warmth and responsivity can be in the form of indulgence of the caregiver in that s/he encodes as well as decodes the messages for the aphasic. At times, s/he might even provide the linguistic items to the aphasic which s/he needs.

There exists a sensitive period for the formation of intimate attachment between the aphasic and the caregiver. The linguistic future of the aphasic heavily depends upon it. The psychologists use the term critical period for talking about the sensitive period for language development in cases of first language acquisition and second language learning. In case of aphasics, language recovery takes place instead
of language development. For the aphasics, the sensitive period for language recovery can be termed as crucial period. Though this crucial period starts right after the outset of aphasia, the initial six months to about two years are very important. The aphasic at this stage is vulnerable and almost totally depends upon others for linguistic help as his/her communication system is disturbed and not fixed.

The aphasic feels frustrated after losing control of encoding his/her messages into normative linguistic signs and tries out different strategies as substitutes, for example, gestures, pointing at things etc. As a result, s/he devises his/her own communication system. This system is purely individual and differs considerably from the established linguistic practices. Thus, when someone does not understand messages of the aphasic, s/he becomes perplexed and unsure about his/her communication system. In such an unsure situation, an empathic response by someone close can do a miraculous job.

An inability to control language causes the aphasic to look for help. This causes him/her to trust and prefer the caregiver over all the others. This eventually turns into attachment. Until the attachment pattern is fixed, the linguistic performance of the aphasic remains in a flux. It involves tiring efforts by the aphasic to make himself/herself understood. Once the pattern of attachment is fixed, the communication system starts organizing itself, causing the internal working of the brain to become automated, involving nominal conscious effort (Bowlby, 1980). Once automated and established, behavior patterns become difficult to change as then they cannot be processed consciously. For an attachment pattern to form, the existence of a continuous growing relationship is very important.

Depending on the degree of brain damage, responses from people and the will to improve, every aphasic is unique. Therefore, the chances and speed of language recovery for different aphasics are not the same. If the aphasic is securely attached, the chances of language recovery are brighter.

2.18 Attachment Behavior and Caregiving Behavior. The early behavior of the aphasic can be called attachment behavior whereas the caregiver’s behavior can be termed as caregiving behavior. The formation of the former is directly proportionate to the latter. The aphasic is not passive as s/he minutely observes the responses of those around him/her. The one who is more responsive and expressive is immediately
noticed and is thus preferred over the others in the coming times. The aphasic seeks the company of that particular person and expects him/her to be available in the time of physical and linguistic need. In the affection bonding between the aphasic and the caregiver initially, the caregiver contributes more whereas the aphasic expects more.

2.19 Formation of Attachment. The aphasic’s attachment with his/her caregiver is evident from the proximity seeking behavior which can be identified in the situations of physical and linguistic need. This attitude persists as long as the principal attachment figure is capable of providing care, is responsive and easily accessible. During the earliest phases of aphasia, the aphasic almost totally depends on the caregiver for the fulfillment of his/her necessities. So, s/he wants the caregiver all the time around him/her. The absence of the caregiver might cause frustration and even make him/her cry. The caregiver is the same as the real mother is for the infant and so does the mothering for the aphasic (Bowlby, 1973).

Attachment behavior never vanishes; it remains with every individual throughout life. Just like a transition in the attachment behavior, attachment figure might also change and with most humans, it does (Bowlby, 1982). For an attachment to prolong and for the relationship to remain alive, it has to undergo changes. For a harmonious and balanced attachment, both the individuals involved need to keep on adjusting their behavior and feelings. In case of an attachment between an aphasic and the caregiver, the aphasic is not in a position to make adjustments and compromises thus, more responsibility lies on the shoulders of the caregiver who has to sometimes sacrifice his/her choices (Bowlby, 1988). This requires development of an empathic attitude on the part of the caregiver. Otherwise, the attachment behavior starts withering and eventually comes to an end (Shaffer & Kipp, 2007). Synchronization between the aphasic’s needs and the caregiver’s responses insures speedy physical and linguistic recovery of the aphasic (Bowlby, 1982).

Although the principal attachment figure is very important, s/he can be replaced by another attachment figure in case the principal attachment figure cannot continue the relationship (Bowlby, 1982) but in the formation of every attachment, there always exists a sensitive period.

2.20 The Effects of an Attachment Figure on Development. The attachment figure works as the centripetal, attractive force. The presence of the caregiver works as the
home base. After every exploratory linguistic excursion, the aphasic returns to it. Initially, all activities of the aphasic are converged towards it. It has a harmonizing, unifying and comforting effect, as it instigates a sense of security in the aphasic. Whenever the aphasic feels endangered or insecure, s/he seeks the company of the attachment figure, rushes to him/her and feels to be in a secure, safe haven. Within these safe confines the aphasic starts exploring and taking up more difficult linguistic challenges. The caregiver serves as a secure base for the aphasic. This increases the radius of the linguistic exploratory circle of the aphasic yet the center or the secure base has to be there, if explorations ever have to be undertaken.

The attachment figure in an aphasic’s life serves as the sun in the solar system. Being in the center and emitting emotional pull in a particular radius. The aphasic is bound to revolve around it. Without the central combining force of the attachment figure, the emotional and psychological balance is lost and the aphasic falls apart.

A total absence of a principal attachment figure makes the aphasic feel directionless, without any center. If attachment is secure and it has passed the test of time, the individual feels secure, confident and happy. The chances for such aphasic to become physically and linguistically independent are bright. If it is the other way round, the result is disappointment, anger and depression (Bowlby, 1988).

Usually, an aphasic is reluctant to initiate conversation because s/he is not sure of his/her language resources. This problem can be handled by the intimate caregiver as s/he can better deal with the linguistic challenges for the aphasic by providing the linguistic items which the aphasic finds difficult to say or is short of. This capability to deal with the linguistic challenges for the aphasic makes him/her trust that particular person more than anybody else. Initially, the aphasic relies totally on the caregiver for the availability of linguistic resources and thus, wants the physical presence of the intimate caregiver but when the radius of linguistic explorations expands, the physical presence of the caregiver becomes less important and eventually, only the feeling that s/he is somewhere, accessible is enough.

In an ideal situation, an aphasic will be totally independent as s/he feels fully secure in terms of communicative abilities and thus, does not need a caregiver. For achieving it, the caregiver or the more knowledgeable other has to proceed systematically. S/he has to plan language exercises for the aphasic in non-threatening
ways so that the aphasic feels secure and is motivated to do them. Depending upon the responses of the aphasic, his/her motivation and the level of achievement, the nature of the activities can be changed. New challenges can be added into the previously done activities. This is to insure that the aphasic keeps on improving.

The caregiver needs to keep in mind the responses and reactions of the aphasic while deciding for the next level of linguistic practice. S/he is thus the more knowledgeable other who guides the aphasic in his/her linguistic journey towards improvement. All the activities that s/he designs are thoughtfully chosen and properly scaffolded (Shaffer & Kipp, 2007). His/Her emotional intelligence helps him/her devise linguistic activities for the aphasic. S/he knows the nature of emotional attachment of the aphasic with certain ideas which are dear and some of them which are annoying for the aphasic. Keeping in mind the vulnerability and the dependency of the aphasic, the caregiver needs to decide which ideas to include and which ones to exclude from being discussed or even pointed out in front of the aphasic. The responses of the aphasic guide the caregiver about how to proceed whether s/he should repeat some of the words or expressions while giving linguistic practice or add new ideas. This insures an expansion of the existing zone of proximal development which can be stretched to its maximum provided that the linguistic practice is guided and collaborative (Shaffer & Kipp, 2007).

In the beginning of an aphasic’s journey towards linguistic recovery, his/her way of communication diverges from the general, whole system in that it is individual and subjective. Thus, an aphasic’s language recovery process starts ontogenetically. In Vygotskyan terminology, it can be called “private speech” (Shaffer & Kipp, 2007). Instead of converging with the established system of language, the aphasic’s language use is idiosyncratic and “self-centered” (in Piaget’s terminology). The aphasic wants his/her interlocutors to converge to his/her language system which s/he constructs by doing experiments with his/her existing vocabulary, gestures, facial expressions etc. and through trial-and-error or syncretism (Vygotskyan term). Vygotsky views child development to start off through trial-and-error. The point to remember is that a child comes across language for the first time. His/Her brain is blank in terms of language use. An aphasic’s brain is not blank but is partially or fully saturated with linguistic knowledge. An aphasic’s syncretism or trial-and-error is thus different from that of a
child’s as s/he modifies the use of some of his/her existing linguistic resources or completely transforms them. It is a purely individual phenomenon.

Every aphasic is different in terms of the degree of language loss, the type of responses s/he gets for his/her language use etc. Taken this way, no aphasic is a passive recipient s/he actively and minutely observes others’ responses and keeps on amending his/her communication ways. It can be said that a child’s linguistic journey starts *syncretically* (the researcher’s coinage from Vygotskyan term syncretism which means trial-and-error) and an aphasic’s linguistic journey starts idiosyncratically. Practice with the more knowledgeable others directs it towards a convergence with the whole system and thus it becomes *phylogenetic* (Vygotsky, 1962), that is general, which is understood by all. The thought process remains developing and functioning ontogenetically. That is, individually.

A recall of Vygotsky’s ideas about thought and language development makes it clear that in a child both develop on different maybe, parallel planes. Thus, there is a pre-linguistic stage, in which thought develops without the mediation of language and there is a pre-intellectual stage, in which language develops without the mediation of thought. At a certain time in development both thought and language become synchronized on one and the same plane and thus “thinking becomes vocal and speech becomes rational” (Vygotsky, 1962). In aphasia, this harmony between thought and language planes is believed to be lost. This loss or disturbance can be either temporary or permanent. This is a misconception as the said harmony in an aphasic is not lost because both thought and language are already on the ontogenetic, subjective plane. So, they are very much synchronized. The only problem is that the aphasic is yet unable to verbalize his/her thoughts in normative ways.

In case of aphasia, the brain starts functioning differently as compared with a “normal” brain. It causes the aphasic to use language in a brand new way. This divergence from the established communication norms makes the aphasic insecure as sometimes it is difficult for people around the aphasic to converge with his/her individual communication system. It is equally tiring for the aphasic to every time make himself/herself understood. The process can be simplified with the mediation of a more knowledgeable other or the caregiver of the aphasic. The caregiver’s explicit appreciation for the correct performance of the aphasic and implicit correction for the
erroneous one help develop an attachment. An insensitive attitude on the part of the caregiver in terms of language use or emotional support and linguistic help has detrimental effects on the recovery process.

The aphasic needs an attachment figure for interpreting the communication system that s/he devises as s/he individualizes many linguistic expressions. The people communicated with have to pay extra attention to this individualistic use of language to decode the messages. The mediation of the more knowledgeable other improves the chances of communication and thus, provides security to the aphasic.

The aphasics who suffer from partial language loss have bright chances of retrieving their linguistic abilities because their brain has not become completely blank. The only problem is that this knowledge cannot be utilized in a normal or normative way. In many cases, much of the linguistic knowledge is intact as there exist plenty of words but a few are practicable or usable. The reason might be that they demand a lot of muscular efforts which the aphasic yet does not have due to tissue damage or partially has. Sometimes, the aphasic needs a recalling of certain linguistic expressions. The caregiver can help in this recalling. Sometimes, the aphasic has to mold his/her linguistic knowledge or expressive abilities in unusual and creative ways which are purely individual. Thus, every aphasic sets up his/her own communicative signifiers for specific signifieds. It depends on the existing vocabulary in his/her mental lexicon as well as the degree of control that can be exercised over it. There exist several alternatives for one message. The aphasic might be having the most appropriate expression but is yet unable to verbalize it. Thus, s/he makes a choice about how to verbalize his/her thought and this choice is purely subjective and individual. The aphasic’s concept of a sign deviates from the established, normative concept because s/he has no other choice.

The initial stages of aphasia are crucial. It is really important then that someone among the aphasic’s relations should turn into a caregiver and should try to cultivate the relationship into a proper intimate attachment. In many cases of aphasia, the aphasic passes through an initial mute stage during which, s/he is totally speechless. This is the most frustrating and disturbing phase. The presence of someone who can empathize with the aphasic and give emotional support is
invaluable (Shaffer & Kipp, 2007). This is why; the early emotional bonding has an important effect on the future linguistic development of the aphasic.

In this respect, occasional expressivity of love and concern on the part of the attachment figure is important. The caregiver or the attachment figure can do so by encouraging a successful communicative move of the aphasic. An analogy between an aphasic’s developmental process and an infant’s growth can be drawn. An infant needs the physical presence of its mother and wants the visible, obvious emotional display from her. The aphasic wants the same. That is, emotional expressivity and obvious responsivity from his/her principal attachment figure. Physical presence of the attachment figure symbolizes security and engenders confidence and an absence symbolizes insecurity and thus, creates frustration and sadness. Through his/her emotional intelligence, the caregiver knows how to turn his/her physical tangible support into an abstract emotional feeling for the aphasic that the caregiver is with him/her. The caregiver can gradually help the aphasic become independent by reducing his/her linguistic support to the aphasic in a planned way.

2.2.1 The Need for an Attachment Behavior in Aphasia. Attachment behavior is natural as initially, every aphasic is unable to fulfill his/her own needs but can do so with help of a caregiver who is comparatively better equipped with language and can better deal with the world. The linguistic explorations start expanding with experience and with surety about the presence of the caregiver. In case the aphasic is not sure about the presence or availability of the caregiver, s/he becomes insecure, loses confidence and eventually becomes less interested in new expeditions. An emotionally secure aphasic is more likely to develop linguistically and intellectually than the one who is insecurely based.

This study focuses on the language recovery process of the research participant who was an aphasic. Almost six years had passed after the outset of aphasia when this study began over which the language recovery process had undergone different phases. The researcher had a close emotional bond with the research participant who is her mother. After the outset of aphasia, the relationship became even more intense and turned into an intimate attachment. Through this study, it was explored how far the language recovery process could be stretched to its maximum by using this attachment.
There are different opinions about the retrieval of the lost or damaged linguistic abilities after aphasia. Some theorists believe that the brain cells once damaged can never be mended completely and thus, the chances of recovering language perfectly are either absent or are very bleak.

Language has been considered as the highest form of intellectual growth by theorists like Piaget and Vygotsky. Language development is generally discussed considering three cases:

- A child’s first language acquisition.
- An adult’s second language learning.
- Retrieval or recovery process of the disturbed language of aphasics.

All three processes have theoretically been considered separately yet practically, the situation is different. The processes of the child’s first language acquisition and an adult’s second language learning are dealt with in optimistic, positive ways. These processes are treated as the “standards” or the yardsticks with which “normal” language development can be understood and explained. The developmental process in both cases is taken as creative and constructive but when it comes to discussing the language recovery process in aphasics, the situation changes. There are no separate theories and aphasiology, that is, the study of aphasia (Crystal, 1994), is reduced to a subsidiary discipline or an appendage. The process of language retrieval in an aphasic is described in terms of comparison and contrast with the child’s first language acquisition or an adult’s second language learning processes.

No separate terminology has so far been devised for describing aphasic’s language retrieval process. Thus, every discussion about the language recovery process after aphasia is reduced to comparison and contrast with the child’s first language acquisition process or an adult’s second language learning procedure. This treatment of the phenomenon makes the process of language recovery after aphasia appear “substandard”. The history of linguistics and psychology is replete with examples where aphasia is treated as a sub-discipline (as in de Saussure’s and Skinner’s works). Almost all theorists deal with aphasia in their concluding remarks as if it is the last and the least important subject to be discussed. Thus, the first two areas dominate and any progress in terms of theory generation or fact finding is forced to compensate aphasiology as well.
The sad thing about the discussions in aphasiology is that they talk about aphasia as a failure of human intellect and consider it a degenerating process during which human cognitive abilities are continuously deteriorating. The neurologists talk about aphasia as a mental problem which results due to a loss or damage to the brain cells. They talk about a critical period for human brain’s ability to repair itself. In some brain areas neuron generation and repair continues till age 20 yet afterwards, it stops (Kalat, 2004). Thus, there is a critical period for brain repair. After crossing this critical period, an aphasic cannot expect to recover brain cells.

Linguists also talk about a critical period in terms of first language acquisition and second language learning (Crystal, 1994). Eric Lenneberg (1967) mentions a critical period for first language acquisition to lie between five and puberty and Stephen Krashen (1980) talks about critical period for learning second language to be over much before puberty after which the chances of developing language abilities become dim. The researcher challenges this claim as she believes that by cultivating a healthy, intimate attachment between an aphasic and his/her caregiver, the chances of language recovery can be improved even when the aphasic has crossed the critical period both neurologically and linguistically. She has incorporated Vygotsky’s and Bowlby’s ideas as the principal theoretical framework for her study because they generate optimism while talking about human development whether physical or linguistic.

The next chapter deals with the methodology for this study.
CHAPTER 3

RESEARCH METHODOLOGY

Design & Nature of the Study

This is a case study and is mainly qualitative in nature. The unit of analysis is one individual because the researcher wanted to have in-depth understanding of one person’s language recovery process after aphasia. She also intended to seek answers to broad, open-ended questions and to explore and measure changes occurring over a period of one year. The case study strategy made it possible to gather in-depth knowledge about the phenomenon under study. Longitudinal study design was used for collecting data which is generally used for collecting factual information over long periods on regular basis and that also made the milestones in the recovery process noticeable. Ethnographic methods of data collection such as participant observations and fieldnotes provided the researcher with a flexible set of guidelines for collecting the relevant data and connecting it with the theoretical framework. They also enabled the researcher to have prolonged interaction with the research participant in the field and to explore the language recovery process in naturalistic settings.

The researcher has worked in the interpretivist paradigm and it allowed her to understand the behavior and language use of the research participant in real life. Thus, the theory behind the study was not tested; rather it provided guidelines for starting the study.

The researcher had noticed many aspects of the language recovery process in the research participant before undertaking this research endeavor and through this study, she wanted to explore them further. She wanted to get new insights towards the phenomenon because the research participant had crossed the so-called critical period of language recovery when this process started. This made the study exploratory in nature.
All the existing theories about language development mention that this process can be explored by considering any of these three processes:

- First language *acquisition*.
- Second language *learning*.
- Language recovery process after aphasia.

All three processes can be studied by employing any of the theories on human development such as behaviorism, cognitivism and social constructionism. Thus, theoretically first language acquisition, second language learning and language recovery after aphasia are treated as three different developmental processes and three independent domains of study yet practically, the situation is different. In the existing discussions, first language acquisition and second language learning are treated as two independent processes whereas the language recovery after aphasia is not discussed separately and this process is presented only secondarily as an appendage as it is compensated in the discussions about first language acquisition and second language learning. Therefore, in the existing discussions on language development, first language acquisition and second language learning are presented as standard, “normal”, developmental processes whereas language recovery after aphasia appears as a non-standard, abnormal and non-developmental process.

Chapter 2 reveals that there is considerable discussion on first language acquisition and on second language learning in the works of Skinner, Jakobson, Barthes, Halliday and Krashen but there are no detailed discussions on language recovery after aphasia till the 21st century.

Whatever discussions exist on language recovery after aphasia, they are in the form of a comparison with first language acquisition and second language learning processes. In these discussions, the phenomenon of language recovery after aphasia appears as a subsidiary, secondary topic in the concluding sections. No theorist on first language acquisition and on second language learning portrays language recovery after aphasia as a developmental process, rather it is portrayed as an abnormality, a situation in which the language development process deviates from the normal path and human intellect starts deteriorating and this abnormal process is used as a contrast to exhibit how the normal language development process takes place. Thus, in Skinner’s discussions, an aphasic’s language use is termed as an “ill” response to a
stimulus as compared with a healthy person’s language use which is treated as a “normal” response to a stimulus (Skinner, 1957). In Krashen’s discussions, normal language use is termed as creative whereas the aphasics’ language use is called non-creative and abnormal (Krashen, 1981).

The language development theorists point out what is abnormal about the aphasic speech yet none of them suggests how this process can be brought back to the normal track. Thus, despite admitting theoretically that language recovery after aphasia is a developmental process, practically it is treated as a non-developmental process. This dichotomy between theory and practice has led the researcher to explore more about the phenomenon.

The researcher had noticed some unique features of the language recovery process after aphasia in the research participant which could not be studied following behaviorism and cognitivism. The traditional theories are designed for studying the “standard”, normal language development processes. Thus, there can be commonalities between all three processes of language development yet a complete homogeneity is impossible. This is because in case of first language acquisition, a learner comes across language for the first time. In case of second language learning, the learner might have no prior knowledge about the target language or might have partial understanding. In any case, neither the first language acquirer nor a second language learner has full understanding about the language that s/he is developing. This is not the case with an aphasic whose brain is saturated with the language and the only problem is how to mobilize and utilize this knowledge. This means that a comparison between first language acquisition, second language learning and language recovery after aphasia can be misguiding.

Vygotsky is an exception among all theorists on language development because it is only in his work that the aphasics’ language recovery process is discussed as a separate domain of study. Vygotsky not only discusses this phenomenon in detail but also suggests the ways in which this process can be excelled and made normal. Thus, in his discussions, language recovery process of an aphasic appears as a truly developmental process and is discussed in an optimistic way in which every aphasic has a different zone of proximal development. Vygotsky brings in hope through his discussions on language recovery after aphasia. This is why; his
ideas on language recovery after aphasia along with Bowlby’s ideas on emotional development have been incorporated in the theoretical framework of this study.

In the beginning of the study, the researcher adopted a stance of disinterestedness in order to avoid preconceived ideas on language development. This stance caused openness to findings. Garfinkel and Sacks label this stance as “ethnomethodological indifference” (a phrase used by Harold Garfinkel and Harvey Sacks in 1970 as cited in Have, 2004). They consider it an important element of ethnographic research. In this study, the ethnomethodological indifference of the researcher made her open to anomalies and serendipities and made the research design flexible.

The open-endedness of the research questions posited a check on the data collection and data analyses processes. This was achieved by triangulating both processes and by adopting a reflexive attitude. Triangulation of data gathering involved data collection from three different sources (audio recordings, field notes and discussions with the doctor). In the data analysis process, triangulation was achieved by analyzing the data using three different methods (linguistic, statistical and graphic). Reflexivity was achieved by comparing different phases of study with each other. The researcher analyzed the data in the form of audio tapes and diary notes and kept on measuring the changes happening over time. In case the research participant devised a particular strategy for communication, the researcher noted it down in her diary in the form of additional notes and if a strategy underwent transition, it was also noted down. The strategies and their transitional phases were explored by comparing the succeeding phases of the study. This oscillation between different phases of study helped the researcher in achieving reflexivity.

It was an individual case study thus, the data were analyzed using the idiographic analysis process. The audio taped conversations with the research participant have been provided along with the write-up. This gives the readers direct access to the actual data and they can scrutinize the data themselves. This minimizes the chances of bias.

The research participant lost her language abilities after stroke in January 2005. After a period of about twelve hours of total speech loss, she gradually started regaining it. Since then, this process has undergone changes and is still far from being
complete. This study focuses only on the recovery phases between June 2011 and May 2012.

The researcher wanted to understand the language recovery process after aphasia and the part played by emotional attachment in this process as discussed in the third section of Chapter 2. This demanded a thorough, micro level data collection and analyses. So, data collection and data analyses both have been done at the segmental as well as at the suprasegmental levels.

The researcher wanted to explore the phenomenon of language recovery in the naturalistic settings of language use. So, the data were gathered from everyday conversations, discussions, experiences and language practice activities done with the research participant. Thus, the data gathering process involved no artificiality. The researcher was a part of the same culture to which the research participant belonged and this “membership knowledge” helped the researcher analyze the data afterwards (a phrase used in Have, 2004). All language use in the data collection process is situated as it is meaningful in a particular situation. The analyses of the data have been made keeping in mind the emic perspective because it involves language use by one particular family which has its own linguistic culture (Richards & Seedhouse’s ideas, 2007).

The study aimed at an in-depth understanding of the phenomenon of language recovery after aphasia of one particular individual. So, the analyses provide “knowledge of the particular” (Schwandt’s term, 1997). Generalization claims were neither the objective nor have been made after the completion of the study.

**Research Problem**

The language recovery process of aphasics, especially those who are more than 60, has historically been looked upon as a negative process by neurologists, developmental psychologists and language learning theorists. All of them talk about an “ideal” age before which all types of human development whether physical, mental or linguistic can take place in the best possible way. This age is termed as the critical period after crossing this period, all types of physical and mental development becomes difficult, if not impossible. Theorists from different disciplines suggest a different critical period for human development. The neurologists suggest that this
process can stretch till age 20 as some parts of the brain (especially those related with memory) continue to undergo development and change till this age (Kalat, 2004). Thus, language acquisition and language learning both can best be done till this age. Thus, this is the critical period suggested by neurologists up to which language development process can be stretched.

The neurologists also discuss the phenomenon of aphasia as a result of brain damage and the process of language recovery after aphasia. They say that the human brain can repair itself in case of damage yet this process is strictly limited and can occur only in the early part of life (Kalat, 2004). The reason for it is that at young age, the functions that different parts of the brain have to perform in future are not fixed and if one part of the brain gets damaged, some other part starts functioning as a proxy. This flexibility in the brain cells in childhood is termed as “plasticity”. This flexibility starts withering with time. So, there is a critical period for recovering the damaged brain cells and the functions related to these cells. Thus, in case of brain damage after crossing the critical period, the chances of recovering the lost cells and linguistic abilities are rare. After 60, this process becomes extremely difficult because the brain functions become well-defined and fixed (Kalat, 2004). Therefore, the chances of recovering the lost linguistic abilities after aphasia are bleak for those who are above 60.

Developmental psychologists such as Wundt talk about a critical period in terms of language development to end at age seven. To Wundt, every normal human child undergoes change before seven years of age (Wundt, n.d.). Afterwards, this process is complete and thus, developmental processes like language learning become extremely difficult. First language acquisition theorist Eric Lenneberg (1967) mentions a critical period for first language acquisition to lie between five and puberty. The second language learning theorist Stephen Krashen (1980) talks about the possibility of the critical period to be over much before puberty and second language learning theorists Chiswick and Miller (2007) suggest that 60 is the critical age after which, second language learning becomes extremely difficult.

The literature reviewed so far in the previous chapter reveals as if once lost, language abilities can never be fully recovered. After crossing the critical period no one, especially an aphasic, can expect to fully recover his/her language abilities.
There are chances of recovery but within strict limits. The recovery process cannot excel beyond these limits. Though theorists from different disciplines suggest a different age as critical period for language development yet all of them agree that language development as well as language recovery cannot take place after 60.

The researcher does not agree with the idea of restricting the language recovery process. She believes that every aphasic is unique and a close attachment between an aphasic and his/her intimate caregiver can help stretch and excel the process and thus the chances of recovery can be improved. The caregiver of the aphasic can use his/her emotional intelligence and competent emotional expressivity (Shaffer & Kipp, 2007) during the speaking practices by involving the aphasic to talk on the topics with which s/he is emotionally attached. The same emotional intelligence can be used for not including the ideas which are disturbing for the aphasic. Through this study, the researcher intended to explore these ideas further. She wanted to find out whether initiation of positive, joyous emotions results in speedy language retrieval or not. She also wanted to explore whether emotional security of an aphasic causes fluency, more language production and self-reliance or not.

**Context of the Study**

For this particular study, the researcher studied the language recovery process of her mother who had a stroke in January 2005. The researcher was sitting next to her when it occurred. Luckily, the family was able to take her to the doctor immediately. After some medical tests and brain scan, the doctor declared that she had a stroke in the left hemisphere and as a result, had acquired aphasia. He tested her linguistic responses and said that there was a possibility for the research participant to lose all her language abilities. After two or three days of the stroke, the doctor tested the research participant again on her linguistic skills. After the tests, he disclosed that out of four linguistic skills of the research participant, only one was intact and it was listening. He said that the research participant had completely lost reading and writing and her speaking skill was severely impaired. The doctor encouraged the research participant and her family members that she could speak normally if she kept on practicing speaking. He also suggested some speaking exercises for the research participant which proved to be effective. The doctor’s positive attitude initiated the
researcher to undertake this study and to work with the research participant in an organized manner.

**Research Participant**

It is an individual case study. In the past, individual case studies have been done. One such example is that of Susan Curtiss’s who conducted an individual case study at doctoral level on Genie (as discussed in a report by the Georgetown University, n. d.). Genie was a thirteen years old girl who was discovered as a “linguistically deprived” child. She could not use or understand language as a normal thirteen years old child would do. Through her research, Curtiss tried to explore the concept of critical period in the development of first language. Her study supported the idea of a critical period in terms of first language acquisition. This study became famous in the 1970s (Duff, 2007).

The research participant in this study had also crossed the so-called critical period when the language recovery process started after aphasia and the researcher wanted to explore how far this phenomenon restricted the language recovery process of the research participant. Though the outcome of Curtiss’s research supported the idea of a critical period in terms of first language acquisition, the researcher wanted to explore this phenomenon in case of language recovery after aphasia.

The brain study of Einstein in 1980s is a famous study which became a milestone in the history of neuroscience and eventually laid foundations for research on discovering physical evidence of human intellect (Duff, 2007). Another important individual case study in the 1970s was conducted by Michel Halliday. It was based on observing and noting down the communication strategies of his own son Nigel in the first three years of his life. The detailed notes that were preserved in the form of diaries eventually resulted in developing the concept of **systemic functional linguistics** (Duff, 2007). Through his analyses, Halliday explained the process of language development in a child that heavily depended upon the child’s social interactions with others who were better equipped with linguistic skills. Through his work, Halliday described how initially, the child’s communication involved bodily gestures, demonstrations as well as displays and thus could better be described as a semiotic system rather than a linguistic system (as discussed in Duff, 2007).
The researcher had noticed that the research participant relied heavily on non-linguistic communication methods during the initial phases of recovery. Eventually, her communication underwent changes and became an amalgam of non-linguistic and linguistic signs. Halliday’s idea of communication as a semiotic system helped the researcher understand the research participant’s language recovery process.

3.1 Demographic Details of the Research Participant. The research participant in this study had been suffering from aphasia since 2005. She was almost 60 years of age at the time of stroke. She was right-handed, had done matriculation and was a multilingual. At school, she had learnt English and she was used to speaking Urdu for communication and because of living in a village, she was familiar with the Potohari language as well. She got married in a Punjabi speaking family and started speaking Punjabi. Before the stroke, she could fluently speak Punjabi and Urdu and could read, write and understand English. After the stroke, she initially underwent a mute stage, lasting for almost 12 hours. The very next day of the stroke, she started speaking which was very stressful for her. It was very difficult for her to speak full sentences. Occasionally, she would speak using sentences which were very brief yet from her very first communications after the onset of aphasia, she started using only the Urdu language for communication.

Initially, her communication consisted of only sounds or single words which were at times, unintelligible. Her inability to communicate would cause severe aggression and she would become furious very quickly. This resulted in using abusive language. Surprisingly, she had retained all the abusive expressions with exactness. Although the family members around her kept on using Punjabi, her language remained Urdu. She could comprehend her interlocutors’ messages in Punjabi but sometimes, the messages had to be repeated several times. She depended mostly on visuals and body language. Her own way of communication also relied heavily on pointing at things, actual demonstrations and facial expressions. Language was only a part of her communication, not the whole. She has continued to communicate only in the Urdu language. Initially, she could understand and talk about only the present, concrete phenomena. Abstract ideas were very difficult for her to understand. The situation persisted for almost three years.
The research participant was a gregarious person before stroke. However, after the language problem started, she became reluctant to meet even the family members. She was extremely reluctant to have encounters with strangers. The involvement of a nurse would have caused more emotional hazards and in such a risky situation, the recovery of language would have been impossible. Thus, the family decided not to involve many strange faces. This could have been detrimental as the research participant could also have lost trust in her near and dear ones. She was extremely conscious of her inability to speak like normal people. She would remain silent and would not speak for hours when somebody came to see her. She would expect her daughter, that is, the researcher to communicate with others on her behalf. She would expect that the researcher automatically knew what she wanted to say. Usually, whatever she wanted to say was successfully communicated by the researcher. It developed trust and reliance which eventually turned into a close attachment.

Despite consciousness about her faulty language performance and reluctance for communication, the research participant was always active while communicating with her doctor. She would talk to him in a very slow manner. Her communication was not fluent rather it was a mixture of gestures, pointing at things and demonstrations and still she enjoyed talking to him. Her conversation was mainly about the present or immediate past. The doctor would ask her how she felt or what she ate that day and she would try to answer all the questions. Eventually, she also started talking to him about what happened in the family since her last visit and thus started assimilating past with the present.

To improve her memory, the family decided to take her to her parents’ old home, where she used to live in her childhood. She was also taken to the places where she had experienced many memorable events such as her relatives’ houses, her old hospital and the markets where she used to shop before the stroke. Initially, she could not recall anything. The activity was repeated many times. Every time one of the family members would tell her about the place and the memories attached to it. Her memory improved with the passage of time and she started recognizing different places. The activity brought a positive change. Now she would wait for the drive and when she was there, she would talk about the place, the people over there and the things around. It was not a fluent talk and only some of the words in her whole communication were understandable.
She had always been fond of excursions, flowers, young children, birds and animals before the stroke. The family made it a routine to daily take her either to the zoo or a park. She enjoyed the activity. Eventually, she could recognize almost all the places but still she was unable to verbalize her thoughts. She would try hard to speak normally but only a few words were intelligible. This meant that her memory was intact. Though initially after the stroke it was weak, it started improving. She faced many problems in saying certain words such as the name of an animal in a zoo or a flower but her language comprehension as well as production eventually started improving. Her favorite activity had a positive effect on her language performance and she could register most of the messages in single attempt. She could also understand abstract ideas which were physically not present in front of her. Her language production also started improving and becoming richer and more complicated.

The research participant’s reading and writing abilities were completely lost after the stroke. Though she started recognizing some written letters and words after about four years of the stroke, she still could not write and was left with only two skills, that is, listening and speaking.

The researcher had noticed that after experiencing a stage of total speechlessness, the research participant started recovering her speaking ability. Though not completely recovered, it was gradually improving. This realization initiated the idea that if one skill could be recovered, there was a possibility of recovering other skills as well.

The researcher had noticed many linguistic and psychological aspects of the research participant’s language recovery process. She realized that some of these features contradicted with the existing theories, for example, when the research participant was happy and felt secure, her linguistic performance improved. This initiated the idea that the feelings of an aphasic affect the language recovery process and positive feelings expedite the recovery process even if the aphasic has crossed the critical period. This realization contradicted with the theories proposed by neurologists and by language learning theorists who limit this process by strictly suggesting a critical period for language recovery. Through this study, the researcher
intended to explore how far this process could be stretched to its maximum by arousing positive feelings in the research participant.

During the study, the researcher acted as the research participant’s *principal attachment figure*. She scaffolded the speaking and reading exercises in non-threatening, enjoyable ways. Being the research participant’s daughter, she knew the topics with which the research participant was emotionally attached and which could make her happy. She also knew the topics that could annoy the research participant. During the conversations and speaking practice exercises, the researcher initiated topics with which the research participant was emotionally attached and she avoided the topics that could annoy or disturb the research participant. In case, someone else unknowingly started talking about an idea that could irritate the research participant, the researcher intervened and changed the topic. This understanding as the *more knowledgeable other* helped the researcher in providing emotional security to the research participant and in arousing positive feelings in her.

### 3.2 Role of the Researcher in the Study

While discussing about the linguistic and intellectual development of the child, Vygotsky talks about a more knowledgeable other. This more knowledgeable other is a person who is better equipped with linguistic and cultural knowledge and thus, can serve as a guide to a developing child. S/he provides linguistic and cultural assistance to the child in non-threatening ways and insures that the developmental process continues. Thus, s/he sequences/scaffolds the learning material by gradually introducing new aspects and helps in expanding the existing *zone of proximal development*. This more knowledgeable other can be the child’s mother, father or a teacher. In this study the role of a more knowledgeable other has been played by the researcher who was also the research participant’s caregiver and her principal attachment figure.

The researcher motivated the research participant by initiating the topics of speaking with which she was attached. She also took the research participant to her favorite places and helped her see actual phenomena and verbalize them. She motivated the research participant to speak by showing her the television programs that she enjoyed watching. She created an environment in which the research participant could feel secure and experiment with her language abilities. The researcher took care to keep the situation enjoyable for the research participant and if
she realized that the research participant was becoming upset, she diverted her attention to normalize the situation. Her language background enabled her to scaffold the language practice exercises. The audio recordings reveal that she was the one who initiated the speaking process in conversations and in reading activities. Performing as her close associate, the researcher provided linguistic help to the research participant right at the time when she was in need. The language practice exercises were initially guided and later they became freer but they were never controlled. **Scaffolding** was done by planning and sequencing the language practice activities as per need of the research participant. This included speaking practice in the form of small exchanges and moving on to producing prolonged talk (on topics with which she was familiar).

An empathic attitude guided the researcher not to press the research participant for any exercise for which she was not ready. The attachment between the research participant and the researcher was not static and underwent change. Physical proximity of her attachment figure provided emotional security to the research participant and motivated her to experiment with her existing language abilities.

The audio recordings of the conversations (on the CD) display the language produced by the research participant in different situations. They exhibit how she performed while communicating about ideas with which she was attached and also those with which she was not attached. The analyses disclose the degree of correctness or otherwise of her communication.

During this study, the researcher had a continuous interaction with the research participant and it enabled the research participant have practice on regular basis. The researcher did not manipulate the language recovery process at any point in that s/he did not impose language practice exercises rather s/he tailored the practice activities in collaboration with the research participant by preferring the ideas with which the research participant was attached. The researcher’s involvement in this decision making was more direct and that of the research participant was indirect yet it was a collaborative process. The researcher decided about what to do next and the research participant shared this decision through her willingness or unwillingness to participate. The research participant was an active participant in the language recovery process.
The researcher maintained a “dual citizenship” throughout the study in order to avoid potential bias (Schwandt’s phrase, 1997), that is, along with being a daughter and a caregiver, she remained objective as a researcher while analyzing and interpreting the research participant’s linguistic performance.

### 3.3 Level of Language of the Research Participant before the Study

It has been mentioned in Chapter 2 that the research participant was already on her way towards linguistic recovery before this study started yet it was not a smooth journey. After the initial mute stage of total speech loss when the research participant started recovering, some of the linguistic aspects were found to be fully intact and they not only remained intact but had been retained at all levels (phonemic, lexical, syntactic and semantic) with full accuracy such as the names of her immediate family members and some religious expressions.

During the process of her linguistic recovery when the research participant was under extreme anxiety and depression, in her fits she would use single word utterances and almost all of them were abusive expressions. She could use them without any hesitation or reluctance. She can still do so without any problem. This aspect of her language faculty has survived throughout and even stroke could not damage it. This study does not include the initial stages of her linguistic recovery, so those data are not a part of this study.

The researcher knew that the research participant had faced complicated linguistic problems. As some aspects of her language faculty remained undamaged after the stroke, some were slightly damaged and some aspects were completely lost. Similarly, the pace and procedure of recovering different aspects was different with different linguistic expressions. The research participant was on her way towards recovery in terms of speaking and to some extent, reading. Her ability to recognize some letters and words could help integrate her linguistic abilities and could further improve her speaking performance, that is why; the exercises throughout the study converge towards one objective: to help the research participant improve her speaking faculty because language development of an aphasic is, if not solely, mainly, based on the development of vocal abilities (Wooffitt, 2005).

Being a student and teacher of linguistics, the researcher had been noticing the intricacies of the process, the communicative difficulties and idiosyncratic techniques
of the research participant to deal with them. When this study began, she was using a mixture of non-linguistic and linguistic ways of communication. The non-linguistic communication included facial expressions, bodily gestures and demonstration of actual objects whereas the linguistic communication included use of single words, phrases and short sentences. Occasionally, her linguistic performance used to be correct and sometimes she could even read one word expressions on the television screen or on sign boards on roads (refer to Discussion I with the Doctor on the CD) but she suffered from regression. There were two main problems in her speech: It was inconsistent and the grammatical structures were flawed at all linguistic levels. At the phonemic level, many sounds were missing in her speech as she could not say them and at the lexical level, many words were missing. Her linguistic communication scarcely included sentences and usually they were grammatically ill-formed. Her speech also suffered from fluency problems as she used to speak very slowly and in a very low tone, sometimes taking long pauses between words.

The researcher had noticed that the research participant was aware of her communicative inabilities. Initially, she started depending more on the non-linguistic ways of communication yet she was aware of the fact that people around her communicated mainly through language. She did not have much control over language and this made her irritable yet she had devised certain techniques for dealing with her linguistic problems. The researcher wanted to explore them in a systematic way through this study. She had also noticed that the research participant was emotional about certain topics and whenever she talked about them, her linguistic performance improved, for example, she could pronounce the names of her family in a better way. This initiated the idea that attachment with an idea could trigger more language and a continuous practice on regular basis could resolve the problem for good (refer to Discussion I with the Doctor on the CD).

The researcher decided to first search for a complete list of topics with which the research participant was attached and secondly, how the speaking exercises could be planned and scaffolded. The research participant’s physician, who himself had lost and recovered language after losing it, could guide in a better way (refer to Discussion I with the Doctor on the CD). He had been guiding about his patient’s speech regulation and thus, the researcher decided to request him to formally participate in this study.
In order to expand the research participant’s linguistic zone of proximal development, the researcher decided to start with her intact communicative abilities and started paying special attention towards understanding the physical gestures and demonstrations that she usually used for communication. This aided in cultivating a closer emotional bond with her. Later, the researcher realized that she could verbalize the research participant’s thoughts to others. This resulted in strengthening the bond of trust between the two and in making the research participant feel secure. The attachment between the two helped the researcher devise language practice exercises for the research participant in a way that would not put her in stress.

It was not possible to work on many aspects at the same time as it could put the research participant under stress. So, the researcher and the doctor decided to work on only two or three features at one time. These features could be at any linguistic level depending upon the research participant’s existing problems and were the ones where the research participant’s linguistic performance was found to be most problematic. These features were noticed either by the researcher or by the doctor. The strategy to work during each phase of the study was devised after a discussion between the researcher and the doctor. However, the topics for speaking and practice exercises in each phase were selected solely by the researcher.

3.4 Linguistic Features Focused during the Study. The purpose of this language study was to find out how the language recovery process of the research participant proceeded over one year. To do this, the researcher focused on the following linguistic features of the research participant:

- Vocabulary and grammar that the research participant used.
- Her fluency.
- The amount of language she contributed in each conversation.
- Her readiness and willingness to speak.
- Her personal techniques to minimize efforts for speaking.
- Her data encoding techniques.

“Normal” communication includes a control over language use and this means having a good existing vocabulary, an understanding of the grammatical rules of that language and fluency. The above mentioned features were focused during the study because they could reveal the research participant’s control over language. This could
not only reveal the research participant’s ability to use language effectively but also her inability to do so.

For studying these features, the researcher focused on the length and number of sentences produced by the research participant on different topics. This could not only reveal her vocabulary about certain ideas but also her control over grammatical rules. The researcher also studied the pattern, time and frequency of pauses as well as response time taken by the research participant to find out about her fluency. The amount of language produced by the research participant on different topics was studied through the number of sentences contributed by her in the conversations. This was done to explore whether the topics with which she was attached aided her in speaking or not.

The researcher has tried to find out what happened when the research participant felt short of linguistic resources and what techniques she applied to come up with those challenges. The researcher has tried to explore those techniques, the frequency with which each technique was used and their effectiveness in communication. The researcher has also explored whether the research participant continued with one particular technique or changed it over time. For convenience and clarity, the researcher has divided the rest of the chapter into three sections: The first section deals with the methods of data collection and the rationale for employing a particular method. The second section is about the details of each phase of the study and objectives of each phase. The third section includes details about ethical issues of representation, legitimation and voice and the methods of data analysis.

**Section I**

**Methods of Data Collection**

The data for this study were collected using the following methods:

3.5 Conversation Analysis. For data collection, the research participant’s conversations were audio taped. The researcher intended to explore the language recovery process taking place in the naturalistic settings. She did it by recording the research participant’s conversations in actual life when the research participant was engaged in talking to the researcher, to her other family members or her doctor. The
topics of these conversations were mainly selected by the researcher as she knew about the topics with which the research participant was attached. In this way, she acted as a guide. However, the process was not monopolized. The research participant collaborated in this process in the form of her willingness to participate. In case she was unwilling to speak, the researcher did not force her to do so. These audio tapes were later transcribed and analyzed following the tenets of conversation analysis.

For data transcription, Gail Jefferson’s (1983) transcription conventions and symbols have been used (see Appendix C). The transcriptions have been done in Roman. The research participant’s main language of communication was Urdu so, the Urdu sounds were converted into Roman symbols (see Appendix D). Some modifications and additions in these transcription symbols have been made to accommodate some Urdu sounds which could not be transcribed using only the conventional symbols. Punjabi and Potohari languages share the same set of sounds with Urdu thus, the same symbols have been used for transcribing the Punjabi and Potohari expressions as well. English translations of the recorded conversations have been provided in parentheses along with the transcriptions.

Each recording was transcribed on a separate sheet yet only the selected excerpts of the recordings which were found to be relevant to the study have been included in the data presentation section. The audio recordings of full versions of these excerpts have been provided on the CD along with the write-up.

Conversation analysis gave the researcher a chance to analyze the research participant’s naturally occurring talk which she carried out in real life. It also helped the researcher to see what the research participant actually did with language when she used it in an ordinary, natural way. It also helped the researcher systematically analyze language use in a particular context. Audio taping enabled the researcher to scrutinize language features such as intonation pattern, elongation of sounds, and pauses etc.

Hutchby (2002) suggests that audio recordings enable the researcher to get access to the actual data (p. 13). In this study, the researcher used the audio recorded material to study the linguistic as well as paralinguistic features of the research participant’s speech. Thus in case of doubt, the researcher could play the material as
many times as she wanted. The recordings were done in the natural settings so the analyses are *authentic* and no artificial language use was involved. Much of the analyses depend upon the shared knowledge between the researcher and the research participant. The researcher kept in mind the in-group activities during the conversations and the “insider’s perspective” was considered while taking notes of the language use (Schwandt’s phrase, 1997).

### 3.6 Participant Observations

Understanding and meaning making both take place in social interaction and not in isolation (Lock & Strong, 2010). Keeping this point in mind, the data for this study were gathered when the research participant was interacting with someone around her. This was done by keeping a written record of those interactions. This was done in the form of *fieldnotes*. These notes were taken on daily basis and later they were analyzed following the tenets of participant observations. Participant observations as a method of data collection allowed the researcher situate herself in the field with the research participant, interact with her and gather the data. For in-depth understanding of the phenomenon, prolonged interaction was required and to achieve this, single observations were not sufficient. Thus, multiple observations were made.

The researcher was also the *principal attachment figure* of the research participant as well as the *more knowledgeable other* in the study. This demanded her to actively participate in the data generation process. Thus, mostly it was the researcher who initiated conversations with the research participant yet this process was *guided* and not controlled. The observations were both *unstructured* as well as *semi-structured* (Grix, 2004). The researcher took care to maintain the natural flow of the conversations with the research participant. Initially, mainly unstructured observations were employed to avoid testing preconceived ideas and to generate categories as the data would guide. Later, when the categories were decided, semi-structured observations were used according to what the researcher intended to find.

McKay (2008) stresses the importance of sequence in recording data as it helps in recognizing patterns (p. 67). The researcher recorded her participant observations in the form of a diary and this helped her maintain the data in chronological order. It also helped the researcher notice any changes taking place in the phenomenon under study. The process of diary writing involved a lot of
subjectivity and introspection but a reflexive attitude of reviewing the previous entries helped the researcher avoid bias and in making unprejudiced interpretations.

Note taking during conversations was avoided as it might have disturbed the flow of conversations yet delay in noting down the observations was avoided as some important points might have been forgotten. Maintaining a diary enabled the researcher to have empirical evidence on the basis of which she afterwards made interpretations. These interpretations involved subjectivity yet it was not the same as bias. McKay (2008) warns against the possibility of bias during interpretations in qualitative research (p. 68). He says that potential bias in research can be avoided by putting a check on the analysis process and by adopting a reflexive attitude. The researcher applied this check by maintaining diary notes as they could be consulted at any time.

A tentative strategy was devised after first month’s data collection and recurring patterns in the linguistic performance of the participant guided the researcher about which linguistic as well as paralinguistic features to focus on.

Language development after aphasia is a slow, time taking phenomenon. Participant observations enabled the researcher have prolonged interaction in the daily activities of the research participant. This sometimes involved silent, direct observations. The research participant was not a fluent speaker and at times, needed help in the form of words, phrases or even sentences to continue with her talk. An empathic relationship with her helped the researcher understand where and how she should prompt and interrupt for providing the linguistic help that the research participant needed.

Participant observations appear at the bottom of each diary entry under the heading “Analysis”. The researcher wanted to understand the language use of the research participant in actual life and for this, it was important to keep in mind the context of a particular language use during analysis. According to Cottles (2004), language use is always context bound and mundane details about a specific language use give clues about the context of a specific language use (p. xiii). The contextual clues in the audio recordings include details about the mood of the research participant, her interlocutors, location of language use and time of the day. The researcher has kept a record of the contextual clues and it appears in the form of
additional remarks under each diary entry. Dates on which the notes were made have been mentioned on the top of each observation. At the bottom of each note, the researcher has written her comments.

Participant observations were later used for data encoding. Eco (1998) suggests that in the process of data encoding the researcher should be open in order to avoid preconceived ideas (Preface). Thus, initial coding in this study was open and was liable to change. This is why, tentative categories were generated in the beginning which underwent change as the situation guided. The researcher was open to unexpected observations and findings. Alston & Bowles (2003) point out that at later stages of data collection when considerable amount of data have been gathered, the researcher can identify the recurring patterns in data which can guide in forming categories. Thus, at the later stages of data collection process, the researcher becomes selective, as s/he knows on which aspects of data s/he has to focus and which aspects can be ignored. Thus, selective coding takes place (a phrase by Alston & Bowles, 2003).

During first month of data collection, the researcher made tentative categories yet from the second month of the data collection process, the researcher became more focused and used selective coding for data collection.

Diary entries as a method of data collection demand a careful, rigorous analysis of the language specimens (McKay, 2008) and this was done by analyzing the entries at the linguistic and paralinguistic levels. Schwandt (1997) says that a rigorous linguistic analysis demands systematic and organized methods of data collection (p. 4). This was done through regular note taking and analysis on continual basis. To organize the study in a systematic way, the total time of the study has been divided into three phases.

Each phase of the study appears under the heading “Session”. Thus, one year study has been divided into three sessions. Each session covers a period of four months. The study began in June 2011 so, the first session includes language recovery process from June 2011 to September 2011. The second session includes the recovery process from October 2011 to January 2012 and the final session of the study includes the time period from February 2012 to May 2012. The researcher kept a record of the techniques adopted by the research participant during communication and the process
of recovering a particular linguistic feature. The stages involved during the recovery process throughout have been highlighted in the transcriptions. The analyses of the transcribed conversations were made on the same sheet at the end of each transcription and the analyses of the diary entries were made after each entry. The language recovery process was noted down in the form of extra notes or remarks by the researcher and appears in the research diary.

3.7 Discussions with the Doctor. The doctor of the research participant knew her language condition since the stroke and the beginning of her language problems. He had always been concerned about her physical betterment and had been giving valuable suggestions for improving her language. His concern for the research participant was an important factor in the process of her physical and linguistic recovery. The researcher did not know about how to communicate with the research participant when aphasia started. It was the doctor of the research participant who guided the researcher about it and when the research participant started recovering, he suggested how this process could be excelled. Thus, when this study began, he had the same level of information as the researcher had about the linguistic condition of the research participant. This is why the researcher’s discussions with the doctor have been used as a data collection method.

Before starting the proceedings, the researcher discussed with the doctor about the study and its objectives. She discussed with him about the linguistic condition of the research participant in detail and asked him how it could be improved more in an organized and planned way. The researcher informed the doctor about the duration of the study and discussed with him how this time could be used in the best possible way. The doctor listened to the researcher and then gave some suggestions which are as under:

- One year study period should be divided into manageable phases.
- For each phase, some linguistic targets should be set for the research participant.
- After completion of one phase, the doctor and the researcher need to discuss about whether the targets for that phase were successfully achieved or not.
- If the research participant is unable to achieve the set targets of a particular phase, what else can be done.
The researcher suggested that each phase of study should be of four months. Though the overall strategy for the whole study was decided by both the researcher and the doctor, mainly it was the researcher who devised the language practice exercises. It was her discretion to decide whether a particular strategy was to be continued or even carried on or not. She was the one in the actual field with the research participant and could observe the responses of the research participant.

The researcher had four discussions with the doctor and all of them were face-to-face. They took place at the doctor’s clinic. These discussions were also audio taped and transcribed for analysis. The doctor’s informed consent about his participation in the proceedings of the study is attached with the study (see Appendix B).

The study aimed at maximizing the research participant’s existing zone of proximal development yet the major purpose behind the study was the betterment of the research participant so at any stage of the study, if the researcher realized that some strategy was stressful for the research participant or she resisted in some way, the researcher changed it.

3.8 Role of the Doctor in the Study. The doctor was requested to notice language use of the research participant in every visit to his clinic. He was also requested to notice changes in her performance as compared with her previous visit. His involvement in the study was due to these reasons:

- To benefit from the doctor’s own firsthand experience of language recovery.
- To make sure that the researcher did not employ any language practice exercise for which the research participant was physically not ready.
- To make sure that whatever strategy was being applied helped in improving the research participant’s language (by discussing over her language performance as a result of implementing a specific strategy).
- To avoid potential bias in the interpretations.
- To triangulate the data gathering and data analysis processes.
3.9 Rationale behind the Research Methods. The study undertaken is a form of *ethnography* as it allowed the researcher to collect data on continuing basis over a long period of one year and have prolonged interaction with the research participant in the field. The rationale behind using each data collection method is discussed below:

3.10 Conversation Analysis. Conversation analysis done in this study was based on the audio recordings of the research participant’s conversations in naturalistic settings. Recording of these conversations enabled the researcher collect the data on continuing basis. The recording device was kept ready all the time during the study when the research participant was engaged in talking. Thus, if the researcher found it linguistically rich in content, she played the device and recorded the conversation. To explore the strategies adopted by the research participant during her language recovery and to understand the stages involved in this process, the researcher had to consider linguistic features of the research participant’s speech along with the paralinguistic features. Audio recordings helped the researcher in recognizing both types of features in the research participant’s communication. The most recurring features were eventually used for generating categories. These features included pauses, elongation of sounds, tonal patterns and response time.

    Gail Gefferson’s Transcription System not only helps in representing the linguistic features of conversation but it also accommodates the paralinguistic features of speech. Due to this reason, her transcription conventions have been employed in transcribing the audio recordings in this study. Audio recordings were helpful in that they could be played as many times as the researcher wanted. Thus, if the researcher missed some part of the research participant’s conversation or a particular paralinguistic feature, she could play the recording and listen to it.

3.11 Participant Observations. Participant observations were maintained in the form of fieldnotes and were recorded in a field journal or diary. Thus, the researcher was able to gather data on regular basis in an organized way. Due to maintaining a diary, the researcher was able to compare the linguistic performance of the research participant at different stages of the study. These fieldnotes were rich in terms of linguistic features yet they could not be used for recognizing the paralinguistic features of the research participant’s conversations. They have been included only in
terms of generating linguistic categories and for linguistic analysis. The fieldnotes helped the researcher in organizing the data gathering process. The researcher could consult these notes at any time in the study. So she could easily compare data at the initial stages of collection with the later stages of collection. This back and forth movement helped in achieving reflexivity.

3.12 Discussions with the Doctor. Discussions with the doctor helped in triangulating the data collection and data analysis processes. The researcher is not a physician. Thus, during the study, she needed the help of a professional who could guide her about the physical condition of the research participant at each stage of the study and who could also suggest some language improvement tips. Discussions with the doctor of the research participant insured the research participant’s physical as well as linguistic betterment. From these discussions, the researcher also got new ideas about how the research participant could be helped in a planned way.

Section II

Sessions of the Study and Objectives of Each Session

The study covers one year of linguistic recovery of the research participant. For the sake of convenience and clarity, this time period was divided into three sessions. Each session spreads over four months. The researcher had discussions with the doctor before starting the proceedings of each session in which the most recurring linguistic problems of the research participant at the time of discussion were discussed. The strategy to help her in overcoming these problems in the coming four months was also devised. Each succeeding discussion provided a chance to formulate a strategy for the coming session of the study and to reflect on the outcome of the previous session. This also helped in achieving reflexivity. There were four discussions in all.

The first discussion took place before the start of the study (in May 2011) in order to discuss the existing linguistic condition of the research participant and to devise the strategy to improve it. The second discussion took place at the end of the first session to review the effect of the strategy on the language recovery process and to revise the strategy for the second session. The third discussion (see Appendix E) took place at the end of the second session and the last discussion took place at the
end of the third session after the completion of the study in which the overall linguistic condition of the research participant from first session till the last session was discussed. The details of each discussion and the objectives of each session are described below:

**Note:** The major objective throughout this study was to help the research participant improve her speaking abilities. She was not a fluent speaker at the beginning of this study and her other linguistic skills (reading and writing) were severely impaired. This is why the doctor and the researcher decided to include speaking skill as a primary focus and reading practice only as a secondary objective and as an aid in speaking. All audio taped conversations were initiated by the researcher to engage the research participant in speaking and to maximize her practice.

**3.13 Discussion I.** The first discussion took place in May 2011 before starting the first session. The doctor and the researcher discussed about the existing condition of the research participant. It was also discussed how this situation could be improved in a planned way. This discussion took place after the research participant’s regular check-up. Though the research participant’s physical health as well as her linguistic condition both were discussed yet that portion of the discussion which focuses on only the linguistic condition of the research participant has been included in this study.

The doctor and the researcher discussed about the most prominent and recurring linguistic problems of the research participant and also about how the research participant could be helped in the coming four months for overcoming those problems. They both agreed that the research participant had two major problems:

- Fluency in speech.
- Lack of confidence in her linguistic abilities.

**3.14 Session 1 (June 2011- September 2011).** The researcher and the doctor both had noticed that though the research participant had improved in speaking yet she still lacked in fluency and confidence. These aspects of her linguistic performance could be improved by giving her practice in reading. Thus, the skills focused during the first session of the study were speaking and reading. To help the research participant improve her fluency and confidence, the researcher and the doctor decided to focus on
only three aspects during the coming four months. These three aspects were taken as the objectives for the first session of the study. They were:

- To involve the research participant in loud reading.
- To involve her in reciting the Holy Quran.
- To motivate her for informal reading.

Practice in these three areas could help the research participant improve both fluency and confidence. Though the researcher and the doctor both had discussed about the linguistic problems of the research participant and also about how the research participant could be helped yet the material for loud reading practice as well as the informal reading activities were decided solely by the researcher as she was the more knowledgeable other and knew the ideas with which the research participant was attached.

3.15 Plan to Achieve the Objectives of Session 1. The researcher knew that the research participant loved children’s story books and school books so for loud reading exercises, the researcher decided to use these books. For the recitation of the Holy Quran, she decided to start with the first surah of the holy book. For informal reading, the researcher decided to show the research participant her favorite TV programs (for example cooking shows) and help her read the ingredients’ names, recipes etc. on the recipe cards displayed on the TV screen. The researcher also planned to frequently take the research participant to the markets, mosques and motivate her to read the names of shops, services available at those shops and the holy verses outside mosques. The resultant linguistic performance of the research participant was audio taped as well as noted down in the diary. So, when the research participant was involved in reading practice indoors such as from a book or on the TV screen, it was audio taped. However, her linguistic performance during informal reading practice such as in the markets and during daily excursions was noted down in the diary.

The researcher scrutinized the research participant’s performance at all linguistic levels, that is, the phonemic, lexical and syntactic levels as well as at the paralinguistic levels. Her strategies for overcoming communication problems were also noted down. For studying her fluency, each audio recording was listened and features such as tonal patterns, number and length of pauses, elongation of sounds and words were noted down to check the research participant’s fluency. These notes
appear in the transcription sheets under the heading “Analysis”. For discovering the confidence of the research participant in speaking, the researcher noted down features such as response time in dialogs, voice level (high or low), number of sentences contributed in each conversation etc. Multiple listenings were given to each transcription. Afterwards, each transcript and diary entry was analyzed individually and by the end of the first session, an overall analysis was made to note down the patterns in the performance of the research participant. The researcher also noticed whether the same patterns were found in the transcripts and the diary entries or not. It was also noted down whether the application of the above mentioned exercises caused a change in the performance or not.

After completion of the first session of the study, the researcher made notes before having the second discussion with the doctor. In these notes, she had noted down the responses of the research participant to a particular linguistic exercise and also its effect on her linguistic performance. The researcher also wrote about what could be done in the coming session of the study to help the research participant. She noted down her findings before the second discussion with the doctor.

3.16 Discussion II. The second discussion between the researcher and the doctor took place in the last week of September 2011 after the regular check up of the research participant. During the check up, the doctor tried to extract maximum amount of language from the research participant so that he could recognize the most serious problems. After the check-up, the researcher discussed with the doctor what she had noted down about the research participant’s responses towards the reading exercises and also about her linguistic performance during formal and informal reading exercises. The doctor discussed about what he had noticed in the research participant’s linguistic performance. After the discussion, the researcher and the doctor agreed that the most serious problems in the linguistic performance of the research participant at this time were:

- Pronunciation of some phonemes.
- Recognition of some letters (causing reading disability).

3.17 Session 2 (October 2011- January 2012). The researcher and the doctor planned to focus on the same skills that had been focused during the first session, that
is, speaking and reading but this time these skills had to be practiced in a different way. During the first session, both these skills had been practiced following the *top-down* approach and in the second session of the study, they were going to be practiced following the *bottom-up* approach. Thus, speaking practice was going to be done through phonemic practice and reading practice was going to be done through letter recognition. Speaking practice could help the research participant improve her pronunciation and reading practice could improve her ability for letter recognition. The strategy for the second session of the study was devised and it was again an amalgam of the researcher’s ideas and the doctor’s suggestions. The objectives for the second session of study were:

- To give the research participant practice of the phonemes in the Holy Quran.
- To give her practice in recognition of the letters of the English alphabet and recognition of single words.
- To involve her in reciting the Qurani qaedah.

### 3.18 Plan to Achieve the Objectives of Session 2.

For speaking practice, the researcher planned to work on three or four phonemes of the Holy Quran and for reading practice, she planned to include three or four letters of the English alphabet per day. The researcher used children’s school book for Class One for the practice of the English alphabet. Her plan was to daily practice both speaking and reading skills with the research participant, revise the previous day’s reading practice every day and then proceed. However, the researcher did not impose any practice exercises on the research participant. Thus, if the research participant was unwilling to do the practice, the researcher did not force her to do so. This is why, the duration of daily speaking and reading practice activities is not the same. This feature of practice activities is evident in the audio recordings as well as in the diary entries.

For recognition of words, the researcher planned to start with the words with which the research participant had been emotionally attached. The researcher planned to write the research participant’s family members’ names among unfamiliar names and ask her to recognize where a particular family member’s name was written. The practice exercises were audio taped. The researcher noted down the responses of the research participant to the linguistic exercises during the whole session.
The researcher gave multiple listenings to the audio recordings. She also scrutinized the diary entries before the next discussion with the doctor. She made notes about her observations about the linguistic performance of the research participant during the second session. She also noted down her ideas and suggestions for the third session of the study.

**3.19 Discussion III.** The researcher had the third discussion with the doctor after completion of the second session of the study. This discussion took place after the regular check-up of the research participant at the doctor’s clinic. The researcher discussed her observations with the doctor and the doctor told the researcher about what he had noticed in the research participant’s linguistic performance. In the end of the discussion, the researcher told the doctor about her suggestions for the next session of the study. The doctor told the researcher about his ideas. Finally, after mutual consensus, a strategy was devised about how the research participant could be linguistically helped in the next session.

**3.20 Session 3 (February 2012- May 2012).** The researcher had noticed that the research participant had problems in sequencing ideas whereas the doctor had noticed that the research participant had some problems with assimilating and integrating ideas in her speech. The situation could be improved by helping the research participant sharpen her memory. The only skill focused during the third session of the study was speaking. Thus, the third session comprised two objectives:

- To involve the research participant in speaking on single topic at length.
- To help the research participant improve her memory.

**3.21 Plan to Achieve the Objectives of Session 3.** The researcher decided to involve the research participant in prolonged talk on single topic of speaking by starting with the topics with which the research participant had always been emotionally close. Thus, the speaking practice exercises in the third session included talking about family members, some important family matters such as marriage ceremonies, religious anecdotes, recipes and certain dramas on the TV. Through these prolonged talks the researcher could achieve both objectives. That is, she could help the research participant sequence her ideas in a planned way and use her memory actively by integrating her thoughts and verbalizing them in a planned way.
The outcome of the strategies applied in each session and the responses of the research participant to different speaking and reading exercises throughout the study appear in the data presentation and data analysis sections of Chapter 4.

3.22 Final Discussion with the Doctor. The researcher had final discussion session with the doctor after completion of the third session of the study. Before the discussion, she had made notes about what she had found out about the linguistic performance of the research participant over this one year of study. These notes included details about the linguistic condition of the research participant at the beginning of the study and her linguistic condition at the completion of the study. She discussed these points with the doctor. The doctor also did the same by telling the researcher what he had noticed in the research participant’s linguistic behavior. This discussion has been provided in recorded form on the CD. The overall outcome of the strategies applied during this study appears in the data analysis section of Chapter 4.

The main objective of the study was to aid the research participant in improving her linguistic performance. Thus, the end of the study did not mean the end of the process. For further practice, the doctor suggested two main objectives:

- To involve the research participant in goal-oriented reading exercises.
- To involve her in singing.

This type of exercise would help the research participant further improve her fluency, confidence, voice control and tone management. The researcher also planned to achieve these objectives by involving the research participant in reading comprehension exercises. She would prepare some comprehension questions about the reading passages or stories. After reading would be done, she would ask those questions from the research participant. Initially, only one question would be asked, consequently two or even three could be asked depending on the willingness and performance of the research participant. The researcher intends to continue the process of giving linguistic practice to the research participant till she becomes an independent language user.
Section III

The Ethical Issues of Representation, Legitimation and Voice

The ethical issues in this study have been dealt with by taking informed consent of all those people who contributed in the study. The conversations of the research participant were not monologs. She had interlocutors including the researcher, her doctor and other family members. The research participant’s conversations were audio taped when she was talking with the researcher and some parts of the conversations were contributed by other family members. Similarly, some diary entries were made when the research participant was engaged in conversations with someone other than the researcher. All those people who participated in the study directly or indirectly were informed about the objectives and the consequences of the study before starting the proceedings.

When the study started in June 2011, the research participant was unable to read and write. For this reason, the researcher took oral consent from her. She told the research participant about the details of the study. The research participant agreed to participate in the proceedings. Her willingness was audio taped and later transcribed. In this oral consent taking procedure, the participant was clearly told about the format of the study, her participation, the schedule of recordings and the purpose of the study. The transcribed form of the consent is attached (see Appendix A) and the audio recording has also been provided on the CD.

The researcher got informed consent from the doctor in written form. He was first orally told about the nature and purpose of the study in detail and later was given a printed consent form. This consent form consisted of two parts. The first part included details of the study, the schedule for discussions and also the prospects of the study. This part was given to the doctor. The second part consisted of the consent statement (see Appendix B). The doctor in this study is a neuro physician. He was trained in the UK and is a qualified practitioner with his own clinic in his area of specialization but his participation in the study was on voluntary basis. He was informed about each point of development in the study and that he was eligible to claim for a copy of the transcribed discussions with him as well as a copy of the findings of the study after its completion.
Methods of Data Analysis

Data were analyzed on daily basis, on monthly basis, on four monthly basis and also by making comparisons between succeeding sessions. Finally, an overall analysis was made by comparing all sessions of the study. This was done to achieve reflexivity. Due to space constraints, data analysis on daily basis has not been included in the write-up yet it was done on transcription sheets and in diary entries.

The study did not aim at generalization; rather it produced “knowledge of the particular” (a phrase use by Schwandt, 1997). Thus, whatever insights have been gathered, they cannot be generalized.

The research participant was not a fluent speaker, specifically in the initial part of the study. Thus, at some points of the data collection process, the researcher had to motivate the research participant for speaking yet she did not force the research participant at any point. The researcher depended upon her own theoretical orientation and methodological rules for analyzing the data. This determined the politics of her research yet the research questions, the research methods as well as the theoretical framework were the guiding and not the controlling and totalizing forces during both processes of data collection and data analysis. The process involved more subjectivity than objectivity and also introspection and even retrospection depending upon the context of a particular language use yet it did not involve bias.

Representation of the Data

The data have been represented linguistically, statistically and graphically. The linguistic representation involves carefully selected excerpts rich in particular features under study. The researcher has used tables and figures (in the form of bar graphs and pie charts) to exhibit the linguistic improvement or otherwise of the research participant pictorially.

The next chapter deals with data presentation and analyses. For the convenience of the reader, the data collected from the audio recordings of the conversations (in the form of transcriptions) or the participant observations (in the form of diary entries) as well as the discussions with the doctor, all have been presented in the form of continuous dialogs. There are three dialogs altogether, each
covering one particular session of study. In these dialogs, there are mainly two or three participants: the researcher, the research participant, the doctor and the researcher’s sister. Each dialog includes data mainly collected through audio recordings and diary entries. If a particular feature was noticed through different methods of data collection (that is, the audio recordings, diary entries and discussions with the doctor), this has been mentioned in the data presentation section. The source of the data (that is, transcriptions, diary entries or discussions) are mentioned in parenthesis along with the dates of documenting the data.
CHAPTER 4

DATA COLLECTION, ANALYSIS & INTERPRETATION

Purpose of the Study

Aphasia is a situation of language loss as a result of brain damage. Historically, there has been considerable research in different disciplines including neurology, developmental psychology and linguistics for exploring the possibility of retrieving the language abilities after once losing them. Generally, this has been associated with the human brain’s ability for self repair. In each discipline, the same phenomenon has been discussed through their set terminologies yet the existence of a critical period has been mentioned by all. A critical period is the time period in an individual’s life till which there is a possibility to develop and recover (Crystal, 1999). There is polarization between the theorists in neurology, developmental psychology and linguistics and the idea remains contested. This study explores whether a critical period in terms of physical age of the sufferer exists for language recovery after aphasia and if yes, how far this process can be stretched.

Most of the theorists on language development give a myopic view of the phenomenon by always comparing it with the child’s first language acquisition and an adult’s second language learning and by treating it as an abnormality. They also present the aphasics as passive recipients of this abnormality. This study explores language recovery after aphasia as an independent, unique phenomenon in which the aphasic actively participates in retrieving his/her damaged or lost language abilities.

Theoretical Perspective

This study focuses on the relationship between emotional attachment and the language recovery process after aphasia. It explores the recovery phases of the research participant over a period of one year. For exploring the phenomenon, Lev Vygotsky’s ideas on intellectual development have been employed along with John Bowlby’s Attachment Theory (as discussed in Chapter 2).
This has been discussed in Chapter 2 that most of the renowned theorists on language development have discussed language recovery after aphasia in negative terms. They present it as an abnormality which can only be used as a contrast to discuss the process of “normal” language development but Vygotsky is an exception as he not only discusses aphasia as a deterioration of human intellect but also talks about the possibility of recovering from it (Veer & Valsiner, 1994). He says that emotional attachment and subjective involvement with an idea provides a strong basis for language development (Veer & Valsiner, 1994).

John Bowlby is another developmental psychologist who also talks about the uniqueness of every individual by discussing the role of an attachment figure in everyone’s life. In case of an aphasic, this attachment figure can do wonders, as the bond of trust between the two serves as a safety zone in which the aphasic feels secure and can experiment with the communicative abilities s/he is left with. He also discusses the possibility of emotional rejuvenation in a disturbed individual through his Attachment Theory (Bowlby, 1982). The optimism in Vygotsky’s and Bowlby’s discussions encouraged me to incorporate their ideas in this study.

**Methodology**

This study explores the language recovery process of the research participant who had suffered from aphasia and was on her way towards recovering language abilities when this study began. The study spreads over a period of one year. In order to understand the phenomenon in an organized way, the one year span was divided into three sessions, each covering a period of four months. For collecting the data, audio recordings of the research participant’s conversations, diary entries about her language performance and discussions with her doctor about the same were used. Audio recordings and diary entries were done on daily basis whereas each discussion with the doctor took place after a period of four months. The doctor was not a language expert but he himself had lost and recovered speech in the past. He had discussed with the researcher about the effectiveness of planned exercises in retrieving the lost speaking abilities. Thus, discussions with him could help the researcher in deciding and sequencing the language practice for the research participant. All discussions were audio recorded with the informed consent of the doctor (see Appendix B) and have been provided on a CD along with the write-up.
The audio recordings include informal talk in the daily, mundane situations when the research participant was either talking to the researcher or with one of her family members, watching television or was on a stroll or a drive. The audio recordings also include her speech in the formal reading activities devised after discussions with the doctor. The audio recordings were transcribed each day and patterns emerging in the data were noted down in the margins of each transcription. These audio recordings have also been included in the CD. Similarly, the diary entries were also analyzed on daily basis and they were mentioned in the form of additional notes at the bottom of each diary entry. The researcher kept on comparing the data collected through audio recordings and diary entries in order to make connections and to find similarities. This gave her a chance to double check her interpretations and minimize bias. After every four months, discussions with the doctor were made to check the level of improvement in the research participant’s speech or otherwise and to form strategy for the next session.

**Data Analysis**

The research participant had suffered from aphasia and her language had “deviated” from the “normal” track. This deviation has been measured by analyzing the level of accuracy and fluency in her speech. These are two important features of the normal speech. Accuracy has been studied through the linguistic features of her speech and fluency has been estimated through the paralinguistic features of her speech.

### 4.1 Linguistic & Paralinguistic Features

The linguistic analyses have been done by considering the segmental features of the research participant’s speech and the paralinguistic analyses have been done by considering the suprasegmental features of her speech.

### 4.2 Segmental & Suprasegmental Features of Speech

The segmental features include the phonemic, lexical and syntactic levels of speech. Overall, accuracy in the research participant’s speech (mentioned as P hitherto) has been estimated by considering her performance at sentential level as it is the most complex in terms of language production (Chomsky, 2002) and reveals the ability to deal with the highest level of grammatical complexity. Mainly, three types of sentences have been studied
in her speech: simple, compound and complex. All the utterances of the P that are beyond phrase level have been treated as sentences and have been divided into three categories: short (of one line), long (of two lines) and prolonged talk (of three or more lines). A simple sentence has been defined as single-clause, having an agent or is agentless and has a predicate (Wren & Martin, 2009). A compound sentence has been defined as the one with two independent clauses joined together with the help of a conjunction and a complex sentence has been defined as the one having one independent and one or more dependent clauses. Features of connected speech such as repetition, fumbling, conjunctions or other function words have not been considered in sentential analysis.

Fluency has been estimated through the suprasegmental features. Thus, intonation, stress and tempo of her speech have been analyzed. The analysis of intonation generally involves a distinction between a rising and a falling tone (Crystal, 1994). Thus, the tonal analysis in this study is based on the use of rising and falling tone to check whether the P’s speech was monotonous or she could experiment with different tones.

Stress has been studied by considering the words in her speech uttered with more prominence than the surrounding words and tempo has been measured through the spontaneity of response and the number and length of pauses during her speech.

Though the language recovery process of the research participant after aphasia has been studied as an independent phenomenon yet there are no separate terms available in any discipline for studying it. That is why; the terms that are conventionally used for a child’s first language acquisition and an adult’s second language learning have been used.

**Topics used in the Research**

The topics used in this research were the ones with which the research participant was attached, that is, her immediate family members, her husband, daughters, grandsons, grand daughter, sons-in-law, parents, brothers, sisters, nephews, nieces, her doctor (Doctor Asaf Alavi), her pets, cooking, her country, religion, children’s stories, her illness, Imran Khan and Fridays. She also loved following television channels such as Animal Planet, Discovery, Masala TV, Star TV, and Nat
Geo Adventure. Her favorite programs were documentaries, dramas and cooking shows. Often, these channels repeat each program several times. Thus, a repetition in the talk of the P might be found.

**Speech Performance in Reading Activities**

Vygotsky equates the intellectual development with the linguistic development and to him, speech is the highest form of intellectual abilities (Blunden, 2010). Thus, reading activities were also done (refer to Discussion I & II with the Doctor on the CD) but to initiate and maximize the speech production process in the P. This could help gauge the language retrieval process and her intellectual abilities.

The researcher used books that she had already discussed with the doctor. The course books of Urdu, English and Mathematics used for school children of Class One were used. The names of these books are: Meyraa Pehlaa Alif, Bey, Pey (Tasveeree Qaedaa), My First ABC (Picture Book), My First 123 (Picture Book). The story books were also for the same level of children. These included: Zalim Jadoogarni (Cruel Witch), Rehamdil Bheyriya (Kind Wolf), Neeli Darhi Wala Zalim (Blue-Beard Rascal), Adam Khor Deyo (Maneater Giant) and Jadoo Ka Qaleen (Magic Carpet).

The doctor and the researcher had also decided to include practice of some religious expressions in reading activities (refer to Discussion I with the Doctor on the CD).

**A few Words about Data Presentation & Analyses**

The suprasegmental features of the P’s speech have been considered after demarcating the borders of “normal” speech. Thus, in data analyses very brief pauses mentioned as (.) and one second pause mentioned as (1.0) have been taken as features of the normal speech so they have not been considered. Similarly, one second response time represented as (1.0) has been treated as a feature of normal speech and has been ignored. Any sound elongated just briefly represented by a single character as : has been considered normal and has not been included in the analyses. Due to the constraints of space, entire audio recordings done in one session have not been included in transcribed form and only the selected excerpts relevant to the study have been included. However, the CD provided along with the write-up includes the full version of the audio recordings. The CD also includes the oral consent of the P and
discussions with the doctor and all the audio recordings are arranged in a chronological order.

Any feature appearing twice in the data has been mentioned as (x2) in the tables; similarly, a feature appearing thrice in the data has been represented as (x3) in the tables and so on. The researcher has tried to make connections between conversations recorded at different times and this information has been provided in the form of comments in the parentheses.

The P’s language performance in each session has been divided into three scenes each having a different setting. The scenic details have been provided in the beginning of each session.

Most of the chatting sessions were audio recorded in the P’s room but some were noted down in the research documenting diary while she was outside the house and on a stroll or on a drive. The P liked certain television channels, so her language performance was recorded while she was watching these channels. These recordings were sometimes audio and sometimes in the form of diary notes. The P tended to repeat certain expressions at different times. Thus, repetition might be found in the data presentation section. For convenience of the reader, the words, phrases or sentences are presented in the tables exactly as they appear in the transcript along with transcription conventions as suggested by Gail Jefferson (see Appendix C) so that the reader can easily identify them. English translations (in italics) appear in the parentheses after each line.

Due to space constraints, some abbreviations have been used in the write-up. The phrases ‘research participant’ and ‘researcher’s sister’ appear as ‘P’ and ‘S’. Similarly, the words ‘researcher’ and ‘doctor’ appear as ‘R’ and ‘D’ respectively. Likewise, the phrases ‘audio recording’, ‘diary entry’ and ‘discussion with the doctor’ have been abbreviated as ‘AR’, ‘DE’ and ‘DD’. The first discussion with the doctor is represented as DD I, the second one is represented as DD II, the third one as DD III and the fourth one as DD IV. The contextual information along with these abbreviations and dates of documentation has been provided prior to the data and each line has been numbered as 1, 2, 3 and so on.
Pattern of Analysis & Interpretation

The analyses of the P’s speech in each session have been done in three sections: Section I deals with accuracy in her speech whereas Section II deals with fluency and Section III displays overall analyses of a particular session and comparison between succeeding sessions in terms of accuracy and fluency as well as interpretation from the analyses. Each session makes use of different scenes. There are three scenes in each session and each presents the language performance of the P in a different setting. The Doctor’s opinion about the P’s language recovery process and the effect of attachment with the topic on speech in each session have also been included in the analyses of each session. For convenience of the reader, the sequence of analyses has been kept the same in each session. However, if a particular feature was not noticed in one particular session, it does not appear in the analyses part. Likewise, if a particular feature was noticed in only one session, it appears in the analyses of only that session. The effects of attachment with the topic of speaking on accuracy and fluency have also been analyzed in each session.

In the data, English translations have been done according to the context and even wrong words have been translated in order to clarify the conversations to the reader yet in the tables for analyses, the data appear in isolation and incorrect words have not been translated. Totally meaningless words have not been translated even in the data section. For one wrong word produced by the P the symbol ---has been used in place of translation. For two consecutive wrong words produced at the syntactic level, the symbol ------ has been used, similarly for three consecutive wrong words the symbol --------- has been used and so on.

At the syntactic level analyses, literal translations have been provided. For Urdu to English translations, the dictionary by Bashir A. Qureshi (1994) has been consulted. There are many words that Urdu and Punjabi share but Punjabi language has many regional varieties or dialects. Thus, the grammatical structure and vocabulary as well as pronunciation sharply change from region to region (Crystal, 1999). So, for Punjabi to English translations, the R has used her own cultural understanding. Same is the case with Potohari language which is spoken in most of the rural areas of the Punjab province. Potohari also has many regional dialects.
The reader also needs to know that some translations in English might look correct but in Urdu, Punjabi and Potohari, they might not be correct. This is because Urdu, Punjabi and Potohari have a grammatical gender. Thus, all these languages have a noun class system in which all nouns (whether human or non human), acquire either a masculine or a feminine gender (Crystal, 1999). The determination of gender is manifested generally through inflections or word endings (Barber, 2001). The nouns trigger this process and pronouns, numerals, quantifiers, adjectives, verbs, auxiliaries, adverbs and prepositions are affected by it, as all of them have the same endings as the noun has. Thus, in Urdu, Punjabi and Potohari, a male noun has an ‘aa’ ending and a female noun has an ‘ee’ ending. The same ending or declension comes in the related words as well (Crystal, 1999).

A wrong word ending in Urdu or in Punjabi and Potohari has been treated as grammatically incorrect. The gender of these words has been mentioned as ‘male’ or ‘female’ along with the word in the English translations in tables and only proper nouns have been capitalized.

For homonyms in Urdu, that is, the words that are said or written in the same way but have a different meaning (Crystay, 1999), translations have been done according to the context. No translation has been provided for the words produced by the P which were grammatically wrong. However, the words which were wrongly used but were grammatically correct, English translations have been provided.

**Session 1 (June 2011-September 2011)**

The P’s language performance in Session 1 has been divided into three scenes each having a different context. In Scene 1, the P is chatting with the R; in Scene II, she is watching TV; and in Scene III, she is doing formal practice in speaking and reading.

**Scene I**

P and R are sitting in P’s room and chatting. There are family albums in front of them.

**Lines 1- 5 from AR on 4.7. 2011. For the same Lines also refer to DD II on 25. 9. 2011 on the CD.**
1 R: keyupaa par reyee thin

(what were you reciting?)

2 P: wo parti hai BISMilaahirahmaani raheem

(she recites in the name of God, Most Merciful, Most Beneficent)

3 R: aqhaa is ko keyaa baatay hain bismilaa ko

(ok what do they call Bismila?)

4 P: ba bas koe par neyee sakti bas BISMILAAHIRAHMAANIRAHEEM (1.0) yeyhee parti

5 raiji hoon

(I cannot recite anything else so I keep on reciting only Bismilahirehmaniraheem)

R shows a family photo to P. She looks at it and tells R that her grandfather was a hero and was given the sword of honor.

Lines 6-8 from AR on 30. 6. 2011

6 P: likhaa huaa unhon ney dey:: diaa saari ( ) talaa::r talaa::r

(it was inscribed on it they gave it to him)

7 R: talwaar

(sword)

8 P: haan unhon ney likhaa huua thaa

( yes they had written on it)

There are parrots sitting outside on the roof and eating. P looks at them.

Lines 9-19 from AR 15.7.2011

9 P: is ko gaani hoti ai ( ) doosra ( )

(it has a band  the other one)

10 R: gaani hoti hai

(it has a band around its neck)
For Line 11 also refer to DD II on 25.9.2011 on the CD.

11 P: GAANI is ↓ko gaani do ain

(band it has got two bands)

12 R: DO ↑hoṭey ain

(they are in pairs)

13 P: ↑neyee (1.0) eyk↑larkaa hoṭaa hai eyk ↑larki hoṭi hai

(no there’s a boy and there’s a girl)

14 R: ↑toṭaun kaa

(of parrots?)

15 P: ((Laughs)) ey us ko KOTI hai (.). KOTI hoṭi hai ↑naan (1.0) or KOTAA hoṭaa ai (.)

16 koṭaa koṭi dey kho naan ( ) eyk ↑khaa rey ain↑naan (1.0) aap ko paṭaa ↑neyee lagaa

( there’s a male parrot and there’s a female look they’re eating didn’t you notice?)

17 R: aap kai reyee thin un kaa JORAA oṭaa ai

(you said they are in pairs)

18 P: har ( ) har cheez ↓ko ↓goṛaa oṭaa ai (9.0) kaṭey ain:: ZINDAGHI meyn har

19 cheez hoṭi ai joṛey ki ↓hoṭi ai

(everything is in pairs they say every thing in life is in pairs)

P looks outside and wants her chickens to be fed. They are in the courtyard.

Lines 20, 21 documented as DEs on 22.6.2011

20 R: daanaa daal reyee hain murghion ko

(are you feeding the chicken with grains?)

21 P: in beychaarion ko oo::k lagi thi

(poor souls were hungry)
Lines 22, 23 documented as DEs on 17.8.2011
22 R: laal murghaa kidar geyaa
   *(where has the red rooster gone?)*
23 P: ey laal murghheey ki nazar chalii geyee ai to usey ainak dalwaa do naan
   *(the red rooster has lost its eyesight why don’t you get it a pair of glasses?)*

Scene II

R puts on the TV at P’s favorite channel ‘Animal Planet’.

Lines 24, 25 documented as DEs on 20.8.2011
24 R: momo teevee deykhey naan
   *(momo please watch TV)*
25 P: achhaa yey machwaa ai
   *(ok it’s a tortoise)*

Lines 26, 27 documented as DEs on 27.8.2011
26 R: ab yey keyaa ai deykheyn
   *(now look at this what is it?)*
27 P: mhains ai naan
   *(it’s a buffalo)*

P doesn’t like black color, so R changes the channel.

Lines 28, 29 documented as DEs on 13.9.2011
28 R: teevee par deykheyn
   *(look at the TV screen)*
29 P: yey ey:riaa ai naan
   *(it’s a wolf isn’t it?)*

P doesn’t like wolves, so R changes the channel to show P her favorite drama serial.
Lines 30-34 documented as DEs on 29.7.2011

30 R: yey is kaa kon ai

(what relationship does he have with her?)

31 P: yey is kaa ka kazan ai naa (.) kaalaa saa

(he’s her cousin a dark one)

P doesn’t like black color. She recalls a black rabbit she saw in a park during a stroll and it was digging the earth. She thought it was very clever and talks about it.

32 R: keeaa kar raa thaa wo

(what was it doing?)

33 P: wo kaalaa khargosh raam sey baithaa huaa thaa or us ney thogaa saa kaam bi kar liaa (.)

34 boe ee::t thaa yey haraami har jagaa karwaa deytye ain

(that black rabbit was sitting in a jesting mood and it did some work as well it was very shameless)

R again changes the channel as P doesn’t like black color. R shifts to the channel showing a program on cooking.

Lines 35, 36 documented as DEs on 26.8.2011

35 R: paataa neyee keyaa pakaa reyee ai

(I don’t know what she’s cooking)

36 P: shubraa ansaari ai naan rosh kart reyee ai

(it’s Bushra Ansari she’s roasting)

R asks P the dish she loved most. She wants P to tell her about its recipe as well.

Lines 37-55 from AR on 21.6. 2011

37 R: bataaeyn naan bhindiaan kaisey banaatey hain

(tell me how to cook okras)

38 P: bhindieyn bhi pailey (3.0) yey ey pakaatii hain key dhoaa key hain yey: : (2.0)
39 ey parparaatı (.) yey kaitey hain yey ( )
(first wash okras then put)

40 R: ↑peyaaz
(onions)

41 P: ↑haan (.) naan neyeen ba baad meyn (.) pailey yey ↓rakhwaati ain (1.0) PAANI ni ni

42 yey keyaa hoţaa ↑hai (1.0) paani yey keyaa hoţaa ↑hai
(yes, no put it later first add water no not water what is it called?)

43 R: PINDDIAAN
(okras)

44 P: piniaan meyn piniaun meyn taniaa naan ((laughs)) (1.0) wo is meyn keyaa hoţaa hai taaey

45 taa keyaa oţaa ai
(first add coriander in okras no it’s?)

46 R: mircheyn
(chilies)

47 P: mircheyn haan (.) wo saari rakhwa key naan (.) pailey ( ) KARWAAMO phir neyee (.)

48 wo naa key PINDDIAAN baad meyn rakhsaaao phir pindiey ( ) pailey saa::ri karwaaeyn

49 naan to phir (.) phir paani baad meyn rakhsaaana paani naan laanaa ↓pailey pailey saa::ri

50 key kar key naan ↓karwaaeyn gey to phir PINDDIAAN rakhsaana (.) phir thoraaa sa paani

51 ↓rakhwaeyn gey (1.0) ↓paani paani
(yes chillies and put everything inside then leave them for some time add water afterwards add just a little water not too much of it)

52 R: ↑shoraa to neyee hoţaa is main
(isn’t there any gravy in it?)
53 P: SHORAA neyee hoțaa (.) shorey meyn KHARAAB ho < jaatî hain>( ) tumhaarey
definition

54 daađaa mey::shaa kaițey (1.0) piniau yey is main ( )har cheez main SHORAA diaa karo

definition

55 shoraa neyee ( ) shorey KHARAAB ho jaatî hain

(no okras become tasteless in gravy your grandfather always used to ask for gravy in everything)
definition

P also talks about the sweet dishes she loved to cook and starts discussing about the approaching religious festival.

56 R: to aaj gudee kuch pakaaye gi shabaraat pey

(will Guddee cook something today it’s Shab-e Baraat today)
definition

57 P: haan rakhi hain naan cheezeyn

(yes she has kept something)
definition

58 R: ↑keyaa pakaaye gi GUDEE

(what will Guddee cook?)
definition

59 P: ey ALWAA

(halwa)
definition

60 R: ačhaa kaisey pakaatey haiñ halwaa sooji waalaa

(how is halwa of semolina cooked?)
definition

61 P: alwaa yey ( ) ↓ keyaa hoțaa ai sa sa

(halwa it’s cooked by what sa sa?)
definition

62 R: sooji

(semolina)
definition

63 P: soolwi soolwi main parțaa neyee yey cha cha cheeni cheeni main neyee cheeni main neyee

64 pailey parwaatî ai (2.0) ey keyaa hoțaa ai sh shoraa (.) shor shoraa neyee keyaa hoțaa ai

(first add sugar no not sugar first add what gravy no not gravy what is it?)
definition
65 R: SHEERAA

(sugar mixture)

66 P: sooji mai ey (2.0) paan ey yeh hoṭaa ai (.) keyaa hoṭaa ↑hai yeh heed heed (2.0) keyaa

67 hoṭaa ai dhheep dhheep keyaa hoṭaa ai

(add in semolina what is it?)

68 R: ↑GHEE

(ghee)

69 P: haan lagṭaa ai thọṛaa saa lagṭey ain ( ) zaraa ↓zaraa THEEK ho jaṭṭaa ai yey ( )

70° lagṭey ain°° naaṇ to zaraa ho jaṭṭaa ai LAAL LAAL ho jaṭṭaa ai

( yes it seems it looks better then when it is put there it turns red)

71 R: THEEK ai

(ok)

72 P: phir meyṇ ey ey karṭey ain shoraa lagṭaa ai naaṇ

(then add gravy)

73 R: SHEERAA

(sugar mixture)

74 P: haan SHEERAA (.) is meyṇ dalwaatey ain phir karṭey raiṭey ain karṭey raiṭey ain phir ↓ho

75 jaṭṭaa ai (2.0) hal jaṭṭaa ai to phir (1.0) hee:: ho jaṭṭaa ai hee::

( yes add sugar mixture then keep on stirring so that the oil comes out)

P tells R about one of her paternal uncles who loved sweets and got married twice.

**Lines 76-85 from AR on 28.7.2011**

76 P: ↓kaaey ney dobaaraa SHAADI karaa:: ↓di

(my paternal uncle got married for the second time)

77 R: ↑aap key ūaeyaa ney

( your paternal uncle?)
78 P: haan (.) phir shaadi kar di ai KHAIBAR (2.0) ey phir SHAADI ho geyee ↑ai naan (.) ey

79 ey kaey ki shaadi huu ee geyee ↓ai KHAIBAR or(.) SAABAR (2.0) bachiaan ho geyee ↓ain

(yes he got married again Khaiber he got married again he got two daughters, Khaiber and Sabar)

80 R: acha

(ok)

81 P: acha (.) eyk kalal thi or doosri CHITI thi ((R laughs)) or ( ) kaaey ney rakhaa thaa

82 ↑naa:n (1.0) kaibar (2.0) or (2.0) doosri ↑thi (1.0) khaibar or khaibar donon ka naam

83 eyk thi eyk khaibar or ↑doosri

( one was dark and the other was fair my uncle named one Khaiber and the other Sabar one was Khaiber and the other was?)

84 R: do larkiaan thin ↓bas

( so he had only two daughters)

85 P: bas

( that’s it)

**Lines 86-89 documented as DEs on 18.8.2011**

86 R: aap ki kiti larkiaan ain

(how many girls do you have?)

87 P: ↓meyri ↑chaar::r neyee teen neyee neyee neyee (2.0) ey

(I’ve got four no three no no no eh)

88 R: gineyn

(count)

89 P: ey::k do teen chaar paans (.) paans

(one two three four five five)
P looks at R.

**Lines 90, 91 documented as DEs on 2.7.2011**

90 R: keyaa huuaa

*(what happened?)*

91 P: aap ki kameez toot geyee ai or najmaa ki murghi bi toot geyee ai

*(your shirt is broken and Najma’s hen is also broken)*

**Scene III**

P and R are practicing reading and speaking. R writes some words on the paper and asks P to read them. All words written are related with the topics that P is attached with.

**Lines 92-117 from AR on 20.8.2011.**

92 R: achaa ab main yey Likhoon gi aap ney parmaa ai (.) aap pareyn main ney keyaa likhaa

93 ai yey deykheyn (1.0) ↑main ney likhaa:: (3.0) keyaa ↑likhaa:

*(ok now I’ll write and you’ll read it read what I have written look here see what have I written?)*

94 (4.0)

95 P: ↓ alaa

*(God)*

96 R: ↑ alaa:: ↑ shaabaash or yey::

*(God good and what’s this?)*

97 (5.0)

98 P: ↓ haan alaa alaa or keyaa ↑ai

*(yes Allah and what is this?)*

99 (2.0)

100 R: keyaa likhaa ai

*(what is written?)*

101 (2.0)
102 P: mumṭaaż yey neyee neyee ((laughs)) ai reyhaanaa (.) neyee meyraa naam kaun ai

(it is Mumtaz no no it’s Rehana no what’s my name?)

103 R: achaab ab main likhön: gi:: aap yey baṭaaeyṇ yey main ney keyaα likhaa: (4.0)

104 (2.0) aap ki bhain kaa naam ai

(ok now I’ll write and you tell me what I wrote read it’s your sister’s name)

105 P: yey ↑meyri bhain kaa naam ↑ai

(it’s my sister’s name)

106 R: hoon

(yes)

107 P: kaun naam ai

(what name is it?)

108 R: aap ↑baṭaaeyṇ

(you tell me)

109 (1.0)

110 P: ey mumṭaaːz

(it’s Mumtaz)

111 R: ↑shaabaash ab yey aap kaa (.) yey eyk or lafz ai jis ko aap ney paṇnaa ai (3.0)

112 yey keyaα

(ai)

(good now here’s another word for you that you have to read what is it?)

113 (3.0)

114 P: ↓mumṭaa neyee meyraa naal meyraa naam ai

(it’s Mumta no it’s my name)

115 R: boleyṇ naa

(please say it)

116 (1.0)
117 P: dafaa karo ↓yey:
   ( leave it)

Lines 118-132 from AR on 21.8.2011

118 R: momo yey pareyn zaraa main ney keyaa likhaa ai (2.0) ↑yey:: (1.0) yey keyaa ↑likhaa
   (mama please read it what did I write here?)

119 (2.0)

120 P: ↓alaa
   (God)

121 R: ↑alaa::
   (God)

122 (6.0)

For Lines 123-126 also refer to DD II on 25.9.2011 on the CD.

123 P: alaa talaalaa
   (God Almighty)

124 R: shaa:baa::sh
   (very good)

Line 125 also documented as a DE on 17.7.2011 & 31.8.2011

125 P: ((laughs))↓zabaan neyee ai naa
   (I have no tongue)

Lines 126-129 also documented as DEs on 8.7.2011

126 R: achaa chaleyn yey yey keyaa likhaa ai (5.0) ↓yey: (3.0) shaabaa:sh
   ( ok what is this?)

127 P: mumtaaa:z
   (Mumtaz)

128 R: mumtaaa:z shaa:baa::sh or yey:: ↑keyaa likhaa main [ ney ]
   (Mumtaz that's right and what is this?)
129 P: [ mumṭaaaz bat ]

(Mumtaz Butt)

130 R: shaa:baa::sh mumṭaa:z ↑bat or yey main ney likhaa (1.0) yey eyk or naam alif sey

131 shuroo hoṭaa ai a

(good it’s Mumtaz Butt and now tell me what is this? it starts with alif)

132 P: ↓zabaan neyee par sakṭi

(I can’t read)

R diverts P’s attention by asking her about how many sisters her father had.

Line 133 from AR on 4.9.2011

133 P: teen bhaineyn thin naan teen thin naan tumhaarey aboo key (.) bhaineyn teen thin

(there were three sisters your father had three sisters)

R changes the topic.

Lines 134-142 from AR on 11.9.2011

134 R: konsaa din ↓ai

(what day is it?)

135 (2.0)

Lines 136-142 also documented as DEs on 8.7.2011

136 P: junaa ((laughs)) (2.0) junaa (2.0) junaa ↑ee ai

(Friday Friday isn’t it Friday?)

137 R: JUMAA:

(Friday)

138 P: junaa aḥhaa [ junaa ]

(Friday ok Friday)

139 R: [ boleyn ] JUMAA:

(say Friday)

140 P: junaa junaa junaa junaa junaa aḥhaa lagṭaa ai ↓naan ((laughs))
Friday I love Friday

Friday Friday Friday Friday

R: JUMAA kioo acha lagtaa ai

(why do you love Friday?)

P: ey aa: aa: aadhi dor meyn (.) aa jaati hain larkiaan jaldi aa jaati hain

(because they come in half time the girls come earlier)

Line 143 documented as a DE on 9.9.2011

143 P: yey (.) JUNAA

(this is Friday)

R gives P some practice in religious expressions.

Lines 144-158 from AR on 17.9.2011

144 P: tobaa astaghfaar ↑BAS ↑BAS

(it’s God forgive me only)

145 R: or bi pareyn ↑naan: (2.0) kaheyn SHUKAR(.) al (2.0) SHUKAR boleyn

(say something else also say thank say thank)

146 P: SOFAA ((laughs))

(sofa)

147 R: SHUKAR (.) sofa neyee (.) shukar (5.0) acha boleyn SUBHAAN alaa (2.0) SUB:

(thank not sofa thank ok say I praise God)

148 P: ↓neyee neyee naan

(no no no)

149 R: or koi cheez par sakti ↑ain (7.0) maashaalaa kai sakti ain (2.0) maashaalaalaa:

(2.0) boleyn

150 maashu↑alaa (2.0) biloo maashaalaa THEEK ho geyaa ↓ai

(and what else can you say? can you say mashala say mashala biloo has got well)

151 (3.0)
152 P: ↓bismilaahirahmaaniraheem meyraa BILOO bis: neyee yey neyee ( ) ↓zabaan neyee

153 ai chali geyee ai

(In the name of Allah the most merciful my Billoo has no no I’ve lost my tongue)

154 R: boleyn alif laam meem

(say alif laam meem)

155 P: ( ) ↓naan naan

(no no)

156 R: yaaseen

(Yaseen)

157 P: astaghfaar (1.0) ba biloo bismilaahirahmaaniraheem biloo meyraa bachaa THEEK ho:

158 geyaa: alaa taaalaa meyrey bachey ko ZINDAGHI ↑dey:

(God forbid my child Billoo has got well God almighty give my child long life)

P talks about her boys Salman and Sarmad and about the month of Ramazan.

Lines 159-166 from AR on 2.8.2011

159 P: namaaz PARTAA ai (1.0) roz partaa ai noz partaa ai namaaz partaa ai namaazaa ai (.)

160 namaazi aadmi ai (. ) salmaan rozaa rozaa partaa ai ra rozaa ey ( ) rozaa [ ROZ ]

(he offers prayers regularly he is very regular in his prayers)

161 R: rakhtaa ai

( he does so)

162 P: biloo THEEK ai kaitaa ai main aaoon gaa neyee ( ) ↓ham aa jaaeyn gey abi aaeey

163 neyee ↓ kioon main ney ey INSHALA aaeyn gey (1.0) BILOO ko main paisey doon gi naan
164 (3.0) meyraa sonaa bachaa:: samtar ai naam ((laughs)) is kaa naam ai:

(Billoo is ok he said he’ll come I said no we’ll come he asked why didn’t we come and I told him we’ll soon come Inshala my sweet little child I’ll give him some money)

165 R: SARMAD

(Sarmad)

166 P: neyee zabaan neyee par sakti naam

(no tongue I can’t read it)

R asks P whether she used to keep fast and offered prayers.

Lines 167-174 from AR on 6.8.2011

167 R: RAKHTI THI

(kept fast)

168 P: haa: karati thi [ ((laughs)) ]

(yes used to get it done)

169 R: [RAKHTI thi]

(kept fast)

170 (3.0)

Lines 171-174 also documented as DEs on 31.8.2011

171 P: bemaar huee to zabaan bi neyee reyee to bas (.) bas phir phir PHIR bi neyee sakti (2.0)

172 ↓bas alaa ney ( ) bas karo too pag (1.0) ↑bas kar too ((laughs)) ey daaktar saab ney ( )

173 daatar saab ney ↑neyee: ALAA TAALAA ney bataa ↓diaa BAS kar too ((laughs)) BAS kar

174 too ((laughs))

(when I fell ill I lost my tongue and I can’t even walk then Allah said stop reading stop the doctor said stop no allah said stop stop)

Lines 175-188 from AR on 9.8.2011
175 R: aap pari hain namaaz
       (do you offer prayers?)

176 P: main ( ) pari hoon to phir neyee sakti hoon namaaz bi neyee par sakti
       (I offer my prayers yet I can’t walk and I can’t offer my prayers)

177 R: tasbee pari hai
       (do you recite on a rosary?)

178 P: hoon bas neyee jo jo kuch hotaa ai karnaa par par leyti hoon
       (yes I do what I can)

179 R: keyaa pari hai tasbee pey
       (what do you recite on the rosary?)

180 P: bismilaahirehmaaniraheem
       (in the name of Allah the most gracious the merciful)

181 R: ALHAMDULILAA par sakti hai
       (can you recite Alhamdulillah?)

182 P: neyee (.) par sakti
       (I can’t read)

For Lines 183-189 also refer to DD II on 25.9.2011 on the CD.

183 R: al

184 P: neyee par sakti
       (I can’t read)

185 R: AL HAM
       (Alham)

186 P: alaa naan:: main neyee par sakti
       (Allah no I can’t read)

187 R: alhamdulilaa (2.0) par sakti hain naan::
       (Alhamdulillah come on you can read)

188 P: neyee neyee naan:: par neyee sakti zabaan chali geyee ai
Lines 189-205 from AR on 17.8.2011

189 R: parsau̯ konsaa din ↑ai

(what day is it the day after tomorrow?)

190 P: ↓yey neyee paṭaa

(I don’t know)

191 R: aaj konsaa ai (1.0) aaj buḍ ai (2.0) kal konsaa ho gaa (4.0) aaj buḍ ai kal::

(what day is today? today’s Wednesday so what day will be tomorrow today is Wednesday tomorrow?)

192 P: ↓kal ai:

(tomorrow is)

193 (6.0)

194 R: jumeyraṭ ai or parsau̯: (3.0) jumeyraṭ key baaḍ konsaa din aaṭaa hai momo

(it’s Thursday and the day after tomorrow is what day is it after Thursday?)

195 (6.0)

196 P: junaa (.)[ junaa junaa ] ho geyaa

(it’s Friday)

197 R: [ shaabaash (1.0) jumaa] hoon or jumey key ↑baaḍ

(good and after Friday?)

198 (2.0)

199 P: ( ) phir hathaa asaa [ afaa aftaa ]

(then it’s Saturday)

200 R: [hafṭaa shaabaash ] or hafṭey key ↑baaḍ

(Saturday good and after Saturday?)

201 P: ey ↑afaṭey meyn aftey [ meyn baaq ↑meyn::]

(after Saturday it’s ?)
202 R: [ haftey key baad ] konsaa aataa ai

(after Saturday what day is it?)

203 P: ey (4.0) itraar (. ) itraar

(it’s Sunday)

204 R: shaabaash itwaar (1.0) itwaar ko keyaa hoataa ai

(good it’s Sunday and what’s special on Sunday?)

205 P: ↓ yey ↑ CHUTEE

(it’s a holiday)

P and R are sitting and R shows P a file on which P’s doctor’s name is written.

Lines 206, 207 documented as DEs on 16.7.2011

206 R: momo is par keyaa likhaa huua ai

(what’s written on it?)

207 P: aasaf ( . ) daaktar aasaf ( . ) daaktar aasaf alwi

(Asif doctor Asif doctor Asif Alavi)

R opens a children’s story book.

Lines 208-216 from AR on 25.9.2011

208 P: ↓ bismilaahirahmaaniraheem (2.0) ey

(in the name of Allah the most merciful)

209 (1.0)

210 R: acha yey konsi ↑ kahaani ai

(ok which story is this?)

211 (2.0)

212 P: zaalam ↓ din

(cruel jinnee)

213 R: pailey yey pareyn (2.0) keyaa likhaa ai

(first read this what is written)

214 P: ↓ laal naan; ey (4.0) ↓ laal naa laal neyee is ko daari (    ) ↓ daari:: (1.0) kaal
(red no red no not red his black beard)

215 R: neeli daari waalaa

(the one with blue beard)

216 P: ↓neelwi daaro waalaa

(the one with a blue beard)

Lines 217-261 from AR on 8.9.2011

217 R: achaab ab thora saa partey hain (2.0) aap ney yey bataanaa ai main ney yey keyaa likhaa

218 ai:

(ok let's read something now you have to tell me what I have written)

219 (2.0)

220 P: ↓ey::k

(one)

221 (4.0)

222 R: is ko paryen (5.0) [shaabaash ]

(read it come on)

223 P:

[[(/laughs))]]

224 R: [kuch likhaa ai]

(something is written)

225 P: [ itraar ↑ai ]

(it's Sunday)

226 R: hoon::: ITWAA::R (2.0) itwaar sey pailey keyaa hoṭaa ai

(yes Sunday what comes before Sunday?)

227 (1.0)

228 P: itraar ai naan aa:j ↓kon dil ai

(it's Sunday right? what day is it? what day is today?)

229 R: yey ↑kon saa din ai
(what day is it?)

230 P: ↓ey aa::

(eh)

231 R: yey main ney LIKAA aii

(this I’ve written)

232 (1.0)

233 P: aftaa

(Saturday)

234 R: shaa:baa:sh haftaa o::r yey:: keyaa likhaa aii main↑ney:

(good Saturday and what have I written here?)

235 P: yey (. ) JUNAA

(it’s Friday)

236 R: JUMAA (1.0)jumaa

(Friday Friday)

237 R: mangal phir us key baad mangal ke ↑baad

(Tuesday then after it after Tuesday)

238 (3.0)

239 P: ban baad bal

(Wednesday)

240 R: bud

(Wednesday)

241 P: bud key baad meyn hoțaa ai ↓bud ((laughs)) bud key baad ((laughs)) (6.0)
budaa

242 neyee par sakțaa

(after Wednesday it’s Wednesday after Wednesday an old person cannot read)

243 R: hoon ( . ) acha yey: inglish meyn main ney keyaa likhaa aii

(ok what’s this that I have written in English?)
244 (5.0)
245 P: yey bi neyee paṭaa ((laughs))
   *(this as well I don’t know)*
246 R: deykheyn naan
   *(please see)*
247 P: ey ainak neyee ↓ai ((laughs))
   *(I’ve no glasses)*
248 R: yey:: (5.0) boleyn (1.0) shaabaash (1.0) see:
   *(say this c)*
249 P: see
   *(c)*
250 R: or
   *(and)*
251 P: ↓see or ey: ↓ or ((laughs))
   *(c and a and)*
252 R: dee
   *(d)*
253 (3.0)
254 P: dee ((keeps on laughing)) ↑dee::
   *(d, d)*
255 R: dee or: (( P keeps on laughing)) (2.0) or yey ee:
   *(d and what is this e)*
256 P: ↓ aḥaa ((keeps on laughing))
   *(ok)*
257 R: is meyn ṭnaa hansney ki keyaa baat hai noonoo
   *(what’s so funny about it mama?)*
258 (2.0)
259 P: main kaiți hoon budaa aadmi ↓par sakṭaa

(I say an old person can read)

260 R: deykheyn [ naan ]

(please see)

261 P: [ par neyee sakṭi] (laughs)

(I can’t read)

R opens a story book and asks P the name of the story.

Lines 262-269 from AR on 24.9.2011

262 P: ZAA↑LAM

(cruel)

263 R: hoon: or is key aagey ↑keyaa likhaa ai

(yes and what’s written after it?)

264 P: ( ) ↓zaalam (2.0) ai: keyaa: (3.0) ( ) yey zaalam ai (1.0) ey ( )
↓jo ZULM

265 karṭaa ai

(cruel what? it’s cruel the one who does cruelty)

266 R: hoon leykin yey keyaa ↑likhaa ai aagey (3.0) JAADOOGARNI

(ok but what is this written afterwards enchantress)

267 P: ↓achaa ⁰⁰wo laṛki ai⁰⁰

(I see it’s a girl)

268 R: ZAALIM () JAADO↑GARNI

(cruel enchantress)

269 P: ↓ ( ) zaalam ( )

(cruel)

P doesn’t like to proceed so R picks another story book and opens it up.

Lines 270-278 from AR on 28.9.2011

270 R: ↓pareyn
(read)

271 P: ↓beyríaa (2.0) [ beyría ] ( ) beyríaa maar deyţaa ai ↑naan

(wolf wolf a wolf kills)

272 R: [↑beyríaa aĉhaa beyríaa] beyríaa maar deyţaa ai beyrıyey ki shakal

273 kidĥar ai is meyṅ (2.0) is meyṅ ↑hai beyríaa

(wolf ok wolf wolf kills where’s wolf’s face in this picture?)

274 P: ↓deykhoon zaraa ((laughs))

(let me see)

275 R: deykheyn ↑naan::

(ok see)

276 P: ((laughs)) kaalaa ( ) mujey kaalaa ( ) mujey kaalaa neyee aĉhi lagţi

(black I don’t like black)

277 R: kaalaa ↑neyee aĉhaa lagţaa ( . ) aĉhaa [ kioon ]

(you don’t like a black person but why?)

278 P: [ ((laughs)) ] kaalaa aadmi neyee aĉhaa lagţaa

(I don’t like a black person)

R now opens some school books. First, the book of Urdu and then of Mathematics.

Lines 279-287 from AR on 20.9.2011

279 R: bey ↑sey::

(with bey)

280 (2.0)

281 P: ey::

(eh)

282 R: yey keyaa ↑likhaa ai: (3.0) yey GINTI likhe ai EYK DO yaa ↑TEEN
(what’s this written? it’s counting one two or three)

283 (2.0)
284 P: ey::k

(one)

285 R: ey::k ✅shaabaash (. ) kiñney jahaaaz ✅ain (5.0) yey kiñney jahaaaz [ ✅ain ]
kiñney jahaaaz

286 ain

(one good how many ships? how many ships are these? how many ships are there?)

287 P: [ ✅eyk ee ai ]
eyk

(it’s one one)

Lines 288-305 from AR on 14.9.2011

288 P: saari ho geyee ai baad meyn neyee ✅par sakti ( )

(It’s over and afterwards I can’t read)

289 R: aap ney mujey saaraa paraaeyaa ((laughs)) ab main aap ko paɾaaoon gi ((P laughs))

290 (2.0) chaleyn pareyn [ shaabaash ]

(you made me read everytinhg now I’ll make you read ok start reading)

291 P: [ par neyee sakti]

(I can’t read)

292 R: alif
293 P: alif
294 R: ✅bey:
295 P: do

(two)

296 R: pey:: ((P laughs and doesn’t say anything))

297 P: ey
298 R: bee:

(b)

299 P: ↓bee

(b)

300 R: [ see ]

(c)

301 P: [ see:]

(c)

302 R: [ dee ]

(d)

303 P: [ey bey:] ↑bey:

(a --, --)

304 R: ee:

(e)

305 P: yeyee seyee ai budee ho geyee hoon to (         )

( this is true I’ve become old this is why)

Analysis & Interpretation of Session 1

Section I

Accuracy Check

4.3 Phonemic Level. For analyses at the phonemic level, consider the tables below. Table I displays the sounds missing in the P’s speech.

Table I

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word Used</th>
<th>Missing Sound</th>
<th>Correct Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>ţalaa::r(x2) (---)</td>
<td>/w/</td>
<td>ţalwaar (x2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(sword)</td>
</tr>
<tr>
<td>21</td>
<td>oo::k (---)</td>
<td>/bh/</td>
<td>bhook (appetite)</td>
</tr>
</tbody>
</table>
(i) Analysis & Interpretation. The data displayed in Table I reveal that the P tended to skip sounds in some words. She usually did so at the initial and medial position of words. This was however, not done at the final position of any word. In case of a difficult phonemic combination such as an aspirated consonant followed by a long vowel or a diphthong, she skipped either the consonant or the aspirated consonant. In the context of the sounds that were missed, Crystal (1999) explains that a consonant sound involves obstructing the air coming out from the lungs at some point and then releasing it. This implies that the production of a consonant sound involves a lot of energy and effort and aspiration means an added puff of air. This effort was minimized by the P by skipping one sound and the data reveal that it was always a consonant. In the articulation of the above mentioned words, a lot of energy was required. Thus, some of the difficult features were missed. However, the total length of the word was retained by elongating the following vowel sound. It can be said that the P’s speech was rich in vowel sounds.
Table II below displays the words used by the P with an elongated sound.

**Table II**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>dey::, ţalaa::r (x2)</td>
</tr>
<tr>
<td></td>
<td>(give, ---)</td>
</tr>
<tr>
<td>18</td>
<td>ain:: (---)</td>
</tr>
<tr>
<td>21</td>
<td>oo::k (---)</td>
</tr>
<tr>
<td>29</td>
<td>ey::riaa (---)</td>
</tr>
<tr>
<td>34</td>
<td>ee::t (---)</td>
</tr>
<tr>
<td>38</td>
<td>yeys:: (this)</td>
</tr>
<tr>
<td>48</td>
<td>saa::ri (all)</td>
</tr>
<tr>
<td>49</td>
<td>saa::ri (all)</td>
</tr>
<tr>
<td>54</td>
<td>mey::shaa (---)</td>
</tr>
<tr>
<td>75</td>
<td>hee:: (x2) (---)</td>
</tr>
<tr>
<td>76</td>
<td>karaa:: (---)</td>
</tr>
<tr>
<td>82</td>
<td>naa::m (name)</td>
</tr>
<tr>
<td>87</td>
<td>chaa::r (four)</td>
</tr>
<tr>
<td>89</td>
<td>ey::k (one)</td>
</tr>
<tr>
<td>164</td>
<td>bachaa::: (child)</td>
</tr>
<tr>
<td>186</td>
<td>naan:: (no)</td>
</tr>
<tr>
<td>188</td>
<td>naan:: (no)</td>
</tr>
<tr>
<td>201</td>
<td>meyn:: (in)</td>
</tr>
</tbody>
</table>
(ii) Analysis & Interpretation. Table II reveals that the P elongated a particular sound in a word on purpose. This can be checked from Lines 6, 18 in which she elongated a sound in a verb to emphasize the action. In Lines 38, 48, 89, 201, 220, 230 and 281 she elongated a sound to have time to plan her speech. Her consciousness about her linguistic performance following elongated sounds in Lines 48, 49 and 214 shows that she was unsure of it and it is obvious from her faulty expression following the elongation of a sound. Clark & Clark (1977) discuss “normal” human speech planning as a process of decision making involving certain linguistic “choices” from the “linguistic devices” available to him/her (pp. 225-226). The P planned speech from her leftover linguistic abilities in that she knew the total length of her performance. She could not utter certain sounds and compensated for them by elongating their neighboring, less troublesome sounds. In Lines 82, 87, 164, 254 and 284 she elongated a sound to emphasize that word and in Lines 186 and 188 she elongated a sound to insist on her point. The analysis of Table I reveals that a particular sound was sometimes elongated to adjust the total length of that word. Thus, elongation of a sound in a word was a strategy in speech planning that the P used during speaking.

4.4 Lexical Level. For the lexical level analysis, the words either missed or wrongly used in the conversation were noted down. In case of words used wrongly, the correct words have been provided in the fourth column of Table III.
<table>
<thead>
<tr>
<th>Line #</th>
<th>Sentence Used</th>
<th>Missing/Incorrect Word(s)</th>
<th>Correct Word</th>
<th>Correct Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>is ko gaani hoṭi ai</td>
<td>ko (to)</td>
<td>ki (his)</td>
<td>is ki gaani hoṭi ai (it has a band)</td>
</tr>
<tr>
<td>11</td>
<td>GAANI is ko gaani do ain</td>
<td>ko (to)</td>
<td>ki (his)</td>
<td>GAANI is ki gaani do ain (band it has two bands)</td>
</tr>
<tr>
<td>55</td>
<td>shorey KHARAAB ho jaaṭi hain</td>
<td>sey (with)</td>
<td>-</td>
<td>shorey sey KHARAAB ho jaaṭi hain (they are destroyed in gravy)</td>
</tr>
<tr>
<td>78</td>
<td>haan (.) phir shaadi kar di ai</td>
<td>di (gave)</td>
<td>li (did)</td>
<td>haan (.) phir shaadi kar li ai (yes he has got married once again)</td>
</tr>
<tr>
<td>133</td>
<td>tumhaarey aboo key (.) bhaineyn teen thin (three sisters were to your father)</td>
<td>key (their)</td>
<td>ki (his)</td>
<td>tumhaarey aboo ki (.) bhaineyn teen thin (your father had three sisters)</td>
</tr>
<tr>
<td>201</td>
<td>ey ↑aftey meyn aftey [meyn baad ↑ meyn:: ] (eh after in Saturday after in Saturday in)</td>
<td>meyn (in)</td>
<td>key (to)</td>
<td>ey ↑aftey meyn aftey [key baad ↑ meyn:: ] (eh after Saturday after Saturday)</td>
</tr>
<tr>
<td>214</td>
<td>↓ laal naa laal neyee is ko daari ( )</td>
<td>ko (to)</td>
<td>ki (his)</td>
<td>↓ laal naa laal neyee is ki daari ( ) (red no it’s beard)</td>
</tr>
</tbody>
</table>
(i) **Analysis & Interpretation.** Table III reveals that all the words skipped by the P in Session 1 were function words (except one word ‘din’ (day), which is a noun). However, she tended to say nouns, verbs, adjectives and adverbs. Crystal (1999) labels nouns, verbs, adjectives and adverbs collectively as *content words* and he names pronouns, interjections, conjunctions and prepositions as *function words.* Content words carry the main content of the encoded message whereas function words just aid in putting ideas together. The P did not skip content words in her speech and this made her speech telegraphic in nature. Inclusion of only the content words in her speech can also be because searching them from the *mental lexicon* was relatively easier as the concrete, visible context lowered the “cognitive demands” needed for their initiation and thus making the speech production process less complicated (Werker & Fennell’s term (2008) as cited in Everaert, Lentz, Mulder, Nilsen & Zondervan, 2010).

The P’s speech having only the content words can also be explained using Skinner’s terminology. The visible, concrete *stimulus (signified)* brought a desired *response (signifier)* resulting in an automatic *reinforcement (signification)* (Skinner, 1957). Lack of the function words in her speech was because the signification process in the P’s speech demanded a tangible, sense experience.

Table IV displays the words that were changed by the P in her speech during Session 1.

**Table IV**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word (s) Used</th>
<th>Actual Word (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>wo, hai (<em>she, does</em>)</td>
<td>main, hoon (<em>I, do</em>)</td>
</tr>
<tr>
<td>Line</td>
<td>Urdu Word</td>
<td>English Translation</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
<td>---------------------</td>
</tr>
<tr>
<td>13</td>
<td>larka, larki (boy, girl)</td>
<td>male parrot, female parrot</td>
</tr>
<tr>
<td>23</td>
<td>dalwa (make it put on)</td>
<td>lagwaa (get it)</td>
</tr>
<tr>
<td>34</td>
<td>karwa (get it done)</td>
<td>khod (dig)</td>
</tr>
<tr>
<td>41</td>
<td>rakhwaati (keep)</td>
<td>daaltey (add)</td>
</tr>
<tr>
<td>47</td>
<td>rakhwa, KARWAAO (keep, get it done)</td>
<td>daal, BHOONO (add, fry)</td>
</tr>
<tr>
<td>48</td>
<td>rakhwaao, karwaaye (keep, get it done)</td>
<td>daalo, bhooney (add, fry)</td>
</tr>
<tr>
<td>49</td>
<td>rakhwaana, laana (keep, bring)</td>
<td>daalnaa, daalnaa (add, add)</td>
</tr>
<tr>
<td>50</td>
<td>karwaaye, rakhwaana (get it done, keep)</td>
<td>nikaal leyn, daalne (bring them out, add)</td>
</tr>
<tr>
<td>51</td>
<td>rakhwaaye (keep)</td>
<td>daalne (add)</td>
</tr>
<tr>
<td>74</td>
<td>dalwaatey (get it done)</td>
<td>daaltey (add)</td>
</tr>
<tr>
<td>81</td>
<td>kaali, CHITI (black, white)</td>
<td>badsoor, KHOOBSOORAT (ugly, beautiful)</td>
</tr>
<tr>
<td>91</td>
<td>toot (x2) (break)</td>
<td>phat, beemaar (tear, sick)</td>
</tr>
<tr>
<td>152</td>
<td>bismilaahirahmaaniraheem (in the name of Allah the merciful)</td>
<td>maashaalaa (may God take care of him)</td>
</tr>
<tr>
<td>168</td>
<td>karaati (got it done)</td>
<td>rakhti (kept)</td>
</tr>
<tr>
<td>247</td>
<td>ainak (power glasses)</td>
<td>nazar (eyesight)</td>
</tr>
<tr>
<td>267</td>
<td>larki (girl)</td>
<td>moanas (female)</td>
</tr>
</tbody>
</table>

(ii) Analysis & Interpretation. Table IV reveals the tendency in the P of using only three verbs, karwaanaa, dalwaanaa and rakhwaana (get something done, put, keep) to mean many actions (in Lines 23, 34, 41, 47 (x2), 48, 49, 50, 51, and 74). In Urdu, verbs are inflected depending on number, gender and case. The data reveal that
though the P overextended these three verbs to mean many actions such as lagwaanaa, khodnaa, daalnaa, bhoonanaa, nikaalnaa, rakhnaa (get, dig, add, fry, bring out, keep), she used them with correct word endings or inflections. She did the same with nouns like in Lines 13 and 267 when the word laṟkaa (boy) was used to mean tọṯaa (a male parrot) and the word laṟki (girl) was used to mean tọṯee (a female parrot) or a female. Table IV also reveals that the P made such substitutions within the same word category. Thus, she used language in a purely idiosyncratic but rule-governed way. The words in her speech were flexible and had “plastic meanings” (in Barthes’ terminology, 1982), as their meaning was not fixed but was context-bound.

Table V displays more features of the P’s speech at the lexical level in which the P mixed up two words and created a new word. She sometimes took both words from the same language and sometimes mixed words from two different languages. The column ‘actual words’ displays the words mixed together and the language from which they were taken.

**Table V**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word (s) Used</th>
<th>Actual Word(s)</th>
<th>Punjabi/English Word(s) Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>KÔTI (x2), KOTAA (---, ---)</td>
<td>KABOOTAR+ TÔTI(x2), KABOOTAR +TÔTAA (pigeon+ female parrot, pigeon+male parrot) all words in Punjabi &amp; also in Urdu</td>
<td>-</td>
</tr>
<tr>
<td>16</td>
<td>kọṯaa, kọṯi (---, ---)</td>
<td>kabootṯar+ tọṯaa, kabootṯar+ tọṯi (pigeon+male parrot, pigeon+ female parrot) all words in Punjabi &amp; also in Urdu</td>
<td>-</td>
</tr>
<tr>
<td>25</td>
<td>machwaa (---)</td>
<td>machli+kachwaa (fish in Urdu+tortoise in Punjabi &amp; also in Urdu)</td>
<td>-</td>
</tr>
<tr>
<td>27</td>
<td>mhains (---)</td>
<td>majh+bhains (buffalo in Punjabi+buffalo in Urdu)</td>
<td>-</td>
</tr>
</tbody>
</table>
(iii) Analysis & Interpretation. Table V displays that the P created many hybrid words in Session 1. She coined words like mhains (Line 27) and roshṭ (Line 36) by clipping two words of Punjabi and Urdu (majh, bhains) and two words from English and Urdu (roast, goshṭ) and creating a third one. The table also reveals that she sometimes used the compounding technique to create words. It was an idiosyncratic way of word formation and the multilingual background of the P aided her in doing so. In her pidgin-like language, the substrate (structure) was always Urdu but the lexifer (vocabulary) could be taken from Punjabi or English. Her mixing of two words and creating a third one can be explained as Spoonerism in the “normal” speech (Crystal, 1994), that is, tongue slips due to nervousness. Clark & Clark (1977) explain such blends in “normal” speech to be the result of misderivations as the speaker is upset or annoyed so s/he produces a wrong word, but interestingly that wrong word
either has some phonemes from the word intended or is semantically related with it. The creation of hybrid words in the P’s speech was the result of such misderivations.

Clipping of the sounds of two words and blending them together can be explained in another way: The P was a multilingual and in all the examples mentioned in Table V (except in Line 159) exposure to tangible, concrete phenomena initiated signs from two different languages at the same time resulting in intermingling of the sounds of both words. This can be detected from her performance. The language from which the signifier got initiated first, its phonemes got precedence over the other (Lines 27 & 36). The searching for the exact signifier for a specific signified was conscious and not due to nervousness. This can be detected from the fact that every time, the signs selected by the P from her mental lexicon were selected from the same semantic field (words related to each other in terms of meaning) irrespective of the language that she used (a term explained in Crystal, 2006). This explanation furthers the significance of exposure to tangible, visible experience for initiating the speech recovery process in the P.

4.5 Syntactic Level. Table VI displays the P’s performance in short utterances. A * has been mentioned in the third column for the sentences that were syntactically right but contextually wrong.

Table VI

<table>
<thead>
<tr>
<th>Line #</th>
<th>Sentences Produced</th>
<th>Total # of Sentences Produced</th>
<th>Correct Sentence(s) Produced</th>
<th>Total # of Correct Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>wo parti hai BISMilaahirahmaani o°raheem°° (she recites in the name of Allah the merciful)</td>
<td>1</td>
<td>wo parti hai BISMilaahirahmaani o°raheem°° (she recites in the name of Allah the merciful)</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>likhaa huaa unho° ney, deya:: diaa saari ( ) talaa::r talaa::r (they wrote it, gave it all sword sword)</td>
<td>2</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td><code>unho n ney likhaa hu aa thaa</code> (they had written it)</td>
<td></td>
<td><code>unho n ney likhaa hu aa thaa</code> (they had written it)</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------</td>
<td>---</td>
<td>---------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>is ko gaani hoṭi ai (to it is a band)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>is ↓ko gaani do ain (to it there are two bands)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>eyk↑larkaa hoṭaa hai, eyk ↑larki hoṭi hai (there’s a boy, there’s a girl)</td>
<td>2</td>
<td>eyk↑larkaa hoṭaa hai, eyk ↑larki hoṭi hai (there’s a boy, there’s a girl)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>in beychaarion ko oo::k lagi thi (these girls were feeling---)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>None</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>None</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>None</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Line</td>
<td>Text</td>
<td>Tag</td>
<td>Score</td>
<td>Confidence</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>-----</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>72</td>
<td>phir mein ey ey kartey ain, shoraa lagtaa ai naan (then in eh eh do it, gravy gravy looks like)</td>
<td>2</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>76</td>
<td>↓kaaey ney dobaaraa SHAADI karaa ↓di (--- got married again)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>87</td>
<td>↓meyri ↑chaa::r neyee teen neyee neyee neyee (mine four no three no no)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>89</td>
<td>ey::k do teen chaar paans (.) paans (one two three four------)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>91</td>
<td>aap ki kameez toot geyee ai, najmaa ki murghi bi toot geyee ai (your shirt is broken, Najma’s hen is also broken)</td>
<td>2</td>
<td>*aap ki kameez toot geyee ai, *najmaa ki murghi bi toot geyee ai (your shirt is broken, Najma’s hen is also broken)</td>
<td>*2</td>
</tr>
<tr>
<td>98</td>
<td>keyaa ↑ai (what is it)</td>
<td>1</td>
<td>keyaa ↑ai (what is it)</td>
<td>1</td>
</tr>
<tr>
<td>102</td>
<td>mumtaaz yey neyee neyee, meyraa naam kaun ai (this is Mumtaz no no, who’s my name)</td>
<td>2</td>
<td>mumtaaz yey neyee neyee (this is Mumtaz no no)</td>
<td>1</td>
</tr>
<tr>
<td>105</td>
<td>yey ↑meyri bhain kaa naam ↑ai (this is my sister’s name)</td>
<td>1</td>
<td>yey ↑meyri bhain kaa naam ↑ai (this is my sister’s name)</td>
<td>1</td>
</tr>
<tr>
<td>107</td>
<td>kaun naam ai (who name is it)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>114</td>
<td>↓mumtaaz neyee meyraa naal, meyraa naam ai (not Mumtaz my--- is, my name is)</td>
<td>2</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>117</td>
<td>dafaa karo ↓yey: (leave this)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Page</td>
<td>Sentence</td>
<td>Count</td>
<td>Previous Sentence</td>
<td>Count</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>-------</td>
<td>-------------------</td>
<td>-------</td>
</tr>
<tr>
<td>125</td>
<td>zabaan neyee ai naa (<em>have no tongue</em>)</td>
<td>1</td>
<td>zabaan neyee ai naa (<em>have no tongue</em>)</td>
<td>1</td>
</tr>
<tr>
<td>132</td>
<td>zabaan neyee par sakthi (<em>tongue can’t read</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>133</td>
<td>teen bhaikeyn thin naan, teen thin naan, tumhaarey aboo key() bhaikeyn teen thin (<em>had three sisters, they were three</em>)</td>
<td>3</td>
<td>teen bhaikeyn thin naan, teen thin naan (<em>had three sisters, they were three</em>)</td>
<td>2</td>
</tr>
<tr>
<td>136</td>
<td>junaa (2.0) junaa ^ee ai (<em>it’s-------</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>138</td>
<td>junaa achha [ junaa ] (<em>--- ok---</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>140</td>
<td>junaa achha lagtaa ai ^naan (<em>I love---</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>142</td>
<td>aadi dor meyn (.) aa jaati hain, larkiaan jaldi aa jaati hain (<em>they come in---, the girls come back early</em>)</td>
<td>2</td>
<td>larkiaan jaldi aa jaati hain (<em>the girls come back early</em>)</td>
<td>1</td>
</tr>
<tr>
<td>144</td>
<td>tobaa astaghfaar ^BAS ^BAS (<em>God forbid stop stop</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>148</td>
<td>^neyee neyee naan (<em>no no not</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>166</td>
<td>zabaan neyee par sakthi naan (<em>tongue can’t read</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>168</td>
<td>haan: karaati thi (<em>yes got it done</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>176</td>
<td>main ( ) parti hoon, phir neyee sakthi hoon, namaaz bi neyee par sakthi (<em>I read, I can’t walk, I can’t even offer prayers</em>)</td>
<td>3</td>
<td>main ( ) parti hoon, phir neyee sakthi hoon, namaaz bi neyee par sakthi (<em>I read, I can’t walk, I can’t even offer</em>)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>prayers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>bas yeyee jo jo kuch hoţaa ai karnaa, pař leyti hoon (this is what all done, I can read)</td>
<td>2</td>
<td>pař leyti hoon (I can read)</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>neyee (.) pař sakţi (can’t read)</td>
<td>1</td>
<td>neyee (.) pař sakţi (can’t read)</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>neyee pař sakţi (can’t read)</td>
<td>1</td>
<td>neyee pař sakţi (can’t read)</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>main neyee par sakti (I can’t read)</td>
<td>1</td>
<td>main neyee par sakti (I can’t read)</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>pař neyee sakţi, zabaan chali geyee ai (can’t read, tongue is lost)</td>
<td>2</td>
<td>pař neyee sakţi, zabaan chali geyee ai (can’t read, tongue is lost)</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>yey neyee paţaa (I don’t know)</td>
<td>1</td>
<td>yey neyee paţaa (I don’t know)</td>
<td></td>
</tr>
<tr>
<td>196</td>
<td>[ junaa junaa ] ho geyaa (it’s------)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>199</td>
<td>( ) phir hathaa asaa [ afaa aťaa ] (then--------)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>201</td>
<td>afťey [ meyň baad ↑meyň::] (after in Saturday in)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>203</td>
<td>iťraar (.) iťraar (------)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>207</td>
<td>aasaf(.) daaktar aasaf(.) daaktar aasaf alwi (Asaf Asaf doctor Asaf Alavi)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>214</td>
<td>laal neyee is ko daari ( ) ↓daari:: (1.0) kaal (not red to its beard beard---)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>216</td>
<td>↓neelwi daari waalaa (the one with a---beard)</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Line</td>
<td>Sentence</td>
<td>Reset</td>
<td>Location</td>
<td>Score</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
<td>-------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>228</td>
<td>ḷṭraar ai naan, aa:j ↓kon dil ai (<em>not---, what heart is today</em>)</td>
<td>2</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>239</td>
<td>ban ṣad bal (---------)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>245</td>
<td>yey bi neyee paṭaa (<em>don’t know this as well</em>)</td>
<td>1</td>
<td>yey bi neyee paṭaa (<em>don’t know this as well</em>)</td>
<td>1</td>
</tr>
<tr>
<td>247</td>
<td>ainak neyee ↓ai (<em>have no glasses</em>)</td>
<td>1</td>
<td>ainak neyee ↓ai (<em>have no glasses</em>)</td>
<td>1</td>
</tr>
<tr>
<td>251</td>
<td>↓see or ey: ↓ o (<em>c or a</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>259</td>
<td>main kaiṭi hoon, budaa aḍmi ↓par sakṭaa (<em>I say, an old man can read</em>)</td>
<td>2</td>
<td>main kaiṭi hoon (<em>I say</em>)</td>
<td>1</td>
</tr>
<tr>
<td>261</td>
<td>par neyee sakṭi (<em>I can’t read</em>)</td>
<td>1</td>
<td>par neyee sakṭi (<em>I can’t read</em>)</td>
<td>1</td>
</tr>
<tr>
<td>267</td>
<td>wo laṛk ai (<em>she’s a girl</em>)</td>
<td>1</td>
<td>wo laṛk ai (<em>she’s a girl</em>)</td>
<td>1</td>
</tr>
<tr>
<td>271</td>
<td>beyṛiiaa maar ḍeyṭaa ai ↑naaṇ (<em>a wolf kills</em>)</td>
<td>1</td>
<td>beyṛiiaa maar ḍeyṭaa ai ↑naaṇ (<em>a wolf kills</em>)</td>
<td>1</td>
</tr>
<tr>
<td>276</td>
<td>mujey kaalaa neyee achi lagṭi (<em>I don’t like a black</em>)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>278</td>
<td>kaalaa aḍmi neyee aĉhaa lagṭaa (<em>I don’t like a black man</em>)</td>
<td>1</td>
<td>kaalaa aḍmi neyee aĉhaa lagṭaa (<em>I don’t like a black man</em>)</td>
<td>1</td>
</tr>
<tr>
<td>287</td>
<td>eyk ee ai (<em>there’s one</em>)</td>
<td>1</td>
<td>eyk ee ai (<em>there’s one</em>)</td>
<td>1</td>
</tr>
<tr>
<td>288</td>
<td>saari ho geyee ai, baad meyṛ neyee ↓par sakṭi (<em>all is done, after that can’t read</em>)</td>
<td>2</td>
<td>baad meyṛ neyee ↓par sakṭi (<em>after that can’t read</em>)</td>
<td>1</td>
</tr>
<tr>
<td>305</td>
<td>yeyee seyee ai, budee ho geyee hoon (<em>that’s right, I’ve grown old</em>)</td>
<td>2</td>
<td>yeyee seyee ai, budee ho geyee hoon (<em>that’s right, I’ve grown old</em>)</td>
<td>2</td>
</tr>
</tbody>
</table>
(i) **Analysis & Interpretation.** Table VI displays that the P produced a total of 84 sentences in her short utterances. Out of these, only 37 were correct. So, more than half of her performance at the sentential level was faulty. She tried to deal with some of the linguistic complexity by skipping the subject of the sentences (Lines 98, 176, 178, 182, 184, 188, 261, 288 and 305) yet her performance at this level remained problematic.

Consider Table VII below for her performance in long utterances.

**Table VII**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Sentences Produced</th>
<th>Total # of Sentences Produced</th>
<th>Correct Sentence(s) Produced</th>
<th># of Correct Sentences Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>4, 5</td>
<td>koee par neyee sakti, yeyhee parti raiti hoon (can’t read someone, keep on reading this)</td>
<td>2</td>
<td>yeyhee parti raiti hoon (keep on reading this)</td>
<td>1</td>
</tr>
<tr>
<td>15,16</td>
<td>us ko KOTI hai, KOTI hohti hai ↑naan, KOTAAR hotha ai, kotha ko thi deyko naan, khaa rey ainh ↑naan, aap ko paṭaa ↑neyee lagaa (to his a-- , it’s a-- , it’s a—look at------, they’re eating, didn’t you notice)</td>
<td>6</td>
<td>↑khaa rey ainh, aap ko paṭaa ↑neyee lagaa (they’re eating, didn’t you notice)</td>
<td>2</td>
</tr>
<tr>
<td>18,19</td>
<td>har cheez ↓ko ↓goraa oṭṭaa ai, kaiṭey ainh:: ZINDAGHI meyn har cheez hoṭi ai, jorey ki ↓hoṭi ai (to everything in life is-- , they say everything in life is, is for pairs)</td>
<td>3</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>33,34</td>
<td>wo kaalaa khargosh raam sey baiṭhaa huaa thaa, us ney thọraa saa kaam bi kar liaa, boṭ ee::t thaa, yey</td>
<td>4</td>
<td>us ney thọraa saa kaam bi kar liaa (it did some)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>haraami har jagaa karwaa deyey aïn (that black rabbit was sitting---, it did some work as well, these bastards get it done everywhere)</td>
<td>work as well)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38,39</td>
<td>↓bhindieyn bhi pailey (3.0) yey ey pakaatï hain, dhoaa key ↑naan yey:: (2.0) ey parparaatï, yey kaitey hain (okras also eh they cook them, after --- eh------, they say)</td>
<td>3</td>
<td>yey kaitey hain (they say)</td>
<td>1</td>
</tr>
<tr>
<td>41,42</td>
<td>pailey yey ↓rakhwaatï aïn (1.0) PAANI, yey keyaa hòtåa ↑hai (1.0) paani, yey keyaa hòtåa ↑hai (first they keep water, what is it water, what is it)</td>
<td>3</td>
<td>yey keyaa hòtåa ↑hai (1.0) paanni, yey keyaa hòtåa ↑hai (what is it water, what is it)</td>
<td>2</td>
</tr>
<tr>
<td>44,45</td>
<td>piniaun meyn taniaa naan, wo is meyn keyaa hòtåa hai, keyaa otaa ai (in --- coriander no, what’s that in it, what is it)</td>
<td>3</td>
<td>wo is meyn keyaa hòtåa hai, keyaa otaa ai (what’s that in it, what is it)</td>
<td>2</td>
</tr>
<tr>
<td>63,64</td>
<td>soolwi main parżaa neyee yey, cheeni main neyee, cheeni main neyee pailey parwaatï ai, keyaa hòtåa ai, keyaa hòtåa ai (in --- is added this, in sugar no, not in sugar first she --- it, what is it, what is it)</td>
<td>5</td>
<td>keyaa hòtåa ai (x2) (what is it)</td>
<td>2</td>
</tr>
<tr>
<td>66,67</td>
<td>sooji main ey (2.0) paan, yey hòtåa ai, keyaa hòtåa ↑hai, keyaa hòtåa ai(x2) (in samolina ey ---, it is, what</td>
<td>5</td>
<td>yey hòtåa ai, keyaa hòtåa ↑hai, keyaa hòtåa ai (x2)</td>
<td>4</td>
</tr>
<tr>
<td>69,70</td>
<td>haan lagťaa ai, thọraa saa lagtey aĩn, zaraa THEEK ho jaatťaa ai, yey ( ) ř° lagtey aĩn ř° naan, zaraa ho jaatťaa ai, LAAL ho jaatťaa ai (yes it seems, look a little bit, it becomes a little bit ok, they look, it becomes ok, it turns red)</td>
<td>6</td>
<td>↓zaraa THEEK ho jaatťaa ai, LAAL ho jaatťaa ai (it becomes ok, it turns red)</td>
<td>2</td>
</tr>
<tr>
<td>74,75</td>
<td>SHEERAA (.) is meyѩ dalwaťey aĩn, kartęy raiţey aĩn, kartęy raiţey aĩn, phir ↓ho jaatťaa ai, hal jaatťaa ai, phir (1.0) hee:: ho jaatťaa ai hee:: (sugar mixture is made done inside, keep on doing, keep on doing, then it is done, it is---, then oil is done)</td>
<td>6</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>78,79</td>
<td>phir shaaddr kar dį ai, phir SHAADI ho geyee ↑ai naan, kaaey ki shaaddr hue geyee ↓aį, KHAIBAR aur(.) SAABAR (2.0) bachiaaŋ ho geyee ↓aį (he has got married again, another marriage took place, --- marriage has taken place, Khaiber and Sabar two girls are born)</td>
<td>4</td>
<td>phir SHAADI ho geyee ↑ai naan, KHAIBAR aur(.) SAABAR (2.0) bachiaaŋ ho geyee ↓aį (another marriage has taken place, Khaiber and Sabar two girls are born)</td>
<td>2</td>
</tr>
<tr>
<td>152&amp;153</td>
<td>meyraa BILOO bis: neyee yey neyee, zabaan neyee ai, chali geyee</td>
<td>3</td>
<td>zabaan neyee ai, chali</td>
<td>2</td>
</tr>
<tr>
<td>Sentence</td>
<td>Page Numbers</td>
<td>Translation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>-------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ai (my Biloo --- no not this, there’s no tongue, it’s gone)</strong></td>
<td></td>
<td><strong>geyee ai (there’s no tongue, it’s gone)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>157,158 biloo meyraa bachaa THEEK ho:</strong></td>
<td>2</td>
<td><strong>billoo meyraa bachaa THEEK ho:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>geyaa:, alaa ṭaalaa meyrey bachey ko ZINDAGHI ↑dey:</strong></td>
<td>2</td>
<td><strong>(Biloo my child got well, May Almighty Allah bless him with life)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>159,160 namaaz PARTAA ai, roz partaa ai,</strong></td>
<td>8</td>
<td><strong>namaaz PARTAA ai,</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>noz partaa ai, namaaz partaa ai,</strong></td>
<td>4</td>
<td><strong>noz partaa ai,</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>namaazaa ai, namaazi ađmi ai,</strong></td>
<td>4</td>
<td><strong>namaaz partaa ai,</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>salmaan rozaa rozaa partaa ai, ra rozaa ey (  ) rozaa [ROZ] (he offers his prayers, he daily offers, he --- offers, he offers his prayers, he’s ---, he’s regular in offering prayers, Salman----- offers, ---fast eh fast daily)</strong></td>
<td></td>
<td><strong>namaaz partaa ai,</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>241,242 bud key baad meyn hoṭaa ai ↓bud, bud key baad ((laughs)) (6.0) budaa neyee par sakṭaa (after Wednesday is Wednesday, after Wednesday the old one can’t read)</strong></td>
<td>2</td>
<td><strong>bud key baad ((laughs)) (6.0) budaa neyee par sakṭaa</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(ii) **Analysis & Interpretation.** Table VII shows the P’s performance in long utterances during Session 1. She produced a total of 67 sentences. Out of these, 30 were correct. She had problems when producing long utterances. She tried to deal with some of them by skipping the subject (Lines 4 & 5, 15 & 16, 38 & 39, 44 & 45, 63 & 64, 66 & 67, 69 & 70, 78 & 79, 152 & 153 and 159 & 160) yet her performance at the sentential level remained problematic as she produced a total of 17 long utterances in Session 1 and only two of them were fully correct (in Lines 157 & 158 and 264 & 265).

The P’s skipping of the subject of some sentences can be because she thought the contextual information to be sufficient for conveying her message in its entirety to her interlocutor and thus, she treated the mentioning of the subject or agent as *redundancy* or unnecessary repetition (Belletti & Rizzi, 2000).

Overall, the P produced a total of 151 sentences (84 in short utterances and 67 in long utterances). Out of these, 67 were correct (37 in short utterances and 30 in long utterances). So, she produced 44.37% correct sentences.

Table VIII below reveals the P’s performance that was fully correct at the syntactic level during Session 1.
(iii) Analysis & Interpretation. During Session 1, the P responded 124 times to the R. Out of these, her fully correct responses were only 8. So, overall, the ratio of responding correctly and communicating successfully was 6.45%. This can be checked from the data that in all the lines displayed in Table VIII, the P was talking on a topic with which she was attached. Mostly, she produced single sentence utterances correctly except in line 176 in which she produced a two-clause sentence. Overall, she produced nine sentences. In Lines 8, 31, 105, 176, 182, 184, 267 and 278 she produced eight single-clause, simple sentences and in Line 176 she produced a two-clause complex sentence. This indicates that the P could produce simple, single-clause sentences with fewer problems yet she had serious problems while producing compound or complex sentences. The P’s reliance on simple, single-clause sentences can be due “the minimalist program” at work (Chomsky’s idea as cited in Belletti & Rizzi, 2002). In language acquisition, this program results in selecting the simplest possible options available in one’s native language for rules acquisition and helps in dealing with the linguistic input or speech reception in a simplified way. The P used this program in a new way as she molded the program for simplifying her speech production process.

**Table VIII**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>↑haan ॐunhon ney likhaa huaa thaaॐ (yes they had written)</td>
</tr>
<tr>
<td>31</td>
<td>yey is kaa ka kazan ai naan (.) kaalaa saa (he’s her cousin a black one)</td>
</tr>
<tr>
<td>105</td>
<td>yey ↑meyri bhain kaa naam ↑ai (it’s my sister’s name)</td>
</tr>
<tr>
<td>176</td>
<td>( ) parti hoon to ↓phir neyee sakṭi hoon ↓namaaz bi neyee par sakṭi</td>
</tr>
<tr>
<td></td>
<td>(I read that then I can’t walk I can’t even offer my prayers)</td>
</tr>
<tr>
<td>182</td>
<td>neyee (.) par sakṭi (can’t read)</td>
</tr>
<tr>
<td>184</td>
<td>neyee par sakṭi (can’t read)</td>
</tr>
<tr>
<td>267</td>
<td>↓achaa ॐwo laṛki aiॐ (ok she’s a girl)</td>
</tr>
<tr>
<td>278</td>
<td>kaalaa aḍmi neyee achaa lagṭaa (I don’t like a black man)</td>
</tr>
</tbody>
</table>
This control over speech production exhibits that the P could decide the syntactic content by using the minimalist program effectively for encoding her communicative intent. While discussing about the language faculty after aphasia, Chomsky says that aphasia affects only performance whereas competence remains intact (Chomsky’s ideas as cited in Everaert, Lentz, Mulder, Nilsen & Zondervan, 2010). This is exactly what happened with the P’s speech performance.

Table IX displays the P’s performance in prolonged talk over Session 1 in terms of the response time taken by her, the number of pauses, fumbles and repetitions made.

Table IX

<table>
<thead>
<tr>
<th>Lines #</th>
<th>Response Time (in Seconds)</th>
<th># of Pauses Taken</th>
<th># of Fumbles Made</th>
<th># of Repetitions Made (in Words &amp; Phrases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>47-51</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>53-55</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>81-83</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>162-164</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>171-174</td>
<td>3</td>
<td>1</td>
<td>-</td>
<td>4</td>
</tr>
</tbody>
</table>

(iv) Analysis & Interpretation. The P had 124 exchanges of speech with the R. She held prolonged talk in only 5 of them. Thus, the ratio of her having prolonged talk was 4.03%. In all such exchanges, she was talking on a topic with which she was attached. In all the lines mentioned in Table IX, the P responded quickly, took few and brief pauses between her speech and fumbled less. It has been mentioned that in all these lines, she was talking about a topic that she liked and was familiar with. Thus, emotional attachment resulted in an extended and speedy speech production process.
Section II

Fluency Check

4.6 Intonation. Table X displays the tonal features of the P’s speech in Session 1.

Table X

<table>
<thead>
<tr>
<th>Line #</th>
<th>Rising Tone (Frequency)</th>
<th>Falling Tone (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>13</td>
<td>Thrice</td>
<td>-</td>
</tr>
<tr>
<td>15</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>16</td>
<td>Thrice</td>
<td>-</td>
</tr>
<tr>
<td>18</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>19</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>38</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>41</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>42</td>
<td>Twice</td>
<td>-</td>
</tr>
<tr>
<td>49</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>50</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>51</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>61</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>69</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>74</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>76</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>78</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>79</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>82</td>
<td>Twice</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>83</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>87</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>95</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>98</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>105</td>
<td>Twice</td>
<td>-</td>
</tr>
<tr>
<td>114</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>117</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>120</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>132</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>136</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>140</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>144</td>
<td>Twice</td>
<td>-</td>
</tr>
<tr>
<td>148</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>152</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>155</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>158</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>162</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>163</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>164</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>172</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>173</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>176</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>178</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>180</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>190</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>192</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>205</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>208</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>212</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>214</td>
<td>-</td>
<td>Thrice</td>
</tr>
<tr>
<td>216</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>220</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>225</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>228</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>230</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>241</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>247</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>251</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>254</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>256</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>259</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>264</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>267</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>269</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>271</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>274</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>287</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>299</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>303</td>
<td>Once</td>
<td>-</td>
</tr>
</tbody>
</table>

(i) **Analysis & Interpretation.** Table X displays the P’s ability of tone management. Her linguistic performance following a rising tone was usually correct (Lines 13, 16, 105 and 144) and her performance following a falling or a whisper-like tone was
errorneous (Lines 11, 18, 41, 49, 50, 51, 70, 76, 114, 152, 163, 212, 214, 216, 228, 230 and 259). Thus, a rising tone was indicative of her confidence about her linguistic performance. Likewise, a falling tone indicated her lack of confidence. The P also used a rising tone as a hint for something important as she stressed the words preceding or following the rising tone (Lines 144, 158 and 205). Sometimes, she achieved the same objective by prolonging a sound in the word following the rising tone (Lines 254 and 303). The rising tone in her speech worked the same as question tags do in the “normal” speech, that is to add emphasis (Crystal, 2006). The P replaced a linguistic feature (question tag) with a paralinguistic feature (rising intonation) as the linguistic channel of communication required more muscular energy than the non-linguistic one. This aided her in shedding some of her message encoding burden.

A falling tone was also used as a hint for the interlocutor to pay more attention and guess the meaning from contextual clues. Sometimes, the P explicitly asked the interlocutor to provide the information by posing a question as in Lines 61 and 228. Thus, the P could convey a variety of messages to her interlocutor by experimenting with her intonation.

Tone management demands control over the vocal tract which is an important feature of “normal” speech (Crystal, 1994). The P’s ability to control her speech apparatus shows that she was actively participating in the speech production process like a normal human being.

Table X also reveals that the P could mix different tones in a single stretch of talk (Lines 38, 41, 87, 98, 172, 173, 205 and 271). So, the P could manage her intonation according to her communicative intent. In Lines 8-208 (of Table X), she was talking about a topic with which she was attached and in Lines 212-303, she was doing reading practice. Thus, she could experiment with intonation in all situations and the topic of speaking did not affect this ability.

**4.7 Stress.** Table XI below displays the words which were stressed by the P during Session 1.
### Table XI

<table>
<thead>
<tr>
<th>Line #</th>
<th>Stressed Word (s)</th>
<th># of Stressed Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>BISMILAHHIRAHMAANIRAHEEM (in the name of Allah the merciful)</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>GAANI (band)</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>KOTI (x2), KOTAA (------)</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>ZINDAGHI (life)</td>
<td>1</td>
</tr>
<tr>
<td>47</td>
<td>KARWAAO (get it done)</td>
<td>1</td>
</tr>
<tr>
<td>48</td>
<td>PINDIAAN (okras)</td>
<td>1</td>
</tr>
<tr>
<td>50</td>
<td>PINDIAAN (okras)</td>
<td>1</td>
</tr>
<tr>
<td>53</td>
<td>SHORAA, KHARAAB (gravy, destroy)</td>
<td>2</td>
</tr>
<tr>
<td>54</td>
<td>SHORAA (gravy)</td>
<td>1</td>
</tr>
<tr>
<td>55</td>
<td>KHARAAB (destroy)</td>
<td>1</td>
</tr>
<tr>
<td>69</td>
<td>THEEK (ok)</td>
<td>1</td>
</tr>
<tr>
<td>70</td>
<td>LAAL (x2) (red)</td>
<td>2</td>
</tr>
<tr>
<td>74</td>
<td>SHEERAA (sugar mixture)</td>
<td>1</td>
</tr>
<tr>
<td>76</td>
<td>SHAADI (marriage)</td>
<td>1</td>
</tr>
<tr>
<td>78</td>
<td>KHAIBAR, SHAADI (Khaiber, marriage)</td>
<td>1</td>
</tr>
<tr>
<td>79</td>
<td>KHAIBAR, SAABAR (Khaiber, Sabar)</td>
<td>1</td>
</tr>
<tr>
<td>81</td>
<td>CHITI (white)</td>
<td>1</td>
</tr>
<tr>
<td>143</td>
<td>JUNAA (Friday)</td>
<td>1</td>
</tr>
<tr>
<td>144</td>
<td>BAS (x2) (that’s it)</td>
<td>2</td>
</tr>
<tr>
<td>146</td>
<td>SOFAA (sofa)</td>
<td>1</td>
</tr>
<tr>
<td>152</td>
<td>BILOO (Biloo)</td>
<td>1</td>
</tr>
<tr>
<td>157</td>
<td>THEEK (ok)</td>
<td>1</td>
</tr>
<tr>
<td>158</td>
<td>ZINDAGHI (life)</td>
<td>1</td>
</tr>
</tbody>
</table>
(i) Analysis & Interpretation. Table XI reveals that the P stressed only the content words in her utterances. Thus, in all instances, she stressed either a noun or a verb or an adjective. In Lines 4, 11, 15, 18, 48, 50, 53, 54, 74, 76, 78, 79, 143, 146, 152, 158, 160, 163, 173, 235 and 264 she stressed nouns. In Lines 47, 144, 159 and 171 she stressed verbs and in Lines 53, 55, 69, 70, 81, 157 and 162 she stressed adjectives. Generally, stress carries emotional contours of the “normal” speech (Roach, 1983). In case of the P, this was not the case as she stressed the content words because she thought them to contain the communicative intent and said them accurately along with stress regardless of whether she liked them or not. Thus, the P’s use of stress exhibits her consciousness about words’ identity in the communication process. She stressed only the most important one only as she wanted to make it easily intelligible to the interlocutor (Crystal, 2006).

4.8 Tempo. The tempo of the P’s speech over Session 1 is displayed in Tables XII and XIII.

<table>
<thead>
<tr>
<th>Line #</th>
<th>Response Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>94</td>
<td>4 sec.</td>
</tr>
<tr>
<td>97</td>
<td>5 sec.</td>
</tr>
</tbody>
</table>

Table XII
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>2 sec.</td>
</tr>
<tr>
<td>119</td>
<td>2 sec.</td>
</tr>
<tr>
<td>122</td>
<td>6 sec.</td>
</tr>
<tr>
<td>135</td>
<td>2 sec.</td>
</tr>
<tr>
<td>151</td>
<td>3 sec.</td>
</tr>
<tr>
<td>170</td>
<td>3 sec.</td>
</tr>
<tr>
<td>195</td>
<td>6 sec.</td>
</tr>
<tr>
<td>198</td>
<td>2 sec.</td>
</tr>
<tr>
<td>211</td>
<td>2 sec.</td>
</tr>
<tr>
<td>219</td>
<td>2 sec.</td>
</tr>
<tr>
<td>238</td>
<td>3 sec.</td>
</tr>
<tr>
<td>244</td>
<td>5 sec.</td>
</tr>
<tr>
<td>253</td>
<td>3 sec.</td>
</tr>
<tr>
<td>258</td>
<td>2 sec.</td>
</tr>
<tr>
<td>280</td>
<td>2 sec.</td>
</tr>
<tr>
<td>283</td>
<td>2 sec.</td>
</tr>
</tbody>
</table>

(i) **Analysis & Interpretation.** The P took different amount of response time for different topics. She took more time to respond in speaking practice during reading activities (Lines 94, 97, 101, 119, 122, 211, 219, 238, 244, 253, 258, 280 and 283). However, in Lines 101 and 151 she took a brief time to respond even in formal practice because the topics were related to her two favorite persons, namely her sister and her eldest grandson. Though in both these cases, she was unsure of what she had to say yet she responded quickly. This indicates that emotional attachment with a topic resulted in a speedy response.
The tempo of the P’s speech in Session 1 was also analyzed by studying the pauses during her utterances. They are mentioned in Table XIII.

**Table XIII**

<table>
<thead>
<tr>
<th>Line #</th>
<th>No. of Pauses</th>
<th>Duration of Pause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>One</td>
<td>9 sec.</td>
</tr>
<tr>
<td>38</td>
<td>Two</td>
<td>3 sec., 2 sec.</td>
</tr>
<tr>
<td>64</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>66</td>
<td>Two</td>
<td>2 sec., 2 sec.</td>
</tr>
<tr>
<td>75</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>79</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>82</td>
<td>Two</td>
<td>2 sec., 2 sec.</td>
</tr>
<tr>
<td>87</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>136</td>
<td>Two</td>
<td>2 sec., 2 sec.</td>
</tr>
<tr>
<td>164</td>
<td>One</td>
<td>3 sec.</td>
</tr>
<tr>
<td>171</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>203</td>
<td>One</td>
<td>4 sec.</td>
</tr>
<tr>
<td>208</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>214</td>
<td>One</td>
<td>4 sec.</td>
</tr>
<tr>
<td>241</td>
<td>One</td>
<td>6 sec.</td>
</tr>
<tr>
<td>264</td>
<td>Two</td>
<td>2 sec., 3 sec.</td>
</tr>
<tr>
<td>271</td>
<td>One</td>
<td>2 sec.</td>
</tr>
</tbody>
</table>
(ii) Analysis & Interpretation. Table XIII reveals that the P’s performance with brief pauses between her utterances was generally correct (Lines 79 and 171) and it was erroneous when she took longer pauses within her utterances (Lines 203 and 214). A long pause was indicative of unsurrity about her performance and can be detected from her faulty linguistic performance following long pauses yet in some instances she paused longer within her utterances to plan her speech as in Lines 38 and 66, she was telling the recipes of some dishes and wanted to be exact and during the pauses, she could concentrate and think about the exact words. Thus, the P could control the tempo of her speech according to her intentions.

In all the lines with brief pauses within utterances, she was talking about a topic that she loved. Thus, attachment with the topic caused more language production. This can be checked from Lines 4 & 5, 15 & 16, 33 & 34, 41 & 42, 47-51, 53-55, 63 & 64, 66 & 67, 69 & 70, 74 & 75, 78 & 79, 133, 162-164 and 171-174. In “normal” speech, the speed of speaking reflects the intentions of the speaker (Roach, 1983). In all the lines mentioned above, brief pauses within the speech indicate the P’s excitement to express which accelerated the speed of her response.

Crystal (2006) explains pauses within normal speech as a way of emphasizing words identities (p. 248). The use of pauses within the P’s speech can also be due to her consciousness about word identities.

4.9 Speech Performance in Reading Activities. It can be checked from Lines 92-305 that the P’s speech performance generally became faulty in formal reading activities because they made her conscious of her linguistic inability and it resulted in reluctance and very short responses (Lines 95, 120, 123, 127, 129, 146, 155, 192, 203, 205, 212, 216, 220, 225, 230, 233, 235, 239, 249, 251, 254, 256, 262, 269, 274, 281, 284, 287, 293, 295, 297, 299, 301 and 303). Her reluctance for speaking practice through reading can be detected from Lines 117, 125, 132, 148, 152 & 153, 155, 166, 182, 184, 186, 188, 241 & 242, 245, 247, 259, 261, 288, 291 and 305 in which she explicitly showed her lack of interest. The P sometimes performed correctly in some instances (Lines 95, 110, 123, 127, 129 and 207) and in all these lines, the P read the names of her loved ones (consisting of one to three words). Thus, attachment with an idea helped her in reading. As far as the use of religious expressions in speech is concerned, she could not use a religious expression correctly in the formal practice
situation (Line 152) but in informal practice, she could do so (Line 163). Thus, overall, formal speaking and reading practice activities made the P conscious and as a result, her performance became faulty.

4.10 The Doctor’s Opinion about the P’s Speech in Session 1. The doctor agreed with the R that the P tended to skip the function words in her speech. To him, this was because she considered the function words as unnecessary and that is why she did not include them in her speech. He also said that attachment with an idea aided the language recovery process throughout Session 1 (refer to DD II on the CD).

Section III

Overall Analysis & Interpretation of Session 1

In Session 1, the P had problems at all linguistic levels. At the phonemic level, she had problems in uttering some sounds. Mostly, she dealt with this problem by skipping them altogether (see Table I). There are 14 such instances during Session 1 when she skipped the problematic sounds altogether. The analysis of Table I indicates that all the sounds skipped during Session 1 were consonants. Sometimes, she elongated a neighboring vowel sound and compensated the skipped consonant in terms of total length of the word (see Table II). At the lexical level, she handled the linguistic problems by skipping certain words (see Table III) not because they were problematic but because she thought them to be unnecessary (refer to DD II on the CD). This reduced the burden of speech production for her.

At the lexical level, the words that were difficult to say, the P tended to either skip them altogether (see Table III) or replaced them with those that she could easily utter (see Table IV). It can be checked from the analysis of Table III that usually the words skipped in the P’s speech were the function words. Table IV reveals that all such substitutions were done within the same word category. She also overextended certain words to minimize the complexity involved in speech production (see Table IV) and sometimes created words because her linguistic background as a multilingual helped her in this process (see Table V).

At the syntactic level, she simplified the process by creating agentless sentences (see Tables VI & VII) and by usually using simple, single-clause sentences (see Table VIII). The topic of speaking did not affect performance at the phonemic
and lexical levels (see Tables I & III) yet at sentential level, it resulted in more language production (Table IX) and accurate performance (see Table VIII). The analyses of Tables VIII and IX reveal that the P produced grammatically correct sentences and could hold prolonged talk only in a situation when she was talking about a topic with which she was attached. Thus, emotional attachment with a topic resulted in grammatically accurate speech.

As far as fluency is concerned, she had control over the use of intonation and stress pattern of her speech (see the analyses of Tables X & XI). The tempo of her speech was not very fast as it was not spontaneous (see Tables XII & XIII) yet it can be detected from the analyses of these tables that the P slowed down the tempo of speaking in order to think and plan her speech (see the analysis of Table XIII). Overall, her speech did not suffer from many fluency problems in Session 1 and she could effectively experiment with intonation, stress and tempo regardless of the topic of speaking (see the analyses of Tables X & XI). Thus, the topic of speaking did not affect the fluency in her speech.

It has been claimed that aphasia damages certain areas of the brain but this study exhibits that it also activates some other areas, for example, it strengthens the internal simplicity measure, that is a preference for the simplest possible language production process (Chomsky’s phrase as cited in McGilvray, 2009). Thus, an aphasic’s speech involves more simple linguistic structures than a “normal” human’s speech does. Aphasics with the left hemisphere damaged and intact right hemisphere also have a stronger emotional sensitivity than the normal brain has and this strength can be utilized in fuelling and regulating the speech production process.

**Session 2 (October 2011-January 2012)**

Scene I displays the P’s linguistic performance when she was chatting with the R; in Scene II, she was doing formal practice in reading; and in Scene III, she was either on a stroll or had come back home after a drive.

**Scene I**

P and R are sitting in the bedroom and the hens are roaming about in the courtyard in front of them.

**Lines 1-3 documented as DEs on 14.10.2011**
1 P: in ko kuch do naan khaaney key liey inheyn oo::k lagi ai

(give them something to eat they are hungry)

2 R: acha

(ok)

3 P: laal murghaa bau t ai maar raa ai

(the red rooster is very stubborn it’s beating the others up)

**Lines 4-12 from AR on 8.11.2011**

4 R: murghiaan achi lagti hain

(do you like hens?)

5 P: haan murghiaan to mujey ↑BOT achi lagti aïn

(yes I love hens a lot)

6 R: totey NEYEE ahey lagtey

(don’t you like parrots?)

7 (2.0)

8 P: kotey bachey deytey aïn ((laughs))

(parrots give birth to babies)

P tells R that her son-in-law has kept plenty of birds like pigeons but she can’t say the exact word.

9 R: boleyn [kaboo::tar ]

(say pigeons)

10 P: [ chitey ] haan karootey or doosrey laa:l chitey (.) ey bache <chotey chotey

11 bachey [us ney har cheez rakhi ai ]

(white yes pigeons and the other ones are red white babies small babies he has kept everything)

12 R: [ khargosh ]

(rabbit)

P points out at her hens in the courtyard.
Line 13 documented as a DE on 5.11.2011

13 P: ey maari kukriyaan ki tang naa karo

(hey don’t tease my hens)

Lines 14-22 from AR on 16.12.2011

P turns on the TV as P wants to watch some program. There’s a documentary about India.

14 R: SIKH ain:

(they’re Sikhs)

15 P: haan: sit ain

(yes they’re Sikhs)

For Lines 16, 17 also refer to DD III on 12.1.2012 on the CD.

16 P: nahaa: tey ain to phir: nahaa:: key to joraa rakhwaat ey ain: (1.0) nahaa:tey ain jaisey

17 ham neyee nahaa:tey ain to yey neyee: (1.0) nahaa key to phir yey:: ai a paa:n likihtey ain

18 yey nahaa: key to phir keyaa karthey nahai (.)[paa::l ]

(they take bath and after taking bath they tie up their hair in a round shape just like we do when we take bath after taking bath what they do with their hair is )

19 R: [ baal ] khushk kartey ain

(they dry their hair)

20 P: khal kar key phir:: ta ey baal taa::l (. ) taa:l likhtey ain [taa:l]

(after drying they oil their hair)

21 R: [ teil ] lagaat ey ain

(they apply oil)

22 P: haan: phir: ey joraa rakhwaey gey

(yes then they’ll get their hair tied up in a round shape)

The scene changes and now Hindus appear on the screen.
Lines 23-31 from AR on 15.10.2011

23 P: ey ey gaaey (. ) ko kaiṭey aiṅ hamaari ai MAAN ai

(they say that the cow is their mother)

24 R: kon kaiṭey aiṅ

(who say that?)

25 P: yey INDIAA key log

(these Indian people)

P also tells R that snake is a sacred animal in India but can’t say the exact word for snake.

26 R: mo boley [ saa::np ]

(ma say snake)

27 P: [ us ko eyk saanp ] neyee oṭaa saa::npi oṭi ai

(it has a snake and isn’t it a female snake?)

28 R: saanpi oṭi ai

(a female snake?)

29 P: saanpi ( )

(female snake)

30 R: or sapni jo hai wo::

(and what’s a female snake?)

31 P: wo laṛki oṭi ai

(it’s a girl)

The scene changes once again and some animals appear on the screen.

Lines 32-49 from AR on 6.12.2011

32 R: ab yey keyaa ai (. ) yey deykheyṅ:

(now what’s this look at this)

33 P: yey BUDEY aiṅ naaṅ ((laughs))

(these are old people)
34 R: neyee neyee yey yey yey:

(no no this this this)

For Lines 35-39 also refer to DD III on 12.1.2012 on the CD.

35 P: yey: ka kee::raa ai naañ raa::mi: (5.0) raa::mi: deykh raa ai kee::raa (5.0) deykh o idar gey

36 they naañ: (1.0) solo key saath (. ) salmaan ookey saath oo

(it’s an insect bastard bastard insect is looking look at it it’s looking here we went there with Solo with Salman)

37 P: kee::raa (. ) kee::raa motaa: ootaa ai (2.0) deykho naan saa:rey aa rey ain (. ) jaa: rey ain (21.0)

38 kee::raa ai SAMEENAA yey kee::raa neyee ai yey keyaa otaa ai yey chak maartaai ai is ko

39 kaiye aiñ machli ((laughs))

(insect an insect is fat look they all are coming and going it’s an insect Samina it’s not an insect what is it that bites it is called fish)

40 R: neyee machli neyee ai BICHOO:

(no it’s not a fish it’s a scorpion)

41 P: haan_ aan machar machar

(yes yes mosquito mosquito)

42 R: neyee MACHAR neyee BICHOO

(no not mosquito a scorpion)

43 P: haan wo: maa: r deythaai ai

(yes it kills)

44 R: keyaa boltey ain is ↑ko::

(what is it called?)

45 P: dafaak karoo mujey zair lagtaaai

(leave it I hate it)

46 R: bolnaa to hai naañ (. ) bichoo
(but we have to say that it’s a scorpion)

47 P: mačhar (1.0) mačhar ((laughs)) (2.0) haaey kiti naa maartaa ai: haaey bautzaalam cheez ai

48 ((laughs)) (2.0) zaalam cheez (1.0) ((laughs)) maın: har CHEEZ GANDI lagıti ai to

49 (                ) zaalam cheez ai ((laughs))

(mosquito mosquito o’ my God it bites a lot it’s a very cruel thing a cruel thing whenever I dislike a thing I call it a cruel thing)

To divert P’s attention, R turns off the TV and asks P about her cat.

Lines 50-58 from AR on 16.10.2011

50 R: acha aap ki ↑bili aaee thi aaj

(ok did your cat come today?)

51 P: gudee kaiti ai rat meyn ↓aaee thi

(Guddee says it came at night)

52 (2.0)

53 R: subaa neyee aaee

(didn’t it come in the morning?)

For Lines 54-58 also refer to DD III on 12.1.2012 on the CD.

54 P: maın ney deykhı neyee (9.0) subaa neyee ↑aaee naaŋ (    ) kaiti ai kaiti ai

kon kaiti ai

55 gudee kaiti ai (. ) chodri aaeyaa (2.0) ((rooster crows in the background)) chodri
aaeyaa to ba

56 ba bili ko (    ) kaiti ai bili aaee to bili ko ↑maaraa (1.0) kaitaa ai (    ) chodri
kaitaa ai

57 meyraa gar ai ↓too (. ) ey (    ) bili too ↑DAFAA ho to bili gir geyee naaŋ bili::
DAR geyee

58 (1.0) gir geyee

(I didn’t see it in the morning the cat came Guddee says the rooster came and
told the cat to get lost it said that it was his house then the cat fell down it was
frightened and fell down)
R turns on the TV again. This time some wild dogs appear on the screen. P points at the wild dogs in a low voice as R’s sister Guddee is sleeping.

**Line 59 documented as a DE on 19.10.2011**

59 P: "°°papraa ab yey is key bauṭ bachey ain naï yey jangli kuṭey ain°°"  
(now it has many puppies aren’t they? these are wild dogs)

**Lines 60-66 from AR on 19.10.2011**

60 P: eyk kuṭaa oṭaa ai (.) goondaa (.) goondaa oṭaa ai  
(there’s a dog which is deaf)

61 R: GOONGAA hoṭaa ↑ai  
(it’s deaf)

62 P: goondaa or su su sunṭaa NEYEE ai  
(is deaf and can’t hear)

63 R: acha aap ko kis ney baṭaaeyaa  
(ok who told you?)

64 P: haan baṭaaeyaa ai humaarey gaaon meyn raitey they naan key wo kaiṭey ain ey::k (.)

65 soeyaa oṭaa ai soeyaa oṭaa ai ↓leykin jab CHOR aatay ain naan chor aatey ain to cho key

66 TOTEY kar deyṭaa ai  
(yes it’s said in our village they lived they say one sleeps but when thieves come it tears them into pieces)

**Scene II**

P and R are doing some reading practice. R shows P a book. P wants to say the exact word for the color of the book.

**Lines 67-76 from AR on 8.10.2011**

67 P: oon (.) ↓a keyaa oṭaa ai (2.0) chitaa ey chitaa darmeyaanaa saa  
(it’s white white no medium one)
68 R: acha ofwaait (1.0) ↓theek ai (2.0) acha ab kahaani partey aín chaleyn ab bataaeyn mujey

69 yey keyaa likhaa ai (4.0) ↓jaadoo kaa kaaleen

(ok off-white right now let’s read a story you tell me what is this written? magical carpet)

70 P: ↓achaai

(ok)

71 (2.0)

72 R: pareyn

(read)

73 P: ↓ey

(eh)

74 (2.0)

75 R: jaadoo::

(magic)

76 P: ↓daa:: ↑keyaa

(the what?)

P looks outside and tells R to give something to the hens.

**Lines 77, 78 documented as DEs on 25.10.2011**

77 R: momo isey pareyn

(mama please read it)

78 P: neyee kar sakći

(I can’t do it)

R closes the book and opens up the Qurani qaeda. P looks at the beginning of the holy qaeda.

**Lines 79-95 from AR on 20.10.2011**

79 P: ↓yey molvi ai

(it’s a Muslim priest)
80 R: hoon pareyn shaabaash kaaydaa pareyn

(ok come on read the book)

81 P: bismilaahirahmaaniraheem:

(in the name of the Lord the merciful)

82 R: shaabaash (. ) ab pareyn (2.0) yey yahaa sey

(good now read this from here)

83 P: alif

(alif)

84 R: shaabaash

(good)

85 (2.0)

86 P: \( \downarrow \) bal bal (. ) beyl

(---------)

87 R: [bey:: ( ) bey:: ]

(bey bey)

88 P: [bey::l ( ) bey::l ] or ey: (.) teen

(------ and eh three)

P looks at the Qurani qaeda.

89 P: ( ) bis bismilaahirahmaaniraheem

90 R: shaabaash is meyn ALAA kidar likhaa uaa ai (. ) is poorey meyn (2.0) ALAA::
pailaa

91 doosraa teesraa yaa chothaa (1.0) alaa kidar ai is saarey meyn dhoondey

(good where is Allah written in this whole thing? Allah the first one the second one or the third one?)

92 P: \( \downarrow \) alaa yey neyee ai

(this isn’t Allah)

93 R: idar is waaley meyn sey bismilaahirahmaaniraheem meyn alaa kidar likhaa uaa ai
(here in this one in Bismillahirahmaniraheem where’s Allah written?)

94 P: alaa yeyee ai naa

(isn’t this Allah?)

95 R: shaabaash theek ai (.) seyee ai

(good it’s correct it’s correct)

When R asks P to read ahead, she refuses.

Line 96 documented as a DE on 18.10.2011

96 P: budey toṭey bi kabi par saktey ai

(can old parrots be taught?)

P doesn’t want to read so R closes the holy book and starts talking about the birthday party that they are planning to celebrate the next day. It’s day time and they also turn on the TV.

Lines 97-103 from AR on 28.10.2011

97 R: keyk ley key aaeyn

(should we bring a cake?)

For Lines 98-100 also refer to DD III on 12.1.2012 on the CD.

98 P: haa:: (.) ookeyk ley leynaa oo (1.0) phir saa:rey aaeyn gey naan SAMEE aaeey gaa (1.0) a

99 biloo jojaa ridaa samee or:: reyhaanaa (1.0) saarey aaeyn gey naan: salmaan aaeey gaa solo

100 aaeey gi (2.0) theek aie

(yes bring a cake then everyone will come Samee will come Billo Joja Rida Samee and Rehana will come all will come Salmaan will come Solo will come ok?)

101 R: abi karni aie (2.0) abi kareyn

(should we do right now? let’s do it right now)

102 P: neyee:: wo to ( ) rozaa:: ro rozaa karwaaloy gey rozaa aaney waalaa ai rozaa naan
103 shaam (.)\(\text{shaa:m} \text{ meyn aaeyn gey naan}\)

(no they are fasting it’s about to finish they’ll come in the evening)

P tells R that her daughter and son-in-law haven’t visited her for many days.

**Line 104 documented as a DE on 22.11.2011**

104 P: samee kaa kaam \(\text{thaa naan} \text{ isi wajaa neyee aaey}\)

(Samee had some work that’s why they didn’t come)

R asks P about the repairs in the house that need to be done before the party. She asks about the carpenter.

**Lines 105-115 from AR on 18.11.2011**

105 R: kaam (.) kab sey shuru karey gaa

(when will he start the work?)

106 P: \(\text{wo cheezeyn rakhwaa: key:: to geyaa ai naa} \text{ saari cheez rakhi hui thi wo kar key ley:}\)

107 geyaa ai\(\text{oo}\)

(he has left everything everything was kept he has gone after doing)

108 R: naap kar geyaa ai

(he has taken the measurements?)

109 P: haan: gudee kai reyee \(\text{thi} \text{ key karwaaey gaa to kai} \text{ti ai} \text{ khaalaa bi aa} \text{ti ai to} \text{ ((rooster 110 crows))} \text{ gir jaat} \text{a ai bandaa} \)

(yes Guddee was saying that he’ll get it done she says that her maternal aunt also comes then one slips)

111 R: ACHAA ↓bilkul ↑kaa:m kab sey shuru karna ai us ↑ney

(ok that’s right so when will he start the work?)

112 P: yey neyee paṭaa waisey aaeeyaa \(\text{thaa saari cheezeyn udar ley:: key ↑do:: aadmi they naan}\)

(I have no idea but he came with everything there were two men)

R asks about P’s grandson whom she loves most. He has just been operated upon.
113 R: biloo theek ↑ai ab

(is Billoo fine now?)

114 P: biloo mashala theek ai (.) haan:: zaraa phir ṭo neye sakṭaa waisey theek ai daktar saab

115 kaiṭey ain zeyaaḍaa abir phirnaa naa zeyaaḍaa ((rooster crows)) ain: daktar ↓saa

(Billoo is mashala fine yes though he can’t walk but otherwise he’s fine the doctor says so)

P is telling R to take care of everyone in the party just like her sister who used to sit with her mother-in-law during parties and took good care of her.

**Lines 116-118 from AR on 16.11.2011**

116 P: kaiṭi the meyri:: ey kis ko:: ey: us ko key lagṭi thi konṣi us ko lagṭi thi

(she used to say my who mother-in-law what relation did she have with her?)

117 R: saa:s

(mother-in-law)

118 P: saa:s ko DOOD paṭi deynaa (.) main phir us ko dood paṭi deyti thi

(give milk-and-tea to my mother-in-law then I used to give milk-and-tea to her)

P wants to watch TV. R asks P about electricity.

**Lines 119-138 from AR on 12.1.2012**

119 R: laait ↑hai:

(is there electricity?)

120 P: neyee: ai

(no)

121 R: kab sey laait neyee: ai

(for how long has it been off?)

122 (1.0)

123 P: ham a andar geyee ai naan raṭ ko neyee ṭi kaiṭey ain chali geyee chali geyee ai ṭi
124 ((rooster crows))
   (we went inside it wasn’t there during night they say it went out it went out)
125 R: achaa: (1.0) to phir ↑kab aaey gi:
   (ok when will it come back?)
126 P: yey neyee: paṭaa ↓naan
   (I have no idea)
127 R: aap ko thand lagi hui ai
   (are you feeling cold?)
128 P: ↑haan::: bauṭ thand oo lagi ai oo
   (yes I’m feeling very cold)
129 R: baarish kab hui thi
   (when did it rain?)
130 (1.0)
131 P: wo: baae aae aee a in to baarish thi
   (when they came out it rained)
132 R: raṭ ko huee thi baarish
   (did it rain at night)
133 (1.0)
134 P: baa:rish neyee: jab aae e a i to subaa aae e thi to baarish thi ↓naan
   (it didn’t rain it rained in the morning)
135 R: subaa jab uthey they to baarish thi:
   (when we woke up in the morning it was raining)
136 P: ↓hoon
   (yes)
137 R: bani hui thi yaa hui thi
   (it was cloudy or did it rain?)
138 P: ooee thi
(it rained)

They now have electricity and R turns on the TV and P talks about a character in the drama that appears on the screen.

**Lines 139-150 from AR on 24.1.2012**

139 P: main kai raa thaa key: (2.0) ey meyri amee ai (1.0) kai raa thaa: meyri amee
   ai:
   
   *(I was saying that she’s my mother he was saying that she’s my mother)*

140 R: kon
   
   *(who?)*

**For Lines 141-143 also refer to DD III on 12.1.2012 on the CD.**

141 P: wo larkaa wo bachaa (1.0) ab bachaa baraa:: ho geyaa ai naan (1.0) to keyaa
   kai raa thaa:

142 (3.0) o°pa°aa neyee keyaa: koi de°kh raa thaa koi keyaa kar raa°° khaa:: raa
   khaaeyaa to

143 neyee thaa: kuj kai raa thaa keyaa kai raa thaa
   
   *(that boy that child now the child has grown older so what was he saying? I
don’t know what he was saying he was eating something no he didn’t eat he
was saying something)*

144 P: aa::j to us ki maan ajeeb si lagi thi hai naan ajeeb si kaali si ai naan
   
   *(today his mother was looking weird wasn’t she looking weird and dark?)*

145 R: hoon
   
   *(yes)*

146 P: pailey soni thi lag°i aaj ajeeb si lagi ai [ hai naan]
   
   *(previously she used to look beautiful today she looked weird didn’t she?)*

147 R:
   
   *[ hoon ]
   
   *(yes)*

148 P: acha:: (3.0)aa::j gharee::b log bani hui thi
   
   *(yes today she was pretending to be poor)*
149 P: wo bi kaa:m kar\aa\ bar\aa\ har\aa\:mi aad\mi th\aa\ (1.0)\uparrow wo ab us ko shaadi karey gaa

150 naan

*(he also did work he was a bastard now he’ll marry her)*

R changes the channel. There appears news about an air crash.

**Lines 151-155 from AR on 28.1.2012. For the same lines also refer to DD III on 12.1.2012 on the CD.**

151 P: \uparrow haan:: (2.0) ोो\toba\ ोoba\ ो (8.0) yey; bi aaj mosam \uparrow baut gand\aa th\aa
\uparrow naan (.). isi

152 waj\aa\ sey bachaaraa gir; gey\aa\ (1.0) aaj MOSAM th\aa\ BAUT gand\aa mosam ( ) abi \to

153 yey : jaatey ee ney\ee ain wo dey key pa\\aa\ un ko PAT\\aa\ lag jaat\aa\ ai \to\ wo ni wo

154 \uparrow dey::kh\\t\ey ain (1.0) ोोdeykh\\t\ey ain key ोोaaj jaanaa NEY\\ee ai (2.0)bas koi un ko

155 MARN\AA\ th\aa\ bas (2.0) jab marna\ th\aa\ wo::

*(yes God forbid today the weather was very bad the weather was very bad that’s why it fell down now they don’t go when they see they know then they don’t they see whether to go today or not but they were destined to die when they had to die)*

**Lines 156-162 from AR on 31.1.2012**

156 R: aaj MOSAM ney\ee deykhaa ho gaa

*(today they mustn’t have checked the weather)*

**For Lines 157-159 also refer to DD III on 12.1.2012 on the CD.**

157 P: \downarrow da \uparrow deykhaa o gaa pa\\aa\ ney\ee zinda\gh\i\ un ko ney\ee thi bachaaron\ ko \to (1.0) wo

158 deykhtey:: ain wo kaa un deykhtey ain \downarrow un aanaa aanaa likht\aa\ ai unhon\ ney un ko pa\\aa\

159 LAG jaat\aa\ ai
(they must have checked they didn’t have life poor souls they check they keep a tool they discover it)

160 R: ↓ hoon:: (1.0) keyaa rakhaa hoṭaa ai

(Yes what do they keep?)

161P: ↑ aalaa:: aalaa unhon ney rakhaa oṭaa ai key unhon ko kaiṭey aṁ hameyn paṭaa
LAG jaaṭaa

162 ai key: (. ) jaanaa:: key neyee jaanaa

(an instrument they keep an instrument they say we discover whether we should go or not)

Scene III

P and R are back from a stroll. They brought some flowers and R asks P to recognize her favorite color in flowers.

Lines 163-176 from AR on 12.12.2011

163 R: in meyn sey PEE:LAA rang kaunsa aï donon meyn sey

(out of these which one is the yellow color? out of these two?)

164 P: hain:

(What?)

165 R: yey jo do rang hain naan yey: (1.0) in meyn sey peelaa kaun saa aï

(these are two colors and which one is yellow?)

166 (2.0)

167 P: yey ṭo:: keyaa aï:: is ko: (((laughs)) pailey zabaan deykhoon gi ṭo phir
deykhoon gi

168 (((laughs))

(this is it’s first I’ll see the tongue then I’ll see)

169 R: is kaa keyaa: rang hai

(What’s its color?)

170 P: ↓ ey: (2.0) zabaan neyee aï (((laughs))

(I have no tongue)
R: sabaz yaa peelaa
   (green or yellow?)

P: cheelaa neyee ai(.) cheelaa NEYEE acha laagtaa
   (it’s not yellow I don’t like yellow)

R: cheelaa yaa peelaa
   (cheela or yellow?)

P: hoon:
   (what?)

R: cheelaa yaa peelaa
   (cheela or yellow?)

P: ((laughs)) zabaan ee neyee ai to keyaa kareyn:
   (what can one do if one doesn’t have tongue)

R asks P if she wants to buy some seeds from the gardener.

Lines 177-182 from AR on 20.12.2011. For Lines 177-181 also refer to DD III on 12.1.2012 on the CD.

R: phir aap us sey BEEJ leyngi
   (then will you take seeds from him)

P: ↓hain (.)↑haan:: ((rooster crows))unhon rahtey aihn unhon ney (.) unhon ney

beySHUMAAR rakhey huey (. ) phir meyn in sey:: bachaa mujey paisey doon gi tujeィ to

meyrey saari cheezeyn dey do to main apney gar meyn meyraa: hamaaraa GAR ai naan

main ney kaa ((rooster crows)) ( ) ley:: aaoon wo kaitaa ai (. ) unhon ney chotey

rakhey huey aihn ↓naan
   (what? yes they keep them they have kept plenty of them then I said to them
child I’ll give you money and will you give me all these things for our home he
said they have got only small ones)
Lines 183-191 from AR on 23.12.2011

183 R: CHANBEYLI

(jasmine)

184 P: ↑haan doː bas ↓rakh woːe us ney rakhey uey

(yes he has kept only two)

185 R: eyk peeli hoːti ai

(one is yellow)

For Lines 186-189 also refer to DD III on 12.1.2012 on the CD.

186 P: peelichee naan wo neyee us ney wo neyee rakhi thin us ney chiti ee see donon eyk (.)

187 zaraa moti MOTEY MOTEY oṭey aiṇ naan (.),↓phool moti moti

KHOOBSOORAT (1.0)

188 (       ) iṭney khoobsoorat oṭi ai or zaraa (.),↓doosri zaraa zaraa choti oṭi aiṇ naan pooraa

189 wo us us ney yeyee rakhaa huua ↓thi

(not the yellow jasmine he had kept the white ones one was thick its flowers are thick very beautiful they are so beautiful the other one is bit smaller he had only this one)

190 R: hoon

(I see)

191 P: khaibar key baap ney

(Kaiber’s father)

P tells R that her son-in law has bought a farm and it also has beautiful plants in it.

Lines 192-199 from AR on 25.12.2011

192 R: us kaa faam ↑ ai

(he has a farm?)

193 P: hoon

(yes)
For Lines 194-196 also refer to DD III on 12.1.2012 on the CD.

194 R: kitni murghiaan rakhi ↑ain

(\textit{how many hens has he kept?})

195 P: yey neyee paṭaa murghiaan kaafi aĩn bachey (. ) bachon key: rey kaiṭi thi naan murghion:

196 kaa bachey::: ab zaraa andey deynaa ↓unhon ney shuru kar diey bachion ney a (1.0)

197 murghion ney andey deynaa ↓shuru oo kar diey aĩn oo

(I have no idea but there are plenty of hens kids Rey was saying that the hens’ babies are now bit older and they’ve started the girls, the hens have started laying eggs)

198 R: ab zaraa baṛi ho geyee aĩn

(now they’ve grown bit older)

199 P: hoon ((laughs))

(yes)

P tells R about her last visit to her son-in-law’s house.


200 P: samee:: chalaa geyaa thaa (2.0) phir (1.0) gaṛi us ney karwaee ( . ) phir main kai raa aap

201 ney jaanaa: main ney haan: main chali:: phir reyhaanaa bi aae naan reyhaanaa or ridaa

202 (1.0) wo: biloo or jojaa:: apney gar baithey rey (1.0) phir main ney kaa key cha najmaa kaiṭi

203 ai key (1.0) aap idar rainaa key: main ney haan main ba haan: main jaa::oon gi main (. ) main

204 baithi reyee:: main ney un:: paisey thorey sey dey di ey naan (1.0) oo biloo: or jojaa tīnon

205 ko oo
(Samee had gone then he brought the car then he asked me whether I would go I said that yes I’ll go then Rehana also came Rehana and Rida Billoo and Joja stayed at home then I said Najma said would you stay here I said yes I’ll go I kept on sitting I gave them some money to Billoo Joja and all three of them)

206 R: kitney

(how much?)

207 (2.0)

208 P: billoo (1.0) joja: ridaa

(Billoo Joja Rida)

209 R: kitney kitney

(how much to each?)

210 P: ((P demonstrates on fingers)) eyk yey::kitney otey aine ((P and R both laugh))

(how many are these?)

211 R: aap baata:eyn: naan

(you tell me)

212 (1.0)

213 P: ey:k do: (1.0) do do do do (1.0) do do keyaa otaa ai

(one two two two two two two what is it?)

214 R: do do so:

(two hundred each)

215 P: haan: bas haan

(yes that’s it)

P and R are coming back from a stroll. P reads a sign board on her own.

**Line 216 documented as a DE on 16.10.2011**

216 P: yey naadaar khaan likhaa ai naadaar khaan meyrey abaa kaa naam thaa naan

(it’s Nadir Khan written Nadir Khan was my father’s name)

P tells R about a new shop in the neighborhood that she has seen.
217 R: sabzi rakhi ai us ney

(has he kept vegetables?)

218 P: ṭhaan:: saari cheezeyn (1.0) andey:: or doosrey keyaa (1.0) [ a ]

(yes everything eggs and what else?)

219 R:

(vegetable)

220 P: HAR cheez aa geyee ai (. ) koi la koi andiaan daar andey ((laughs)) neyee andey neyee ain

221 koi laa: rey ain ey: keyaa oṭaa ai (3.0) ↓[ keyaa] ṭoṭaa aioo

(everything is there eggs and what else)

For Lines 222, 223 also refer to DD III on 12.1.2012 on the CD.

222 R:

(vegetable)

223 P: haan wo: neyee ain:: ja moolieyn (1.0) moolieyn bi koi laa raa ai koi cheez (1.0) laa rey

224 ain ab un ko bi kaːm ho geyaa ai saaraa

(yes aren’t those radishes somebody is also bringing radishes they are bringing something now all their work is completely done)

P tells R what R’s sister Guddee bought from that shop.

Line 225 documented as a DE on 2.11.2011

225 P: us ney adoo liaa thea sirf

(she bought only gourd)

R wants P to name more vegetables so asks what else is there in that shop.

Lines 226-230 from AR on 2.11.2011

226 R: ṭdhaniaa

(coriander)
227 P: hai: taniaa  or: (1.0) yey neyee YEY rakhaa huua ai (1.0) keyaa ai is meyn keyaa

228 rakhaa ai

(what? coriander and what’s this? what’s inside it?)

229 R: tamaatar
(tomato)

230 P: TAMAATAR or wo laai ai beySHUMAAR laai ai
(tomatoes and she has brought countless)

**Lines 231-240 from AR on 16.1.2012**

231 R: us ney keyaa pakaaeyaa thaa waisey (1.0) raa:† ko keyaa pakaaeyaa thaa

(what did she cook by he way what did she cook last night?)

232 P: kis ney:

(who?)

233 R: GUDEE ney

(Guddee)

234 (1.0)

235 P: karee

(curd curry)

236 R: karee pakaaee thi

(did she cook curd curry?)

237 P: hoon

(yes)

238 R: achaa:: aap ko achi lagi (1.0) neyee (. ) kioon

(ok did you like it you didn’t why?)

239 (3.0)

240 P: yey:: (2.0) khati thi

(it was sour)
P tells R that she used to make tasty curd curry but R’s grandmother loved sour curd curry.

**Lines 241-243 from AR on 18.1.2012**

241 P: τūmaari daadi

(*your paternal grandmother*)

242 R: keyaa kartī thin meyri daadi

(*what did my paternal grandmother use to do?*)

243 P: kāre::: ○○ a○○ khatī khaatī thi to kaiṭī bauṭ mazdaar ↓ai

(*she used to eat sour curd curry and said that it was very tasty*)

**Lines 244-248 from AR on 26.11.2011**

244 R: aap kai reyee thin naan key aap ney: kāre pakaee thi

(*you were saying that you cooked curd curry*)

245 P: ↑haan: eyk dafaa KAREE pakaee naan to wo:: kāre khaatēy neyee they kaiṭey ain kāre

246 bi paṭaa neye:: pakaatī ai (. ) τūmaaree DAADI pakaatī thi kāre khā:li ey thorey si

(*yes once I cooked curd curry he didn’t like to eat curd curry and says that your grandmother cooks curd curry*)

247 R: ↓hoon (2.0) aa:p to boṭ achaa pakaatī thin naan

(*and you used to cook very well*)

248 P: haan: wo khaeyaa DEYKHAA to ITNEY:: khush huey

(*yes he ate that and was very happy*)

P tells R that her father also likes curd curry but hadn’t taken lunch that day when they came out for the stroll.

**Lines 249-254 from AR on 21.1.2012**

249 P: kaiṭey ain main:: so jaa: main main main ney soṭey neyee (. ) kaiṭey ain main so jaaoon
250 soțaa: neyee oon (1.0) main baithaa raițaa oon

(he said he slept I asked him if he slept he said he didn’t sleep he kept on sitting)

251 R: kon kaițaa ai

(who says that?)

252 P: ŏumaarey aboo

(your father)

R looks around for her father and P tells her that he’s sleeping.

253 P abi bi soey uey ain (6.0) wo jo ham ney chaaey pi ai naaŋ (. ŏumaarey aboo bi aaey ò

254 (1.0) kaițey ain gudee mujey chaaey deyo

( he’s still sleeping when we were taking tea your father came and asked Guddee to give him tea)

Analysis & Interpretation of Session 2

Section I

Accuracy Check

4.11 Phonemic Level. Table XIV below displays the sounds missing in the P’s speech during Session 2.

Table XIV

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Missing Sound</th>
<th>Correct Word(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>oo::k (---)</td>
<td>/bh/</td>
<td>bhook (appetite)</td>
</tr>
<tr>
<td>3</td>
<td>ee::t (---)</td>
<td>/dh/</td>
<td>dheet (shameless)</td>
</tr>
<tr>
<td>35</td>
<td>raa::mi: (x2) (---)</td>
<td>/h/</td>
<td>haraami (bastard)</td>
</tr>
<tr>
<td>65</td>
<td>cho (---)</td>
<td>/r/</td>
<td>chor (thief)</td>
</tr>
<tr>
<td>115</td>
<td>saa (---)</td>
<td>/b/</td>
<td>saab (mister, title of courtesy for a male)</td>
</tr>
</tbody>
</table>
Analysis & Interpretation. Table XIV shows that the P tended to skip certain sounds in some words. It could be unaspirated (Lines 35, 65, 115, 138 and 225) or aspirated (Lines 1, 3 and 153) yet it was always a consonant sound. The table also discloses that she had no trouble in pronouncing the vowel sounds. Thus, she had problems only in the production of consonant sounds. The reason is clear: In the production of a vowel sound, the air coming from the lungs has an unobstructed way whereas in the production of consonant sounds, the air coming from the lungs has an impeded way (Jones, 1976). Thus, vowels are easier to produce than the consonants are. The P’s pronouncing of vowel sounds and skipping of consonant sounds can be a way of minimizing the effort involved in the process of speech production. Speech is a hierarchically organized activity and starts with an articulatory plan, that is, a decision about which articulatory muscles to be used and in which sequence (Clark & Clark, 1977). At the phonemic level, the P planned her speech by skipping the difficult sounds.

Table XV

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) (with Elongated Sound)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>oo::k (---)</td>
</tr>
<tr>
<td>3</td>
<td>ee::t (---)</td>
</tr>
<tr>
<td>16</td>
<td>nahaa:: (bath)</td>
</tr>
<tr>
<td>17</td>
<td>yey:: (this)</td>
</tr>
<tr>
<td>18</td>
<td>paa::l (---)</td>
</tr>
<tr>
<td>20</td>
<td>phir:: (then)</td>
</tr>
<tr>
<td>Page</td>
<td>Word</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>23</td>
<td>hamaari::</td>
</tr>
<tr>
<td>27</td>
<td>saa::npi</td>
</tr>
<tr>
<td>35</td>
<td>kee::raa</td>
</tr>
<tr>
<td></td>
<td>(insect, ---)</td>
</tr>
<tr>
<td>57</td>
<td>bili::</td>
</tr>
<tr>
<td>64</td>
<td>ey::k</td>
</tr>
<tr>
<td>76</td>
<td>daa::</td>
</tr>
<tr>
<td>81</td>
<td>bismilaahirahmaanirahee::m</td>
</tr>
<tr>
<td>88</td>
<td>bey::l</td>
</tr>
<tr>
<td>98</td>
<td>haan::</td>
</tr>
<tr>
<td>99</td>
<td>or::</td>
</tr>
<tr>
<td>102</td>
<td>neyee::, rozaa::</td>
</tr>
<tr>
<td>106</td>
<td>key::</td>
</tr>
<tr>
<td>112</td>
<td>ley::, do::</td>
</tr>
<tr>
<td>114</td>
<td>haan::</td>
</tr>
<tr>
<td>116</td>
<td>meyri::, ko::</td>
</tr>
<tr>
<td>128</td>
<td>haan:::</td>
</tr>
<tr>
<td>141</td>
<td>baraa::</td>
</tr>
<tr>
<td>142</td>
<td>khaa::</td>
</tr>
<tr>
<td>144</td>
<td>aa::j</td>
</tr>
<tr>
<td>148</td>
<td>acha::, gharee::b</td>
</tr>
<tr>
<td>151</td>
<td>haan:: (yes)</td>
</tr>
<tr>
<td>154</td>
<td>dey::khṭey (see)</td>
</tr>
<tr>
<td>158</td>
<td>deykḥṭey:: (see)</td>
</tr>
<tr>
<td>161</td>
<td>aalaa:: (God)</td>
</tr>
<tr>
<td>162</td>
<td>jaanaa:: (go)</td>
</tr>
<tr>
<td>167</td>
<td>ṭo::, ai:: (then, is)</td>
</tr>
<tr>
<td>178</td>
<td>haan:: (yes)</td>
</tr>
<tr>
<td>179</td>
<td>sey:: (to)</td>
</tr>
<tr>
<td>181</td>
<td>ley:: (bring)</td>
</tr>
<tr>
<td>184</td>
<td>do:: (two)</td>
</tr>
<tr>
<td>196</td>
<td>bachey::: (kids)</td>
</tr>
<tr>
<td>200</td>
<td>samee:: (Samee)</td>
</tr>
<tr>
<td>201</td>
<td>chali:: (went)</td>
</tr>
<tr>
<td>202</td>
<td>jojaa:: (Jojja)</td>
</tr>
<tr>
<td>203</td>
<td>jaa::oon (go)</td>
</tr>
<tr>
<td>204</td>
<td>reyee::, un:: (kept on, them)</td>
</tr>
<tr>
<td>210</td>
<td>yey:: (this)</td>
</tr>
<tr>
<td>218</td>
<td>haan::, andey:: (yes, eggs)</td>
</tr>
<tr>
<td>223</td>
<td>ain:: (---)</td>
</tr>
<tr>
<td>240</td>
<td>yey:: (this)</td>
</tr>
<tr>
<td>243</td>
<td>karee::: (curry)</td>
</tr>
<tr>
<td>245</td>
<td>wo:: (he)</td>
</tr>
</tbody>
</table>
(ii) Analysis & Interpretation. Table XV reveals that the P elongated sounds in the *content words*. Thus, a sound in a noun (Lines 1, 18, 20, 27, 35, 57, 90, 102, 161, 196, 200, 202 and 243) or in a verb (Lines 16, 142, 154, 158, 181, 201, 203, 204 and 223), in an adjective (Lines 3, 35 and 141) or in an adverb (Line 248) was elongated. Elongation of a sound was a hint dropped to the interlocutor to pay attention as the word was important. Occasionally, emphasis was added by stressing the word before or after elongation (Lines 23, 57 and 248) or through a rising tone accompanying that word (Lines 128, 151, 154, 161, 178 and 218) and sometimes pausing after elongation (Line 148). Thus, elongation of a sound in the P’s speech did the same as *strong forms* do in the “normal” speech, that is, they signal emphasis (Crystal, 2006).

In some instances, elongation was used to have time to plan the speech (Lines 17, 20, 76, 88, 98, 106, 116, 167, 179, 196 and 223). Elongation of a sound was also done to compensate for the length of a sentence as one or two words had been completely skipped (Lines 179, 201, and 204). It can be seen from the instances displayed in Table XV that whenever the P skipped a sound, it was always a consonant and the sound that was elongated was always a vowel (Lines 1, 3, and 35). The P’s skippig of the consonant sounds in connected speech can be compared with the feature of *elision* in the normal speech when a sound fades away (Jones, 1976). Thus, in normal speech, certain sounds that are difficult to produce are usually left out such as *consonant clusters* (Crystal, 2006). The elision of the troublesome sounds in the P’s speech was done because she had problems in the articulation of those sounds.

Another reason for elongating a sound can be that the P dropped a clue about her upcoming faulty performance (lines number 17, 18, 20, 76, 88 and 249) and through elongation of a sound, she shifted the message decoding responsibility to the interlocutor. Occasionally, her consciousness about a faulty linguistic performance was obvious from a whisper-like tone accompanying an elongated sound (Lines 98, 106, 128, 142, and 151).
Table XVI below displays the words created by the P after changing some sounds.

**Table XVI**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Wrong Sound(s)</th>
<th>Correct Sound(s)</th>
<th>Actual Word(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>siṭ (---)</td>
<td>/t/</td>
<td>/kh/</td>
<td>Sikh (Sikh)</td>
</tr>
<tr>
<td>16</td>
<td>jogaa (---)</td>
<td>/o/</td>
<td>/oo/</td>
<td>joogaa (<em>back knot of hair</em>)</td>
</tr>
<tr>
<td>18</td>
<td>paaːl (---)</td>
<td>/p/</td>
<td>/b/</td>
<td>baal (<em>hair</em>)</td>
</tr>
<tr>
<td>20</td>
<td>ŋaaːl, ŋaaːl (x2) (---, ---)</td>
<td>/aa/</td>
<td>/eːl/</td>
<td>ŋeːl (<em>oil</em>)</td>
</tr>
<tr>
<td>22</td>
<td>jogaa (---)</td>
<td>/o/</td>
<td>/oo/</td>
<td>joogaa (<em>back knot of hair</em>)</td>
</tr>
<tr>
<td>60</td>
<td>goondaa (x2) (---)</td>
<td>/d/(x2)</td>
<td>/ɡ/</td>
<td>goongaa (x2) (<em>deaf</em>)</td>
</tr>
<tr>
<td>62</td>
<td>goondaa (---)</td>
<td>/d/</td>
<td>/ɡ/</td>
<td>goongaa (<em>deaf</em>)</td>
</tr>
<tr>
<td>143</td>
<td>kuj (---)</td>
<td>/j/</td>
<td>/kʰ/</td>
<td>kuch (<em>something</em>)</td>
</tr>
<tr>
<td>157</td>
<td>zindagghi (---)</td>
<td>/ɡh/</td>
<td>/ɡ/</td>
<td>zindagi (<em>life</em>)</td>
</tr>
<tr>
<td>158</td>
<td>aanaa (x2) (---)</td>
<td>/n/</td>
<td>/l/</td>
<td>aalaa (<em>tool</em>)</td>
</tr>
<tr>
<td>172</td>
<td>cheelaa (x2) (---)</td>
<td>/ch/</td>
<td>/p/</td>
<td>peelaa (<em>yellow</em>)</td>
</tr>
</tbody>
</table>

**Analysis & Interpretation.** Table XVI displays that the P changed sounds in some words yet all the substitutions that she made were done within the same sound category.

Thus, she replaced a consonant with a consonant (Lines 15, 18, 60, 62, 143, 157, 158 and 172) and a vowel sound with another vowel sound (Lines 16, 20 and 22). Thus, the sound substitution process was rule-governed yet these rules were
idiosyncratic in nature and this has been mentioned by Jakobson while discussing about the speech recovery process after aphasia (Jakobson, 1980).

In the context of sounds sensitivity and sounds discrimination towards one’s native language, Kuhl, Williams, Lacerda, Stevens & Lindbolm, 1992; Polka & Werker, 1994 (as cited in Everaert, Lentz, Mulder, Nilsen & Zondervan, 2010) explain that in case of a child’s first language acquisition, the process starts at about four months. This sensitivity enables one to discriminate between the vowels and consonants of his/her native language. The P’s conscious choices for substituting a vowel for a vowel and a consonant for a consonant indicate that her sensitivity towards the sounds of her native language remained intact even during aphasia.

4.12 Lexical Level. Table XVII displays the words that the P changed in her speech during Session 2.

**Table XVII**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Correct Word(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>joṛaa, rakhwaaeyn (<em>dress, keep</em>)</td>
<td>joorga, banaaeyn (<em>back knot of hair, make</em>)</td>
</tr>
<tr>
<td>27</td>
<td>saa::npī (---)</td>
<td>sanpni (<em>female snake</em>)</td>
</tr>
<tr>
<td>29</td>
<td>saanpī (---)</td>
<td>sanpni (<em>female snake</em>)</td>
</tr>
<tr>
<td>31</td>
<td>laṛki (<em>girl</em>)</td>
<td>moanas (<em>female</em>)</td>
</tr>
<tr>
<td>38</td>
<td>chak maartāa (<em>bites male</em>)</td>
<td>kaatāa (<em>bites</em>)</td>
</tr>
<tr>
<td>39</td>
<td>machli (<em>fish</em>)</td>
<td>bichoo (<em>scorpion</em>)</td>
</tr>
<tr>
<td>41</td>
<td>machar (x2) (<em>mosquito</em>)</td>
<td>bichoo (x2) (<em>scorpion</em>)</td>
</tr>
<tr>
<td>47</td>
<td>machar (x2) (<em>mosquito</em>)</td>
<td>bichoo (x2) (<em>scorpion</em>)</td>
</tr>
<tr>
<td>51</td>
<td>meyṇ (<em>in</em>)</td>
<td>ko (<em>at</em>)</td>
</tr>
<tr>
<td>102</td>
<td>karwaaeyn (<em>get it done</em>)</td>
<td>kholeyṇ (<em>unfast</em>)</td>
</tr>
<tr>
<td>Page</td>
<td>Word</td>
<td>Translation</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>106</td>
<td>rakhwaː (kept)</td>
<td>khareed (buy)</td>
</tr>
<tr>
<td>109</td>
<td>karwaaey (get it done)</td>
<td>karey (do)</td>
</tr>
<tr>
<td>116</td>
<td>konsi, ko (which one, to)</td>
<td>keyaa, ki (what, her)</td>
</tr>
<tr>
<td>123</td>
<td>geyee (went.female)</td>
<td>geyey (went)</td>
</tr>
<tr>
<td>139</td>
<td>raa, thaa (doing male, was male)</td>
<td>reyee, thi (doing female, was female)</td>
</tr>
<tr>
<td>144</td>
<td>lagi, hui, kaali (appeared, did, black)</td>
<td>lag, reyee, badsoorāt (appear female, looking female, ugly female)</td>
</tr>
<tr>
<td>157</td>
<td>ko (x2) (to)</td>
<td>ki (x2) (their)</td>
</tr>
<tr>
<td>158</td>
<td>kaa, un, aanaa (x2), likhtaa (its, they, ---, write)</td>
<td>us, ko, aalaa (x2), rakhaa hoṭaa (it, to, tool, kept)</td>
</tr>
<tr>
<td>161</td>
<td>unhoṇ, ko (they, to)</td>
<td>wo, yey (they, this)</td>
</tr>
<tr>
<td>178</td>
<td>unhoṇ (they)</td>
<td>wo (they)</td>
</tr>
<tr>
<td>180</td>
<td>meyrey (mine)</td>
<td>mujey (me)</td>
</tr>
<tr>
<td>186</td>
<td>chiti (white female)</td>
<td>khoobsoorāt (beautiful)</td>
</tr>
<tr>
<td>188</td>
<td>oṭi, ai (---, ---)</td>
<td>oṭey, ain (-------)</td>
</tr>
<tr>
<td>189</td>
<td>thi (was (female))</td>
<td>thaa (was male)</td>
</tr>
<tr>
<td>196</td>
<td>bachion (girls)</td>
<td>murgion (hens)</td>
</tr>
<tr>
<td>200</td>
<td>karwaaee, main, kai, raa (brought, I, said, did)</td>
<td>chalaaye, muj, sey, poohaa (drove, me, to, asked)</td>
</tr>
<tr>
<td>224</td>
<td>ko (to)</td>
<td>kaa (their)</td>
</tr>
<tr>
<td>245</td>
<td>ain (---)</td>
<td>they (were)</td>
</tr>
<tr>
<td>249</td>
<td>jaa: (go to)</td>
<td>jaaṭaa (goes male)</td>
</tr>
</tbody>
</table>
(i) **Analysis & Interpretation.** In Session 2, the function words started appearing in the P’s speech. This can be seen from Table XVII. Though in many instances, she used them wrongly (Lines 51, 116, 157, 161 and 224) yet they had started emerging. Table XVII also discloses that whenever the P wrongly used a word, she picked it from the same word category. Thus, she substituted a noun with another noun (Lines 22, 39, 41 and 47), a verb with another verb (Lines 22, 123, 139, 144, 158, 188, 200, 245 and 249), a function word with another function word (Lines 51, 116, 157 and 224) and a first person pronoun with another first person pronoun (Lines 180 and 200). The P’s experimenting with the function words during Session 2 discloses that she had started realizing their importance in speech. The P’s substitution of a verb for a verb, a noun for a noun and an adjective for an adjective indicates that her speech problem was on the *paradigmatic plane* (word substitutions) and on the *syntagmatic plane* (word positions), there was no problem (Saussure’s terms as cited in Chandler, 2007). Chandler also explains how the syntagmatic relations are related with *form* whereas paradigmatic relations are closer to the *content* (p. 86). Thus, the structural part of the P’s encoded message was flawed but the semantic part was intact as she could convey her message.

The table also reveals that the P used only two verbs karwaanaa and rakhwaanaa (*get something done, keep*) for talking about four different actions, namely kholnaa, khareednaa, karna and chalaanaa (*unfast, buy, do and drive*) in Lines 102, 106, 109 and 200 but she always used these verbs with correct inflections. Thus, she overextended the use of only two verbs and this reduced the effort of her speaking. She did the same with some nouns (Line 31) by overextending the meaning of the noun ‘larki’ (*girl*) to mean ‘a female’. In Line 196, she did the same by using an Urdu word ‘bachion’ (*girls*) to mean ‘hens’. She also overextended the use of two adjectives ‘kaali’ (*black female*) in Line 144 to mean ‘ugly female’ and ‘chiti’ (*white female*) in Line 186 to mean ‘beautiful female’. The P also overregularized a noun ‘saanpi’ (*female snake*) in Lines 27 and 29. Thus, the P experimented with her language abilities at the lexical level.

Barthes (1986) describes a linguistic sign on two planes: *denotative* and *connotative* (p. 89). He views the meaning of a linguistic sign to be a dynamic entity. Thus, a denotative or dictionary meaning is fixed and objective whereas a connotative meaning is changeable and subjective and depends on factors such as the
language user’s intentions etc. The P’s use of a sign was mostly on the connotative plane as it was subjective and context-bound.

Table XVIII displays more linguistic explorations undertaken by the P as she created many words by mixing two words and sometimes used Punjabi and English words in her speech.

**Table XVIII**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Actual Word(s)</th>
<th>Punjabi/English/Potohari Word(s) Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>kọṭey (---)</td>
<td>kawaa+ṭọṭey (<em>crow</em> in Urdu)+<em>parrot</em> in Punjabi &amp; Urdu</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>karooṭey (---)</td>
<td>kabooṭar+ṭọṭey (<em>pigeon</em>+<em>parrot</em>) both words in Punjabi &amp; also in Urdu</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>-</td>
<td>meyri, murgiọn, ko, ṭang, naa, karo (<em>my, hens, to, tease, not, do</em>) all words in Potohari</td>
<td>maari, kухriaan, ki, ṭang, naa, karo</td>
</tr>
<tr>
<td>20</td>
<td>ṭaaːl (x3) (---)</td>
<td>ṭeyl+baal (x3) (<em>oil</em>+<em>hair</em>) both words in Punjabi &amp; also in Urdu</td>
<td>-</td>
</tr>
<tr>
<td>131</td>
<td>baaee (---)</td>
<td>baahar+aaee (<em>outside</em> in Urdu)+<em>came female</em> in Punjabi &amp; also in Urdu</td>
<td>-</td>
</tr>
<tr>
<td>143</td>
<td>-</td>
<td>kuch (<em>something</em> in Punjabi)</td>
<td>Kuj</td>
</tr>
<tr>
<td>146</td>
<td>-</td>
<td>khoobsoorat (<em>beautiful</em> in Punjabi)</td>
<td>soni</td>
</tr>
<tr>
<td>186</td>
<td>peelichee (---)</td>
<td>peeli+chambeyli (<em>yellow</em>+<em>jasmine</em>) both words in Punjabi &amp; also in Urdu</td>
<td>-</td>
</tr>
<tr>
<td>220</td>
<td>andiaan (-)</td>
<td>andey+sabziaan (<em>eggs</em>+<em>vegetables</em>)</td>
<td>-</td>
</tr>
</tbody>
</table>
(ii) Analysis & Interpretation. The P kept on creating words in Session 2 by using the compounding technique (Lines 8, 10, 20, 131, 186, 220 and 254). Occasionally, she also switched to other languages at word level (Lines 143 and 146) or even said an entire sentence in another language (Line 13). Though some words in this instance are the same in Urdu as well as in Potohari (†ang, naa, karо), it can be detected from the audio recording that the P used them in Potohari. Though her background as a multilingual helped her but still, her main language of communication remained Urdu. Thus, the lexifer (vocabulary) could be from any language that she knew yet the substrate (structure) remained Urdu. The P’s code switching, that is the ability to use more than one languages in a conversation (Crystal, 1999) can be explained as having “lower cognitive demands” in terms of communication (a phrase used in Everaert, Lentz, Mulder, Nilsen & Zondervan, 2010) because when the P could not find a word in Urdu for conveying an idea, she switched to a language of convenience without prolonging the stress.

4.13 Syntactic Level. Table XIX below displays the P’s performance in short utterances during Session 2.

Table XIX

<table>
<thead>
<tr>
<th>Line #</th>
<th>Sentence(s) Produced</th>
<th>Total # of Sentences Produced</th>
<th>Correct Sentence(s) Produced</th>
<th>Total # of Correct Sentence(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>in ko kuch do naan khaaney key liey.inheyn oo::k lagi ai (give them something to eat, they are ---)</td>
<td>2</td>
<td>in ko kuch do naan khaaney key liey (give them something to eat)</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>laal murghaa bauţ ee:::t ai,maal raa ai (the red</td>
<td>2</td>
<td>maar raa ai (is beating</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>rooster is very ---, is beating them up)</td>
<td>1</td>
<td>them up)</td>
<td>1</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>8</td>
<td>koṭey bacheay dehyṭey ain (---give birth to babies)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>maari kukriyaan ki ṭang naa karo (don’t tease my hens)</td>
<td>1</td>
<td>maari kukriyaan ki ṭang naa karo (don’t tease my hens)</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>haan: siṭ ain (yes they are ---)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>ṭa ey baal ṭaa::l (. ) ṭaa::l likhtey ain [ṭaa::l] (-----hair------write-----)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td>phir: ey joṛaa rakhwaayen gey (then they will put ---)</td>
<td>1</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>23</td>
<td>gaaey (. ) ko kaitey ain, hamaari:: MAAN ai (call the cow, it’s our mother)</td>
<td>2</td>
<td>gaaey (. ) ko kaitey ain, hamaari:: MAAN ai (call the cow, it’s our mother)</td>
<td>2</td>
</tr>
<tr>
<td>27</td>
<td>[ us ko eyk saanp] neyee oṭaa, saa::npi oṭi ai (to it there isn’t a snake, it is ---)</td>
<td>2</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>31</td>
<td>wo laṛki ↓oṭi ai (it’s a girl)</td>
<td>1</td>
<td>wo laṛki ↓oṭi ai (it’s a girl)</td>
<td>1</td>
</tr>
<tr>
<td>33</td>
<td>yey BUDEY aĩn naan (they’re old aren’t they)</td>
<td>1</td>
<td>yey BUDEY aĩn naan (they’re old aren’t they)</td>
<td>1</td>
</tr>
<tr>
<td>43</td>
<td>wo: maa:r deyṭaa ai (it kills)</td>
<td>1</td>
<td>wo: maa:r deyṭaa ai (it kills)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>dafaa karo, mujey zair lagtaa ai (leave it, I hate it)</td>
<td>2</td>
<td>dafaa karo,mujey zair lagtaa ai (leave it, I hate it)</td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>------------------------------------------------------</td>
<td>---</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>gudee kaići ai, raat meyn ↓aee thi (Guddee says, it came in the night)</td>
<td>2</td>
<td>gudee kaići ai (Guddee says)</td>
</tr>
<tr>
<td></td>
<td>59</td>
<td>is key bau*t bachey aîn naan, yey jangli kuṭey aîn (it has so many puppies, these are wild dogs)</td>
<td>2</td>
<td>is key bau*t bachey aîn naan,yey jangli kuṭey aîn (it has so many puppies, these are wild dogs)</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>eyk kuṭaa oṭaa ai (.goondaa, goondaa oṭaa ai (there’s a dog that is - ---, it is ---)</td>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>62</td>
<td>sunṭaa NEYEE ai (can’t hear)</td>
<td>1</td>
<td>sunṭaa NEYEE ai (can’t hear)</td>
</tr>
<tr>
<td></td>
<td>67</td>
<td>keyaa oṭaa ai, chitaa darmeyaanaa saa (what is it, a little bit white)</td>
<td>2</td>
<td>keyaa oṭaa ai (what is it)</td>
</tr>
<tr>
<td></td>
<td>78</td>
<td>neyee kar saṭti (can’t do)</td>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>79</td>
<td>yey molvi ai (it’s a Muslim priest)</td>
<td>1</td>
<td>*yey molvi ai (it’s a Muslim priest)</td>
</tr>
<tr>
<td></td>
<td>92</td>
<td>alaa yey neyee ai (this is not Allah)</td>
<td>1</td>
<td>alaa yey neyee ai (this is not Allah)</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>alaa yeyee ai naaṇ (isn’t this Allah)</td>
<td>1</td>
<td>alaa yeyee ai naaṇ (isn’t this Allah)</td>
</tr>
<tr>
<td></td>
<td>96</td>
<td>budey toṭey bi kabi par sakṭey aîn (can old parrots be taught)</td>
<td>1</td>
<td>budey toṭey bi kabi par sakṭey aîn (can old parrots be taught)</td>
</tr>
<tr>
<td></td>
<td>104</td>
<td>samee kaa kaam thaa naan, isi wajaa neyee aay (Samee had some work, that’s why they)</td>
<td>2</td>
<td>samee kaa kaam thaa naan (Samee had some work)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>didn’t come)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126</td>
<td>yey neyee: paṭaa ↓naan (have no idea)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>bauṭ thand &quot;lagi ai&quot; (feeling very cold)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>146</td>
<td>pailey soni thi lagti, aaj ajeeb si lagi ai (previously used to look beautiful, today looks weird)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>148</td>
<td>aa:j gharee::b log bani hui thi (today she was pretending to be poor)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>172</td>
<td>cheelaa neyee ai, cheelaa NEYEE acha lagtaa (it’s not ---, I don’t like -- -)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>176</td>
<td>zabaan ee neyee ai, keyaa kareyn: (there’s no tongue, what can one do)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>woee us ney rakhey uey (he has kept the same)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>210</td>
<td>yeyːː kiṭney oṭey aĩn (how many are these)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>213</td>
<td>keyaa oṭaa ai (what is it)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>216</td>
<td>yey naḍár khaṇ likhaa ai, naḍár khaṇ meyrey</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table XIX displays that the P produced 58 sentences in her short utterances during Session 2. Out of these, 35 were correct. So, the ratio of producing correct sentences in short utterances was 60.34%. She dealt with some of the grammatical complexity at sentential level by occasionally skipping the subject (Lines 3, 23, 45, 62, 118, 126, 128, 243 and 248). The P’s use of agentless active sentences (Halliday’s term, 1994, p. 39) was the same as the egocentric speech in Piagetian terminology (Piaget, 1959). The P assumed that a direct mental communication existed between herself and her interlocutor. Thus, mentioning of the subject of the sentence was a mere redundancy or unnecessary repetition to her and therefore, she skipped the subject and mentioned the predicate only.

The P’s performance in long utterances during Session 2 is displayed in Table XX.
<table>
<thead>
<tr>
<th>Line #</th>
<th>Sentences Produced</th>
<th>Total # of Sentences Produced</th>
<th>Correct Sentence(s) Produced</th>
<th># of Correct Sentences Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,11</td>
<td>[chitey] haan karootey, doosrey laa! chitey (. ) ey bachey chotey chotey bachey, [us ney har cheez rakhi ai] (white yes ---, the other ones are red white small babies, he has kept everything)</td>
<td>3</td>
<td>us ney har cheez rakhi ai (he has kept everything)</td>
<td>1</td>
</tr>
<tr>
<td>35,36</td>
<td>yey: ka kee::raa ai naa\n raa::mi:, raa::mi: deykha raa ai kee::raa, deykho idar gey they naan: (1.0) solo key saath , salmaan °key saath°° (it's an insect bastard, bastard is looking, look went here with Solo, with Salman)</td>
<td>4</td>
<td>kee::raa ai naa\n raa::mi:, raa::mi: deykha raa ai, deykho idar gey they naan: (1.0) solo key saath (it's an insect bastard, bastard is looking, look went here with Solo)</td>
<td>3</td>
</tr>
<tr>
<td>102,103</td>
<td>rozaa karwaayn gey, rozaa aaney waalaa ai, shaa\nm meyn aaeyn gey naan (they'll get fast, the fast is about to come, they'll come in the evening)</td>
<td>3</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>106,107</td>
<td>°°wo cheezeyn rakhwaa: key::\n to geyaa ai naan, saari cheez rakhi hui thi, wo kar key ley: geyaa ai°° (he has left after leaving everything, everything was kept, he has gone after doing)</td>
<td>3</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>109,110</td>
<td>gudee kai reyee thi, karwaay gaa, kai\ti ai khaalaa bi aati ai,</td>
<td>4</td>
<td>gudee kai reyee thi, kai\ti</td>
<td>3</td>
</tr>
<tr>
<td>Page Numbers</td>
<td>Text</td>
<td>Page Numbers</td>
<td>Text</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>114,115</td>
<td>Guddee was saying, will get it done, she says her maternal aunt also comes, one slips</td>
<td>5</td>
<td>Biloo is fine by the grace of God, can’t walk, but is fine, the doctor says, don’t walk a lot</td>
<td></td>
</tr>
<tr>
<td>123,124</td>
<td>we went inside, wasn’t there at night, say, went out, has gone</td>
<td>5</td>
<td>wasn’t there at night, say, went out, has gone</td>
<td></td>
</tr>
<tr>
<td>149,150</td>
<td>he also did work, was a real bastard, now he’ll marry to her</td>
<td>3</td>
<td>he also did work, was</td>
<td></td>
</tr>
<tr>
<td>Page Numbers</td>
<td>Left Text</td>
<td>Right Text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
<td>------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>161,162</td>
<td>&quot;aalaa unhoți ney rakhaa oțaa ai, unhoți ko kaițiey ain, hameyn pațaa LAG jațaa ai, jaanaa:: key neyee jaanaa (they keep an instrument, them say, we discover, whether we should go or not)&quot;</td>
<td>4</td>
<td>&quot;hameyn pațaa LAG jațaa ai (we discover)&quot;</td>
<td>1</td>
</tr>
<tr>
<td>220,221</td>
<td>&quot;HAR cheez aa geyee ai, koi andiaan daar andey neyee, andey neyee ain, koi laa: rey ain, keyaa oțaa ai, [ keyaa] o°oțaa ai°° (everything has come, some ------ eggs no, are not eggs, are bringing some, what is it, what is it)&quot;</td>
<td>6</td>
<td>&quot;HAR cheez aa geyee ai, andey neyee ain, keyaa oțaa ai, [ keyaa] o°oțaa ai°°(everything has come, are not eggs, what is it, what is it)&quot;</td>
<td>4</td>
</tr>
<tr>
<td>223,224</td>
<td>&quot;wo: neyee ain::, moolieyn bi, koi laa raa ai, koi cheez (1.0) laa rey ain, ab un ko bi kaa:m ho geyaa ai saaraa (are not, --- also, are bringing some, are bringing something, now all their work is also done)&quot;</td>
<td>5</td>
<td>&quot;wo: neyee ain::, koi cheez (1.0) laa rey ain (are not, are bringing something)&quot;</td>
<td>2</td>
</tr>
<tr>
<td>227,228</td>
<td>&quot;YEY rakhaa huaa ai, keyaa ai is meyn, keyaa↓rakhaa ai (it’s kept here, what’s inside it,what is kept)&quot;</td>
<td>3</td>
<td>&quot;YEY rakhaa huaa ai, keyaa ai is meyn, keyaa↓rakhaa ai (it’s kept here, what’s inside it,what is kept)&quot;</td>
<td>3</td>
</tr>
<tr>
<td>245,246</td>
<td>&quot;eyk dafaa KAREE pakaae&quot;</td>
<td>6</td>
<td>&quot;eyk dafaa&quot;</td>
<td>5</td>
</tr>
<tr>
<td>237</td>
<td>naa, wo:: ka rèe khàa téy neyee (\text{they, kaïtèy aïn, ka rèe bi pa tåa neyee:: pakaàti ai, tûmaaree DAADI pakaàti thi ka rèe, kha:li ey thorey si (once cooked curd curry, he didn’t like to eat curd curry, says, not sure but she cooks, your paternal grandmotehr used to cook curd curry, just a little bit)})</td>
<td>KARÉE pakaàee naa, wo:: ka rèe khàa téy neyee (\text{they, kaïtèy aïn, ka rèe bi pa tåa neyee:: pakaàti ai, tûmaaree DAADI pakaàti thi ka rèe (once cooked curd curry, he didn’t like to eat curd curry, says, not sure but she cooks, your paternal grandmotehr used to cook curd curry)})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>249, 250</td>
<td>kaïtèy aïn, mai:: so jaa::, main ney soyéy neyee, kaïtèy aïn, main so jaa:oon, so:taa: neyee oon, main bai tha a rai tåa oon (\text{(says, I slept, I don’t you sleep, says, should I sleep, don’t sleep, I keep on sitting)})</td>
<td>7</td>
<td>kai tèy aïn(x2), main so jaa:oon, so:taa: neyee oon, main bai thaa rai tåa oon (\text{(says (x2), should I sleep, I don’t sleep, I keep on sitting)})</td>
<td></td>
</tr>
<tr>
<td>253, 254</td>
<td>abi bi soey uey aïn, ham ney cha:ey pi ai naa, tûmaarey aboo bi a ae y, kaïtèy aïn, gudee mujey cha:ey deyo (is still sleeping, we’ve taken tea, your father also came, says,</td>
<td>5</td>
<td>abi bi soey uey aïn, ham ney cha:ey pi ai naa, tûmaarey aboo bi a ae y, kaïtèy aïn,</td>
<td></td>
</tr>
</tbody>
</table>
(ii) Analysis & Interpretation. In terms of long utterances, the P produced 66 sentences in all. Out of these, 43 were correct. Just like her performance in short utterances, the P sometimes skipped the subject in her long utterances as well (Lines 35 & 36, 109 & 110, 114 & 115, 123 & 124, 149 & 150, 220 & 221, 223 & 224, 245 & 246, 249 & 250 and 253 & 254). Overall, the P produced a total of 124 sentences (58 in short utterances and 66 in long utterances). Out of these, 78 were correct (35 in short utterances and 43 in long utterances). So, the ratio of producing correct sentences in Session 2 was 62.90%.

Table XXI below displays the utterances produced by the P during Session 2 which were fully correct.

### Table XXI

<table>
<thead>
<tr>
<th>Line #</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>haan murghiaan to mujey ↑BOT achi lagti ainn (yes I love hens a lot)</td>
</tr>
<tr>
<td>13</td>
<td>ey maari kukeiaaŋ ki tang naa karo (hey don’t tease my hens)</td>
</tr>
<tr>
<td>25</td>
<td>yey INDIAA key log (these Indian people)</td>
</tr>
<tr>
<td>31</td>
<td>wo laŋki ↓otii ai (it’s a girl)</td>
</tr>
<tr>
<td>43</td>
<td>haan wo: maar deytaa ai (yes it kills)</td>
</tr>
<tr>
<td>45</td>
<td>dafaa karo mujey zair lagtaa ai (leave it I hate it)</td>
</tr>
</tbody>
</table>
| 59     | oo papraa ab yey is key bau tranquil bachey ainn naan yey jangli kuṭey ainn (now it...
has so many puppies these are wild dogs)

92  ↓ alaa yey neyee ai (this isn’t Allah)

94  alaa yeyee ai naan (isn’t this Allah)

96  budey ṭọṭey bi kabi par sakṭey aĩn (can old parrots be taught)

98-100  haan:: (.)⁰⁰keyk ley leynaa⁰⁰ (1.0) phir saa:rey aaeyn gey naan SAMEЕ aey gaa (1.0) a biloo jojaa riḍaa samee or:: reyhaanaa (1.0) saarey aaeyn gey naan: salmaan aaey gaa solo aaey gi (2.0) theek ↑ ai (yes bring a cake then everyone will come Samee will come Biloo Joja Rida Samee and Rehana will come all will come Salman will come Solo will come ok)

112  yey neyee paṭaa waisey aeeya a thaa saari cheezeyn udar ley:: key ↑do:: aadmi they naan (have no idea but he came with everything there were two men)

118  saa:s ko DOOD paṭi deynaa (.) main phir us ko dood paṭi deyti th (give milk-and-tea to mother-in-law then I used to give milk-and-tea to her)

126  yey neyee: paṭaa ↓naan (have no idea)

128  ↑haan::: bauṭ thand o⁰lagi ai⁰ (yes feeling very cold)

176  zabaan ee neyee ai ṭo keyaa kareyn: (what can one do if one doesn’t have tongue)

191  khaibar key baap ney (Khaiber’s father)

210  eyk yey:: kīṭney oṭey aĩn (one how many are these)

216  yey naḍar khaan likhaa ai naḍar khaan meyrey abaa kaa naam thaa naan (it’s Nadir Khan written Nadir Khan was my father’s name)

227,228  hain: ṭaniaa ↑or: (1.0) yey neyee YEY rakhaa huua ai (1.0) keyaa ai is meyṇ keyaa ↓rakhaa ai (what corriander and what’s this what’s inside it)

230  TAMAATAR or wo laai ai beySHUMAAR laai ai (tomatoes and she has brought countless)
240  \( \downarrow \) yey:: (2.0) khati thi \( \text{it was sour} \)

248  haan: wo khaaeyaa DEYKHAA to ITNEY:: khus huey \( \text{yes he ate that and was very happy} \)

(iii) Analysis & Interpretation. The P responded 104 times in all during Session 2. Out of these, only 23 were fully correct at all linguistic levels. Thus, the ratio of responding correctly and producing grammatically correct sentences was 22.11%. This can also be called her ability to communicate successfully. It can be checked from the data that in all the lines mentioned in Table XXI, she was talking about a topic with which she was attached. In these utterances, she produced a total of 35 sentences. Out of these, 30 were single-clause, simple sentences (Lines 5, 13, 25, 31, 43, 45(x2), 59(x2), 92, 94, 96, 98-100(x5), 112, 118(x2), 126, 128, 210, 216(x2), 227 &228(x3), 240 and 248), one was compound (Lines 98-100), and four were complex (Lines 112, 176, 230 and 248). In some lines, the P skipped the subject (Lines 45, 98-100 and 112) and thus reduced the effort involved in the process of articulation yet she could produce three different types of sentences, that is, simple, compound and complex. Thus, there was variety in her language at sentential level during Session 2. The P’s experimentation with language during Session 2 indicates that she was dealing with the communicative challenges by learning how to use language effectively step-wise. Thus, she was developing as a language user yet her mode of communication heavily depended on the field (context) of her language use assumed an automatic tenor (connection with her interlocutor) (Halliday’s terms, 2004).

Table XXII displays more features of the P’s speech by considering her prolonged talk.

**Table XXII**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Response Time (in Seconds)</th>
<th># of Pauses Taken</th>
<th># of Fumbles Made</th>
<th># of Repetitions Made (in Words &amp; Phrases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-18</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>37-39</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>
(iv) Analysis & Interpretation. The P participated in a total of 104 exchanges during Session 2. Out of these, she could hold prolonged talk on a single topic for 14 times which was 13.46% of her total responses. In all these instances, she was talking about a topic with which she was emotionally attached. Thus, attachment with the topic resulted in more language production. The above table also reveals that the P responded spontaneously to the R in all instances but she paused between her talk, at times fumbled and repeated words or phrases even when she loved the topic of...
speaking. So, the topic of speaking did not affect the speed of response. The P’s pausing within her speech can be the result of her consciousness to be accurate at each level as she wanted to produce grammatically accurate speech and took pauses between words. Her pauses are indicative of her sensitivity towards the *grammatical boundaries* between different words that determined their communicative function (Crystal, 2006) and she paused because she wanted to deliver each word clearly which resulted in pauses between them.

**Section II**

**Fluency Check**

**4.14 Intonation.** Table XXIII displays the P’s intonation pattern during Session 2.

*Table XXIII*

<table>
<thead>
<tr>
<th>Line #</th>
<th>Rising Tone (Frequency)</th>
<th>Falling Tone (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>16</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>17</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>18</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>31</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>51</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>54</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>56</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>57</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>65</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>Page</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>70</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>73</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>76</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>79</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>86</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>92</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>100</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>103</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>112</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>115</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>126</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>128</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>134</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>136</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>139</td>
<td>Twice</td>
<td>-</td>
</tr>
<tr>
<td>143</td>
<td>Twice</td>
<td>-</td>
</tr>
<tr>
<td>149</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>151</td>
<td>Thrice</td>
<td>-</td>
</tr>
<tr>
<td>157</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>158</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>161</td>
<td>Once</td>
<td>-</td>
</tr>
</tbody>
</table>
(i) **Analysis & Interpretation.** Table XXIII indicates that the P used the rising tone when she was sure of her linguistic performance and also to drop a hint that the coming part of her utterance was important. This can be detected from the fact that she stressed the word following rising tone (Lines 5 and 57). In some instances, she achieved the same purpose by prolonging a sound in the word following rising tone (Lines 112, 128, 151, 161, 178 and 218). Thus, a rising tone was indicative of emphasis. The P’s use of a rising tone can be compared with *strong forms* of words in the “normal” speech as they are used to drop hints about the *intensity* of expression (Jones, 1976).

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>170</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>178</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>182</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>184</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>189</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>196</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>197</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>218</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>221</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>226</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>228</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>237</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>240</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>243</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>245</td>
<td>Once</td>
<td>-</td>
</tr>
</tbody>
</table>
The P used the falling tone when she was not sure of her performance and this reflects from the faulty performance preceding or following a falling tone (Lines 51, 57, 67, 73, 76, 86, 115, 157, 158, 184 and 189). She was conscious that she could not express herself correctly and dropped a hint to her interlocutor to guess her message from the context by paying more attention to her. Sometimes, she explicitly asked her interlocutor to provide that information by paying more attention to her. At times, the P used a whisper-like tone when she was unsure of her linguistic performance (in Lines 106, 107, 123, 142, 221 and 243). In “normal” speech, a whisper-like tone indicates secrecy, or a desire to hide something (Crystal, 2006). The P’s switching to this tone can be because she wanted to hide her linguistic inability. The use of a falling tone in the P’s speech can be compared with the weak forms in normal speech. The weak forms of certain words in connected speech also indicate their comparatively weaker position in the overall syntagmatic (horizontal) arrangement of a sentence (Roach, 1983).

Table XXIII also reveals that the P could manage her tone whether she loved the topic of speaking or not. This discloses that the topic of speaking did not affect her ability of tone management.

4.15 Stress. Stress pattern of the P’s speech was estimated by considering the words in Table XXIV.

Table XXIV

<table>
<thead>
<tr>
<th>Line #</th>
<th>Stressed Word(s)</th>
<th>Frequency of Stressed Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>BOT (a lot)</td>
<td>Once</td>
</tr>
<tr>
<td>23</td>
<td>MAAN (mother)</td>
<td>Once</td>
</tr>
<tr>
<td>25</td>
<td>INDIAA (India)</td>
<td>Once</td>
</tr>
<tr>
<td>33</td>
<td>BUDEY (old)</td>
<td>Once</td>
</tr>
<tr>
<td>38</td>
<td>SAMEENAA (Samina)</td>
<td>Once</td>
</tr>
<tr>
<td>48</td>
<td>CHEEZ, GANDI (thing, dirty)</td>
<td>Twice</td>
</tr>
<tr>
<td>Page</td>
<td>Word</td>
<td>Meaning</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td>57</td>
<td>DAFAA, DAR</td>
<td>(get lost, fear)</td>
</tr>
<tr>
<td>62</td>
<td>NEYEE</td>
<td>(no)</td>
</tr>
<tr>
<td>66</td>
<td>TOTELY</td>
<td>(pieces)</td>
</tr>
<tr>
<td>98</td>
<td>SAMEE</td>
<td>(Samee)</td>
</tr>
<tr>
<td>118</td>
<td>DOOD</td>
<td>(milk)</td>
</tr>
<tr>
<td>152</td>
<td>MOSAM, BAUT</td>
<td>(weather, a lot)</td>
</tr>
<tr>
<td>153</td>
<td>PATAA</td>
<td>(know)</td>
</tr>
<tr>
<td>154</td>
<td>NEYEE</td>
<td>(no)</td>
</tr>
<tr>
<td>155</td>
<td>MARNAA</td>
<td>(die)</td>
</tr>
<tr>
<td>159</td>
<td>LAG</td>
<td>(discover)</td>
</tr>
<tr>
<td>161</td>
<td>LAG</td>
<td>(discover)</td>
</tr>
<tr>
<td>172</td>
<td>NEYEE</td>
<td>(no)</td>
</tr>
<tr>
<td>179</td>
<td>SHUMAAR</td>
<td>(count)</td>
</tr>
<tr>
<td>180</td>
<td>GAR</td>
<td>(home)</td>
</tr>
<tr>
<td>187</td>
<td>MOTEY(x2), KHOOSBORAT</td>
<td>(fat, beautiful)</td>
</tr>
<tr>
<td>220</td>
<td>HAR</td>
<td>(every)</td>
</tr>
<tr>
<td>230</td>
<td>TAMAATAR, SHUMAAR</td>
<td>(tomatoe, count)</td>
</tr>
<tr>
<td>245</td>
<td>KAREE</td>
<td>(curd curry)</td>
</tr>
<tr>
<td>246</td>
<td>DAADI</td>
<td>(paternal grandmother)</td>
</tr>
<tr>
<td>248</td>
<td>DEYKHA, ITNEY::</td>
<td>(saw, very)</td>
</tr>
</tbody>
</table>
(i) **Analysis & Interpretation.** Table XXIV reveals that the P usually stressed the content words during Session 2. In Lines 23, 25, 38, 48, 57, 66, 98, 118, 152, 180, 230, 245 and 246 she stressed a noun. In Lines 57, 155, 159, 161 and 248 she stressed a verb. In Lines 5, 152, 220 and 248 she stressed an adverb and in Lines 33, 48 and 187 she stressed an adjective. Thus, she knew that the content words carried the content of the message and this consciousness led her to pay more attention to them by stressing them. In Lines 5, 33, 48, 57, 62, 66, 152, 153-155, 159, 161, 172, 179, 220 and 248 the P stressed the words with which she had no emotional association. Thus, the topic of speaking did not affect the stress pattern of her speech.

In this regard, Roach (1983) describes stress to be a difficult feature to produce (as it requires a lot of muscular activity) but easy to perceive (as the stressed words are louder than the surrounding ones). The P invested more energy in the production of the content words because she wanted her interlocutor to perceive them easily and be more attentive to them.

**4.16 Tempo.** The tempo of the P’s speech during Session 2 has been estimated through analyses of Tables XXV and XXVI.

*Table XXV*

<table>
<thead>
<tr>
<th>Line #</th>
<th>Response Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>2 sec.</td>
</tr>
<tr>
<td>166</td>
<td>2 sec.</td>
</tr>
<tr>
<td>207</td>
<td>2 sec.</td>
</tr>
<tr>
<td>239</td>
<td>3 sec.</td>
</tr>
</tbody>
</table>

(i) **Analysis & Interpretation.** Table XXV reveals that the P did not have many problems in responding to her interlocutor as she took only two or three seconds to plan her speech. Though in Line 85, she fumbled a lot and had problems in producing a correct utterance. It can be because of the formal reading practice which put her under stress. In Line 239 as well she was trying to utter the exact expression and was searching for it from her *mental lexicon*. Her correct performance after three seconds’
time indicates that she succeeded in her effort. Thus, during the pause, the P wanted to have time to think and plan her speech. In Line 85, the P was doing a reading activity. In all other lines mentioned in Table XXV, she was talking about a topic that she loved. Thus, the P’s response was not much affected by the topic of speaking.

**Table XXVI**

<table>
<thead>
<tr>
<th>Line #</th>
<th>No. of Pauses</th>
<th>Duration of Pause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>Two</td>
<td>5 sec., 5 sec.</td>
</tr>
<tr>
<td>37</td>
<td>Two</td>
<td>2 sec., 21 sec.</td>
</tr>
<tr>
<td>47</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>48</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>54</td>
<td>One</td>
<td>9 sec.</td>
</tr>
<tr>
<td>55</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>67</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>100</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>139</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>142</td>
<td>One</td>
<td>3 sec.</td>
</tr>
<tr>
<td>148</td>
<td>One</td>
<td>3 sec.</td>
</tr>
<tr>
<td>151</td>
<td>Two</td>
<td>2 sec., 8 sec.</td>
</tr>
<tr>
<td>154</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>155</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>170</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>200</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>221</td>
<td>One</td>
<td>3 sec.</td>
</tr>
</tbody>
</table>
(ii) **Analysis & Interpretation.** Table XXVI displays that the P’s pauses between her utterances were not due to any language problem. In Lines 35 and 37, she was watching a TV documentary and paused longer because she was describing the action going on and spoke only when a change in the scene happened. Thus, the pauses were due to concentration on the program. In Lines 47 and 48, she paused because she was laughing while talking and not because of any language problem. In Line 54, she paused because she wanted to be exact. The data reveal that she succeeded in recalling. So, the long pause was to have time to concentrate. In Line 67, she could not exactly say the word as she wanted. Thus, she wanted to reword or rephrase her message. She achieved her objective by inventing an idiosyncratic expression after the pause. In Line 100, she paused to give time to the interlocutor to respond and agree with her. The pause here can be treated as replacement of a question tag as it did a social function of involving and *giving floor* to the interlocutor (a term in Sociolinguistics for giving someone a chance to participate in a conversation).

In Line 139, she initially made a mistake and after pausing, corrected it. So, a pause was also used to make corrections in speech. In Lines 142 and 221, she posed a question to her interlocutor. She gave floor to the interlocutor in Lines 151 and 253 as well for involving her in conversation. Thus, the P used pauses purposefully.

In all the lines mentioned in Table XXVI, the P was talking about a topic that she loved except in Line 67 in which she was doing reading practice. Thus, the topic of speaking did not affect the tempo of speech.

**4.17 Speech Performance in Reading Activities.** The performance of the P in formal reading practice clearly exhibits her reluctance for participation. In Lines 70, 73, 76, 79 and 86 she dropped her voice. The falling tone was an indicator of a faulty performance that followed (Lines 76 and 86). Consciousness about language problem created a hurdle while speaking but she did not feel any such hurdle while reading the names of her loved ones in an informal setting as she read a sign board on her own while coming back from a stroll (Line 216). Formal reading practice caused more fumbles, lack of confidence (obvious through a falling tone), less language production.
(as she responded only in terms of words or phrases) and a faulty performance. In Lines 78 and 96, she explicitly told the R that she was unable to read. Thus, speaking practice done through reading activities was not very productive.

4.18 The Doctor’s Opinion about the P’s Speech in Session 2. The R had noticed that fluency in the P’s speech improved during Session 2. She discussed it with the Doctor. He agreed with the R after talking to the P. He also said that the P was emotionally secure and this resulted in better communicative abilities (refer to DD III on the CD).

Section III

Overall Analysis & Interpretation of Session 2

As observed in the analyses of Session 1, the P had problems in uttering some sounds. Thus, she tended to skip them altogether. Table XIV displays nine such instances during Session 2 when she skipped the problematic sound. The table also reveals that all the sounds skipped altogether were consonants. However, during Session 2, it can be seen that the P had started overcoming this problem by sometimes replacing the problematic sounds with those that she could easily utter yet all the substitutions were done within the same sound category (see Table XVI). Sometimes, the P skipped a consonant and compensated for the total length of the word by elongating a neighboring vowel sound (see Table XIV).

At the lexical level, the P had devised certain techniques during Session 2 to handle the linguistic challenges. Thus, if she had trouble in articulating a word, she tended to either skip it altogether (see Lines 179, 201 and 249) or substitute it with a word that she could easily utter (see Table XVII). The analysis of Table XVII also reveals that all the substitutions were within the same word class. Thus, she made such substitutions consciously. The function words had started getting importance in her speech during Session 2 as they had started emerging (see Table XVII). Sometimes, the P overregularized and overextended certain words (see Table XVII). Sometimes, she coined words and sometimes switched to other languages (see Table XVIII). All these techniques helped her in meeting the linguistic challenges at the lexical level.
At the syntactic level, she dealt with some of the difficulty involved in speech production by sometimes skipping the subject of the sentence and saying only the predicate (see the analyses of Tables XIX & XX). Her speech also started acquiring variety, as she could produce three different types of sentences, that is, simple, compound and complex (see Table XXI) and she could produce more language on a single topic (see Table XXII).

It can be seen from the analyses of Tables XXI and XXII that attachment with the topic aided the P in producing grammatically correct sentences and in holding prolonged talk. This means that emotional attachment with a topic resulted in creating grammatically accurate speech.

As far as fluency is concerned, the P could experiment with intonation (see the analysis of Table XXIII) and could use the stress effectively (see the analysis of Table XXIV). Her speech was quite spontaneous and fluent throughout Session 2 (see Tables XXII and XXV). It can be checked from the analyses of Tables XXIII-XXVI that the P could use the paralinguistic features of speech effectively regardless of the topic of speaking. Thus, attachment with a topic did not affect the level of fluency in her speech.

The P’s skipping of the problematic sounds and an effective use of the falling tone can be treated as her effort-minimizing techniques. This can be compared with the fluency devices in the “normal” speech namely, *elision*, *assimilation* and *contractions*.

**Comparison between Session 1 & 2**

During both sessions, the P had problems in uttering the consonant sounds and she dealt with this problem by skipping the consonants altogether in her speech (see the overall analyses of Session 1 & 2) yet in Session 2, she had started overcoming this problem by substituting for the sounds that she could not utter (see the overall analysis of Session 2). However, all such substitutions were done within the same sound category (see the overall analysis of Session 2). In both sessions, the P also dealt with the difficult sounds in a creative way: She skipped the problematic sound but maintained the total length of the word by prolonging another sound (see the overall analyses of Session 1 & 2). The overall analyses of both the sessions also
reveal that the skipped sound was always a consonant and the elongated sound was always a vowel.

Consonant sounds require obstruction in the air stream coming from the lungs during speech production whereas vowel sounds have a free way (Crystal, 1999). Thus, in the articulation of consonant sounds more muscular energy is required by the articulators as compared with the vowel sounds. The P minimized her effort in speech production by lessening the number of troublesome sounds in her speech and by relying more on relatively easier sounds. The P’s reliance on the same technique during both sessions discloses that it was a technique that she had devised. Thus, at the phonemic level, she was experimenting with the language but in a rule-governed way. However, these rules were purely idiosyncratic in nature.

At the lexical level, the P’s speech displays the features that were observed in both sessions. So, in both sessions she dealt with lexical problems in three different ways: She tended to skip the words altogether that she could not pronounce. Sometimes, she substituted for some of them, overregularized and overextended the use of few words, switched to a language of convenience (that she knew) and sometimes coined words in a purely idiosyncratic way (see the overall analyses of Session 1 & 2).

The overall analyses of both the sessions also reveal that in both the sessions, the words missing in her speech were generally the function words and whenever a substitution was made, it was within the same word category or word class. The tendency of skipping the function words in speech during Session 1 can be because she could encode all her communicative intent in the content words and thus, the function words were unnecessary in the speech production process (refer to DD II on the CD) and that she could minimize her effort in speaking by skipping them.

The overall analyses of Session 2 also reveal that the function words had started emerging. The use of same technique to handle linguistic problems at lexical level reveals that it was a strategy that the P tried and tested in Session 1 and after finding it helpful continued using in Session 2.

At the syntactic level, the P handled the linguistic challenge by reducing the effort involved in articulation by creating agentless sentences (see the overall analyses
of Session 1 & 2). Her speech at the sentential level displayed less variety during Session 1 as she relied mostly on single-clause, simple sentences yet it started acquiring variety in Session 2 as she started creating more sentence types. Thus, as compared with Session 1, she had a better control over speech production in that she could change the sentence form according to the situation. It can also be checked from the overall analyses of both the sessions that she produced more language in Session 2 as compared with Session 1. Thus, a comparison between Session 1 and Session 2 reveals that the circle of the P’s exploration was increasing at the syntactic level and as a result, her zone of proximal development was expanding. The analyses also disclose that emotional attachment with the topic of speaking helped the P in attaining grammatical accuracy in speech.

As far as fluency is concerned, a comparison between the two sessions reveals that the P could change the intonation, stress and tempo of her speech in both sessions according to the communicative intent in her mind regardless of the topic of speaking. Thus, the topic of speaking had no effect on fluency in speech during both sessions.

**Comparison of Speech Performance in Reading Activities**

A comparison between the P’s speech performance in formal reading activities during both sessions reveals that the P was reluctant in doing it. In Session 1, she explicitly showed her reluctance for reading activities at many places (Lines 117, 148, 155, 166, 182, 184, 186, 188, 241 & 242, 259, 261, 288 and 291). In Session 2 as well, she did the same (Lines 78 and 96). The analyses of accuracy and fluency levels in the P’s speech during both sessions reveal that formal reading practice caused troubles for the P and as result, her performance became faulty. Due to the P’s reluctance, no formal reading practice activities were included in Session 3.

“Normal” speech development starts in an *automatised* way (Vygotsky’s term as cited in Veer & Valsiner, 1994) and eventually becomes creative (Krashen’s idea 1981). However, the language recovery after aphasia follows an opposite route. Thus, it starts in a creative, individualistic way and eventually becomes automatic. Thus, fluency problems, if any, in the early speech of the aphasics might be because of creativity involved at each step of speech production that involves thinking and planning at each level and that can cause disfluent speech.
Session 3 (February 2012-May 2012)

In Scene I, the P is chatting with the R; in Scene II, she is watching TV; and in Scene III, she is either on a stroll or a drive or has just come back from one.

Scene I

P tells R to clean the table with a tissue paper. R searches for one and P says it is on the table.

Line 1 documented as a DE on 2.2.2012

1 P: tishoo baithaa uaa ai

(the tissue is sitting)

R asks P what she did that day. She says that her sister called from abroad.

Lines 2-4 from AR on 14.3.2012

2 P: ki:: ↑neyee: meyri bain naan ey baar jo geyee ↓ai ey (2.0) mumtąaa:z us kaa pa waisey pa

3 aaeeya thaa (1.0) ey keyaa oțaa ↑ai

(not hers my sister who lives abroad Mumtaz her what is it?)

4 R: tailifoon

(telephone)

P tells R that a relative also came in R’s absence.

Lines 5-16 from AR on 15.4. 2012

5 R: aap ki ↑keyaa lagți ai

(what relation does she have with you?)

6 P: meyri:: yey naan kon ai wo: (4.0) ↓ka kazan ai naan wo

(my she’s my cousin isn’t she?)

7 R: ↑haan:::

(yes)

8 P: wo įo wo: chòti:: ai naan wo ( ) wo naan (1.0) us ki:: (2.0) ↓meyri:

(isn’t she young? she her my)
9 R: khaalaa ki laāki ai

*(maternal aunt’s daughter)*

10 P: ↑haan:

(yes)

P thinks for a while then continues.

11 P: main choti thi wo [ bari ai]

*(I was younger she’s older)*

12 R: [↓achaa]

*(ok)*

**For Lines 13-15 also refer to DD IV on 9.5.2012 on the CD.**

13 P: BARI: thi naan un key BACHEY they (3.0) ↑un key:: (1.0) aboo: hamaarey maamoon:

14 (1.0) neyee hamaaraa abaa: or un kaa baa:p (. ) donon DOST they (. ) DOST bi they

15 khaandaan they

*(she was older they had children their father our maternal uncle no our father and their father were both friends friends as well as relatives)*

16 R: rishṭeydaar bi they:

*(they were relatives as well)*

R asks about her father’s relatives now.

**Lines 17-23 from AR on 4.4.2012**

17 R: aboo key chaachaa ↑they

*(did your father have any paternal uncles?)*

18 P: ↓chaachaa they

*(yes he had paternal uncles)*

19 R: ↑kiīney

*(how many?)*
20 P: ↑chaachaa (1.0) ↑chaatāa they ( ) chaaye a ίaay (1.0) eyk do ίeen chaar ↓they

21 (1.0) chaachaa ↑eyk

(I had paternal uncles one two three four paternal uncles older than my father and one paternal uncle younger than my father)

22 R: aap key ↑kiñney chaachaa THEY (4.0) aap kai reyee thin naan

(you were telling something about how many paternal uncles you had)

23 P: ↓meyrey ↑baaee (3.0) naan meyrey ( ) ↓kon saa othaa ai

(my brother no my what is it called?)

Lines 24-30 from AR on 7.4.2012. For Lines 24, 25 & 28, 29 also refer to DD IV on 9.5.2012 on the CD.

24 P: to hamaa:raa: keyaa othaa ai ↑naan hamaari amaan kaa NEYEE: wo kaiṭey aīn maaraa:::

25 ey:: oṅkeyaa othaa ai oṅkey NAANAA: naanaa NEYEE: wo: (1.0) ṅmaa:ː daadį ṅ DAADI

26 kaiṭi ai: (.) a daadąa naan (.) MAR geyaa thaa

(so my what is it called? my mother no my what is it? maternal grandfather no my paternal grandmother told me that my paternal grandfather had passed away)

27 R: hoon:::

(I see)

28 P: bachaaraa MAR geyaa phir daadį ney ka karwaayaa ( ) BAUT ameer log they wo un

29 key keyaa oṭi aīn bauṭ thin keyaa oṭaa ↑ai:

(poor man he had passed away then the paternal grandmother says that they were very rich people they had plenty of what do they call it what is it?)

30 R: zameeneyŋ:

(lands)
P tells R that she wants to visit her relatives but can’t because all her children are having exams these days.

**Lines 31-35 from AR on 3.5.2012**

31 P: najmaa::: ey:: najmaa kaa pasṭ ai

(\textit{Najma has a test})

32 R: test ai

(it’s test)

33 P: tast ai naa

(ok it’s a test)

34 P: main deykh reyee oon naan phir neyee sakṭi naan isi wajaa sey main kaiṭi oon

(1.0)

35 najmaa ko roti:: do::

(I’m seeing it I can’t walk that’s why I say give lunch to Najma)

**Line 36 documented as a DE on 24.3.2012**

36 P: aaj ridaa kaa bi past ai

(\textit{Rida also has an exam today})

**Lines 37-39 from AR on 5.5.2012. For the same Lines, also refer to DD IV on 9.5.2012 on the CD.**

37 P: aa us kaa: potar ai ṭo jo us naan is is kaa ey: sa sa salmaan kaa gaari kharaab ai hamaari

38 gaari theek ai (.) ṭo kaiṭi ai main roti khaa key jaaoon gi ((rooster crows and sparrows chirp))

39 lapar lapar karṭi ai

(it’s her exam today and Salman’s car is out of order our car is all right so she says that after taking meal I’ll go it’s making fuss)

**Lines 40-50 from AR on 29.5.2012**

40 R: ↑kon

(who?)
P asks about her daughter Samina who’s having exams and whom P calls ‘Solo’. She is waiting for her.

**Line 51 documented as a DE on 6.3.2012**

51 P: abi ṭak n eyee aae solo abi ṭak n eyee aae

*(solo hasn’t come yet she has not come yet)*

**Lines 52, 53 from AR on 1.3.2012. For the same Lines, also refer to DD IV on 9.5.2012 on the CD.**

52 P: sameenaa paas ho jaaey gi inshaalaa inshaalaa inshaa n eyee ṭοmeyri bachiṭοm

↓inshaalaa 53 paas ho jaaey gi (.) sameenaa inshaalaa PAAS ho JAAEY ↑gi

(he’s going back to his home no he says I’m going)

(line 44 from the record)
(Samina will pass Inshala Inshala no my daughter will Inshala pass Samina will Inshala pass)

P takes out her rosary and starts doing recital on it.

**Lines 54-64 from AR on 3.3.2012**

54 R: keyaa par reyee ↑ain

(what are you reciting?)

55 P: main (.) bismilaahirahmaaniRAHEEM (.) yeyee ↓par sakti oon

(it’s Bismilahirahmaniraheem as I can recite only this much)

56 R: or ↑neyee par saktiin (2.0) or ( ) aap ↑inshaalaa bi to ↑par sakti ↑ain

(and can’t you recite anything else? you can recite Inshala as well)

57 P: bas woe ai bismilaa ee ai ( ) BISMILAAHIRAHMAANIRAHEEM

(it’s only Bismila Bismilahirahmaniraheem)

58 R: achaa (1.0) is key baad keyaa dua maangeyn ↑gi

(ok then what will you pray for after it?)

59 P: bas yey karoon gi (.) bismilaahirahmaaniRAHEEM (2.0) paroon gi to phir kaoon gi

60 inshaalaa meyri ↑BACHI (1.0) ↑SAMEENAA paas HO JAAEY ↑GI

(I’ll only do Bismilahirahmaniraheem I’ll recite it then I’ll say Indhala my daughter Samina will pass)

61 R: us kaa peypar kab ↑ai

(when does she have the exam?)

62 P: subaa us [ ↑kaa::]a ain::

(hers is in the morning)

63 R: [ test ai ] test

(it’s a test test)

64 P: past ai ↑haan ( )chalo subaa us kaa tast ai

(it’s a test ok let’s say it’s a test)
Scene II

P and R are sitting in P’s bedroom. P tells R what she saw in the morning.

Lines 65-67 from AR on 18.2.2012

65 P: bulbul oti ai BULBUL (1.0) wo aae thi (4.0) bulbul (1.0) subaa subaa

(it’s a nightingale a nightingale it came early in the morning)

66 R: deykhaa aap ney

(did you see it?)

67 P: haan:: aae thi idar oo::k lagi ooe thi

( yes it came it was feeling hungry)

R turns on the TV and P tells R about the dish being cooked on the screen.

Lines 68-77 from AR on 12.2.2012. For Lines 68-71 also refer to DD IV on 9.5.2012 on the CD.

68 P: ooo rakhi uee ai us ney yey haan: ey taniaa: (1.0) har cheez rakhi: uee ai us ney yey

69 pakaay gi to: khaaey gaa bando((voice on TV)) (3.0) taniaa:: (1.0) taniaa: har cheez us

70 meyn pakaay reyee ai haan: deyko naan har cheez ai naan us meyn: (. ) neyee bataa:o naan

71 [ tujey ]

(she’s kept it this is coriander she has kept everything she’ll cook then one will eat coriander coriander she’s cooking everything in it look at it I’ll tell you)

72 R: [ sonf ]

(aniseed)

73 P: har cheez::z us ney: yey: (. ) yey: narak

( she has everything such as salt)

74 (1.0)

75 R: mircheeyn

(chillies)
76 P: mircheyn: or (1.0) yey cheezeyn yey taniaa:

(chillies and this thing coriander)

77 R: hoon: (1.0) NAMAK

(ok salt)

P changes the channel and there is a documentary on TV. P loves documentaries.

Lines 78-92 from AR on 21.2.2012. For Lines 78, 79 also refer to DD IV on 9.5.2012 on the CD.

78 P: deykho ↑naan ey subaa subaa uthtey ↓ain ey wo apni taraf sey to ham namaa::z par tey ain

79 to ↑wo bi apni taraf sey namaa::z par tey ain

(you see they wake up early in the morning and in their own way just like we offer prayers they also offer prayers in their own way)

80 R: ibaadat kar tey ain [ naan ]

(they worship)

81 P: [ haan::] kar tey ain phir par tey ain phir ey: yey: kar key phir (2.0)

82 ookeya kar tey ain oo

(yes they do then they read then after doing it what do they do?)

83 R: kaam kar tey ain

(they work)

84 P: apney:: ( ) us kaa naan un:: ↓hamaaraa ham hamaarey:: ham keyaa otey ↑ain (1.0)

85 hamaa:rey (1.0) ( ) keyaa otey ain hamaaraa jab ham namaa:z par tey ain [ ( ) ]

(their his no their ours we ours what are we? ours what is it? ours when we offer prayers)

86 R: [ masjidl] meyn

87 jaatey ain
(we go to the mosque)

88 P: ṭhaan:: wo naaṁ ṭwo: kartaey ain apney nanar meyn jaatey ain
(yes they go to their temple)

89 R: acha:: or go:shṭ gosht khaatay ain waisey
(ok and do they eat meat?)

90 P: go:shṭ go:shṭ neyee khaatay () ab ṭo shuroo kar diaa ai khaanaa
(meat they don’t eat meat but now they have started eating meat)

91 R: leykin gaaey kaa neyee khaatay
(but they don’t eat cow’s meat)

92 P: maan ai us ko kaiṭey ain meyri maan ai
(it’s our mother they say it’s their mother)

Line 93 documented as a DE on 3.3.2012

93 P: yey keyaa kar rey ain meyraa kheyaal ai key jaa rey ain
(what are they doing? I think they’re going)

Lines 94-102 from AR on 25.5.2012

94 P: abi jaa rey ain gaari meyn
(they’re still going in the car)

95 (1.0)

96 R: baraf ṭo neyee ai
(isn’t there any snow?)

97 (1.0)

98 P: oo yey neyee paṭaa naan abi deykhoon gi naan oo
(I don’t know I’ll watch first)

For Lines 99-102, also refer to DD IV on 9.5.2012 on the CD.

99 P: neyee main DEYKHOON gi naan oo abi dey: reyee oon deykhoon gi abi oo (5.0) is meyn
100 yey (1.0) ey: GAND mey yey kaa:m kartey aηn yey: (. ) gandey kaam kartey aηn (6.0)

101 gaarion meyn idar jaa rey aηn udar jaa rey aηn (. ) harāami (3.0) kaiτey aηn idar neyee jaa

102 sakτaa idar jaaon gi phir IDAR jaaon gi

(no I’ll watch first I’m still watching in this filth they work they do dirty things they are going in cars they do dirty things they are going here and there bastards they say one cannot go here I’ll go here then I’ll go here)

P tells R that her paternal grandfather grew up in India.

**Lines 103-115 from AR on 24.2.2012**

103 P: τumaaaraa daaaat athar thaa

(your paternal grandfather was headstrong)

104 R: akhar

(headstrong)

**For Lines 105-115 also refer to DD IV on 9.5.2012 on the CD.**

105 P: ↑haan:: to us ki ↓wajaa sey key: too DAFAA o jaa ↓ to: daaτaa kaiτaa ai main ↓ phir

106 UDAR jaa raa thaa phir too thorey to ( ) din baad us ko: too:: laahol chalaa jaa:: phir

107 udar: laahol jaaey phir kaiτey key idar ( ) (plane passes) ) (4.0) IDAR chalaa jaa baut

108 TANG kartey they usey baut TANG kartey they (. ) phir kaiτey aηn ihtaa bimaar: r o geyaa

109 naaη τumaaaraa daaaat daa: daa bimaar o geyaa thaa naaη ↑baachaa un kaa (1.0) kaiτey aηn

110 theek o geyaa oo phir theek o geyaa oo phir bachaa theek o geyaa bachaa theek o geyaa

111 ( ) bas (1.0) bas theek inshaalaa theek ai wo thee:: k o geyaa ai ↓ inshaalaa ( ) mainη

112 ney bas alaa τaalaa sey karwaa diaa yaa alaa τaalaa bachaa theek o jaaey ↓ theek THEE: K ee o
113 geyaa o°theek o geyaa achaa theek ai o° kaiṭaa ai alaa ṭaalaa ( ) sey kaiṭaa ai naa key

114 agar main alaa ṭaalaa sey alaa ṭaalaa sey yey: kiaa yaa: alaa ṭaalaa meyraa bachaa thee:k o 115 jaaey yaa alaa meyraa bachaa ( ) o jaaey bau TANG paṛaa

(yes that’s why he said you get lost so your paternal grandfather said he went there then after some days he would say go to Lahore and he would go to Lahore then he would say go there they used to annoy him a lot so he says he got ill your paternal grandfather got ill his son got well his son got well Inshāla he’s fine I prayed to God to bless him with health he got well he says he prayed to God to bless his son with health he got irritated)

R changes the channel and it’s the Animal Planet. Different animals appear one after the other. P tells R about the animal instinct.

**Lines 116-119 documented as DEs on 30.4.2012. For Lines 116,117 also refer to DD IV on 9.5.2012 on the CD.**

116 P: jaisey sheyr sheyri ko marṭaa ai isi ṭaraa jab do cheezeyn oṭi ain to eyk doosrey ko marṭi

117 ain jaisey sheyr ki sheyri oṭi ai ṭo baṭakh ki batkhi oṭi ai

(for example the lion beats the lioness up whenever there are two animals one beats up the other so just like the lion has a lioness there’s a female duck for a male duck)

There’s another scene on the TV screen and peacocks are being shown. P thinks the females are not as pretty as the males are.

118 P : moree iṇi khoobsoorat to neyye jiṭnaa mor

(the peahen isn’t as pretty as the peacock is)

In another scene, there’s a female snake with many eggs in its nest. Soon it starts moving out.

119 P: ey saanpi nikal geyee ai

(oh the female snake has left)
P tells R that she is feeling irritated and wants to change her clothes because it’s hot and her clothes are warm.

**Line 120 documented as a DE on 3.5.2012**

120 P: yey kaprey mujey chak maarṣey ain

(*these clothes bite me*)

P tells R that she didn’t take lunch that day.

**Lines 121, 122 documented as DEs on 7.5.2012**

121 P: aaj garmi ai naa ṭo garmi meyn murghaa khäeyn ṭo chak maarṭaa ai haan gudee ney

122 dalwaayeeyaa ṭo chak maar raa ai

(*it’s hot today and if you eat chicken in the hot weather it bites Gudde made me eat it that’s why it’s biting me*)

P asks R to open the windows.

**Line 123 documented as a DE on 13.3.2012**

123 P: idar makhi phansi uee ai

(*there’s a fly caught in here*)

A fly sits on R’s hand she asks P to kill it with a fly killer.

**Line 124 documented as a DE on 7.5.2012**

124 P: neyee aap ko chak maarey gaa

(*no I won’t it will bite you*)

R feels annoyed because of the fly.

**Line 125 documented as a DE on 10.4.2012**

125 P: moon naa dalwaau

(*don’t make faces*)

R goes out to wash her hands and then brings rice for cleaning.

**Lines 126-154 from AR on 25.2.2012**

126 P: chaawal bi otey ain naan:: pailey:: in ko: (2.0) ey: keyaa kareyn (1.0) ey theek kareyn
127 keyaa kareyn pailey is ko::

(it’s rice first what to do with them is arrange them do what?)

128 R: saaf kareyn

(clean them)

129 P: saa:f kareyn phir us kareyn:: ey: ey (1.0) paani paani meyn ey::

(clean them then do in water?)

130 R: dhoṭey aṁ

(they’re washed)

131 P: ṭhaan dhoeyn phir us meyn

(yes wash them then put in them)

132 R: kioon dhoṭey aṁ

(why are they washed?)

133 P: GANDEY oṭey aṁ naa

(they’re dirty)

134 R: achaa: MITI oṭi aĩ

(I see there’s dirt)

135 P: ṭhaan:: (1.0) do ṭeṇ daḏaa karwaaeyn phir (1.0) paani paani meyn do ṭeṇ daḏaa (1.0)

136raithwaa deyn

(yes two three times then soak them in water two three times)

137 R: aap pakaa: ṭi thin pailey chaawal

(did you use to cook earlier?)

For Lines 138-148 also refer to DD IV on 9.5.2012 on the CD.

138 P: main ney kabi neyee pakaaey they naaṇ (1.0) main choti thi naaṇ oṅkabi neyee pakaaey

139 (1.0) paillī ḍafaa ṭey: ṭeṛey ḍāa: humaarey abaa: aaey naaṇ: (1.0) main:: am: ↓u udar gaaon
I had never cooked I was very young so I had never cooked when I cooked for the first time your paternal grandfather no my father I we used to live in the village there in my own house my father told me how to cook rice then I cooked rice with meat when I got married he came your paternal grandfather said that we’ll eat rice then I cooked rice and gave them to him I gave everything to him I said no first I’ll give you loaf I gave them bread your paternal grandmother says give them loaf with tea they lived in Lahore your paternal grandfather used to live in Lahore so your paternal grandmother said to me when she came to give them loaf your father says that his father says that ok I’ll bring loaf from the bakery oven)

For Lines 150-154 also refer to DD IV on 9.5.2012 on the CD.
151 roti haan (. daadi fir fataa fat (. kaiṭi main bi jaa:oon gi to ↓ phir daadaa ney jaa:naa thaa

152 naan daadey chuti: th (.) kaiṭey: wo aa geyaa ai (2.0) phir ham saa:rey aaeey they wo: (.)

153 tuumaari phupo:: saari aai hui thi naan wo doosri phupo neyee:: (1.0) wo ↑ baad meyn aai thi

154 ↓ naan us ki pailey shaa:di hui:: thi waisey us ki shaadi hui:: thi

(so there was meat it was cooked ok give them loaves then suddenly your paternal grandmother said that she’ll also go your paternal grandfather had to go he had taken leave then he said that he has come then we all had come your paternal aunt not your other aunt your other aunt came afterwards she had got married earlier between ourselves she had got married )

P tells R to clean the rice properly as sometimes there are maggots.

**Line 155 documented as a DE on 2.2.2012**

155 P: idar keeaa phansaa uaa ai

(there’s an insect caught in here)

P tells R about cooking and tells R the method of making cheese.

**Lines 156-166 from AR on 23.4.2012**

156 P: ey: jo: paneer banțaa ai pailey is meyn: da da dood a dood meyn phar pharo keyaa karțey

157 ain dawaa

(cheese is made by first what to do with milk?)

158 R: garam karțey ↑ aĩn

(heat it up)

159 P: garney key ( ) us meyn:: ey: karțey aĩn phir is meyn:: koe detyaai ai: keyaa

160 detyaai ai:: (3.0) pailey: GARAM karțey ↑ aĩn

(after heating up add somebody gives what does he give first heat it up)

161 R: hoon::
162 P: or:: koi koi deytaa ai to pha PHAT jaataa ai

(and he gives something then it gets fermented)

163 P: ey:: pailey garam karrtey ain

(first it is heated up)

164 R: hoon:

(I see)

For Lines 165, 166 also refer to DD IV on 9.5.2012 on the CD.

165 P: phir:: pa pa paneer::r banthaai ai paneer::r (1.0) paneer::r banthaai ai (1.0) garam karreyye ain to 166 pataa neyee keyaa: koi cheez rakhtey ain to ey paneer ban jaataa ai

(then cheese is made cheese cheese is made first it is heated up then I don’t know what is added but something is put and cheese is made)

R gives P her lunch. It’s rice with chicken curry.

Line 167 documented as a DE on 24.3.2012

167 P: waasap karo

(return it)

P tells R that Guddee has added plenty of chillies in it. She did the same last time when she cooked lentils. She doesn’t feel like eating.

Line 168 documented as a DE on 24.3.2012

168 P: pailey gudee ney pakai to laal laal khurs thi

(last time when Guddee cooked it was spicy very spicy)

R offers her another dish.

Lines 169-171 from AR on 27.4.2012. For the same Lines, also refer to DD IV on 9.5.2012 on the CD.

169 P: daan t neyee ai khoa: neyee sakti waisaey mujey bau t ACHEY lagtey neyee ( ) (2.0)

170 main shoraa shoraa khoa loon gi (1.0) main: daan t neyee ain naan to shoraa (.) shoraa khoa
Lines 172-184 from AR on 13.5.2012

172 R: keyaa: daalaa ai

(what has she put there?)

173 P: țaniaa:: or: rakhaa naaŋ taniaa rakhaa uaa gudee ab saaraa dey diaa un ko dey reyee ai

174 to țaniaa

(coriander and she has kept coriander now Guddee will give them all the coriander)

P looks at the TV screen. There’s a drama.

175 P: yey:: is ki maan ai naaŋ (1.0) maan is ki aadmi kaaley ki kaaley larkay ki maar reyee ai

176 kaiti ai to:: ey:: yey: is ki maan ai naaŋ maan kai reyee YEY::: yey:: naaŋ

(this is his mother this dark man’s dark boy’s she’s beating him up and saying that you it’s his mother and she’s saying)

177 R: hoon

(ok)

178 P: YEY: larkaa us kaa baa:ee ai

(this boy is her brother)

179 R: to draamaa: ai:

(but it’s a drama)

180 P: hain:

(what?)

181 R: draamaai

(it’s a drama)
182 (1.0)
183 P: draamaa: to waisey bi:: maan us ko maar reyee ai kioon key ey: kaalaa too: ey: kaa:m
184 neyee kaṛṭaa

(it is a drama but she’s beating him up because the black boy does not work)

**Lines 185-193 from AR on 16.5.2012**

185 R: ↑baṛaa laṛkaa ai

(*the older one is a boy*)

186 (1.0)

187 P: haan yey ↑maan ai (. ) yey: laṛkaa ai chotaa

(*yes this is the mother this is the younger boy*)

188 R: kiṭney laṛkey ain

(*how many boys are there?*)

189 P: do: ain

(*they are two*)

190 R: achaa

(*ok*)

191 P: yey: chotaa ai naan (6.0) yey chotaa ai or doosraa "kaa:laa: seyaa waalaax bachaa aii

(*yes he’s the younger one he is younger and the other one is black jet black child*)

**For Lines 192, 193 also refer to DD IV on 9.5.2012 on the CD.**

192 P: yey: yey ain yey:: ↑baṛaa ai baṛaa yey ai naan yey maan: is ki kaiṭi ai key (1.0) kaam
193 NEYEE kaṛṭaa (1.0) YEY:: baṛaa haraami: ai PAKAA:

(*this is the older one he’s the older one this is his mother she says that he does not do any work he’s a real bastard*)
Lines 194, 195 from AR on 27.5.2012. For the same Lines, also refer to DD IV on 9.5.2012 on the CD.

194 P: yey:: tey:: ey: keyaa ai naan yey: (1.0) ↓chaandaa ai chaand (1.0) yey: KUTAA: rakhaa

195 uaa ai yey kidar key log ↑an

(this is a it’s moon moon they have a dog where are these people from?)
P looks outside at her chickens.

Line 196 documented as a DE on 17.3.2012

196 P: ey laal murghey ki nazar chali geyee ai to usey ainak dalwaa do naan

( the red rooster’s eyesight has become weak bring him glasses)

R asks P if she likes her chickens.

Lines 197-210 from AR on 21.3.2012

197 P: achey: lagtey: ↑ain:::

(I love them)

198 R: or keyaa achea lagtaa ai (2.0) ↑toqey: achey lagtey ainq:

(what else do you like? do you like parrots?)

199 P: kotech haan

(parrots? yes)

200 R: toqey

(parrots)

201 P: ↓kotech or kugiaa

(parrots and doves)

202 R: acha: ↑or (2.0) or phir keyaa acha lagtaa ai aap ko: (1.0) parindey:

(ok what else do you like? birds?)

203 P: ↓hooan

(yes)

204 R: ↑murghiaan
(hens?)

For Lines 205, 206 also refer to DD IV on 9.5.2012 on the CD.

205 P: haan murghiaan bi baut baut: achi lagti ain (.) chiti murghi or doosri murghi ↑murghiaan

206 murghiaan baut achi lagti ain

(  yes I love hens a lot the white hen the other one hens I love hens)

207 R: chiti murghi bimaar ai ↑aap ki

(your white hen is ill)

208 P: oochoon bimaar aioo

(yes it’s ill)

For Lines 209, 210 also refer to DD IV on 9.5.2012 on the CD.

209 P: keetaa: keyaa naan: keetaa oţaa ai naan keetaa (.) yey: keetaa phir: daaktar saab kaiţey

210 aî yey theek o jaaey gi INSHAALAA theek o jaaey gi

(injection what is it? injection yes injection the doctor says afterwards she’ll Inshala be alright)

R diverts P’s attention by changing the topic.

Lines 211-225 from AR on 24.3.2012

211 R: khushboo waaley phool aĉey la gente ↑aîn

(do you like fragrant flowers?)

212 P: haan::

(yes)

213 R: moţiaa

(jasmine)

214 (1.0)

215 P: ↑haan moţiaa to hoţaa ai naan wo:

(  yes jasmine is )

216 (2.0)
217 R: khushboo waalaa hoțaa ai

(it’s fragrant)

218 P: ○haan haan oțaa ai○ (.) YEY: bi pha phoo:i oțaa ai (1.0) ( )deykhnaa

(yes it is a flower look here)

P tells R that she talked to the gardener when she visited a garden last week.

For Lines 219, 220 also refer to DD IV on 9.5.2012 on the CD.

219 P: bachaa: yey phoo:i mujey aขhey lagtey ain ti aap mai aap ko paisey doon gi țo aap

220 phool mujey dey: deynaa

(child I love these flowers I’ll give you money then you’ll give the flowers to me)

P tells R that she also saw some chickens.

221 R: murgh ey aчhey they

(were the chickens good?)

For Lines 222, 223 also refer to DD IV on 9.5.2012 on the CD.

222 P: murghey gudee kîtney soney: they gudee ney deykhey paîți țo gudee jaatî ee neyee thi

223 geyee țo ițney gudee kîti ițney::: khoobsoo::rat murghey::: ↓ițney

(Guddee weren’t the chickens beautiful? when Guddee first saw them she didn’t want to go earlier but when she went she said how pretty they are)

224 R: kînney they:

(how many were there?)

225 P: beyshumaa::r

(innumerable)

Scene III

P and R on a drive. P looks at a poster on the wall and recognizes the person.

Lines 226-245 from AR on 12.4.2012

226 P: imraa:m khaː:m
(Imran Khan)

227 R: hoon:: imraa:n khaa:n KON ai

(ok who's Imran Khan?)

228 (2.0)

229 P: ooim imraam mujey baut achaa lagtaa ai oo

(Imran I love him a lot)

230 R: keyaa kaarthaai ai imraan

(what does Imran do?)

231 P: kaam karthaai ai

(he does work)

232 R: ↓achaa aap ko kion achaa lagtaa ai waisey

(why do you like him by the way?)

233 P: waisey ee mujey baut achaa lagtaa ai [ waisey ee]

(for no reason I like him for no reason)

234 R: [ kion key] pathaan ai aap ki taraa

(isn’t it because he’s a Pathan just like you)

235 P: Pathaan neyee waisey bi mujey khoobsorat larkeaai ((R laughs))

(no not because he’s a Pathan but I think he’s handsome)

R reminds P about what they saw on TV before coming out for the drive.

236 R: abi teevee pey aaeeya thaa

(he just appeared on the TV)

237 (1.0)

238 P: haan:: abi aaeeya ↓thaa

(yes he just appeared on the TV)

239 R: kuch kai raa thaa

(was he saying anything?)

240 P: ↓haan:
R: keya kai raa thaa
(what was he saying?)

P: ey key main:: paisey doon gi sab:: ey: saaraa kaa:m karoon gaa neyee kaam KAROON

243 gaa

(that I’ll donate money for everyone I’ll do everything no I’ll work)

R: kis key liey
(for whom?)

P: Paakistaan key liey
(for Pakistan)

P tells R about a road under construction that they have just seen during the drive.

**Lines 246-249 from AR on 3.2.2012**

P: haan: IDAR sey: jab:: (2.0) jab IDAR otey ain naan to: (3.0) saara yey: kareyn gey (.)

247 yey: jab:: jab ab udar jaaey gey naan wo

(yes from here when when they’re here then they’ll do the whole thing when they go there)

R: to keyaa: kareyn gey

(ok what will they do?)

P: wo saaraa IDAR kareyn gey (2.0) yey:: oo::l baney: gaa

(they’ll do everything a bridge will be made)

P points out the place where she found a hen that lost its home during the previous drive.

**Lines 250-257 from AR on 5.2.2012. For Lines 250-255, also refer to DD IV on 9.5.2012 on the CD.**

P: phir deykhnaa naan (. ) key (1.0) kabi UDAR jaaey beychaari UDAR phirey UDAR jaaey
251 UDAR jaaey phir: ey laarkaa aaeyaa naan bachaa to ham ney key: aap ki murghi ai kaițaa ai

252 neyee ham ney hameyn to neyee murghi li hamaari murghi NEYEE ai wo:: ko kabi phir

253 UDAR chali geyee ai naan phir kabi UDAR chali jaaey kabi udar jaaey beychaari (1.0) to:

254 ey: PHAS geyee ai udar meyn: kaa:lon meyn kaalon kaaley neyee unheyn: keyaa: oțaa ai

255 naan ey:: unho ney rakhey huey ain:: ey

(then see the poor thing went here and there then a boy came a child then we asked is it your hen? he said we don’t have a hen we haven’t bought a hen it went here and there it was trapped in thorns what is it called?)

256 R: kaanto meyn

(in thorns)

257 P: taantey rakhey uey ain naan keyaa: yey: RAKHTEY ain naan:: țaa:rey

(they have kept thorns what have they kept? wires)

Analysis & Interpretation of Session 3

Section I

Accuracy Check

4.19 Phonemic Level. Tables XXVII-XXX display the P’s performance in Session 3 at the phonemic level. Table XXVII displays the sounds skipped in certain words.

Table XXVII

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Missing Sound(s)</th>
<th>Actual Word(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>maaraa::: (---)</td>
<td>/ha/</td>
<td>hamaaraa (our male)</td>
</tr>
<tr>
<td>25</td>
<td>maari:: (---)</td>
<td>/ha/</td>
<td>hamaari (our female)</td>
</tr>
<tr>
<td>67</td>
<td>oo::k (---)</td>
<td>/bh/</td>
<td>bhook (appetite)</td>
</tr>
</tbody>
</table>
Table XXVII reveals that whenever the P skipped a sound, it was a consonant. In Lines 24, 25 and 249 consonant sounds were skipped. In Lines 67 and 99 aspirated consonants were skipped and in Lines 153 and 251 nasal consonants were skipped. The P maintained the total length of the word in most cases by elongating one of the sounds in each case and every time she elongated a vowel sound. The skipping of sounds in the P’s speech is close to the feature of *elision* in “normal” speech. Elision is the process of deleting of troublesome sounds. The feature of skipping consonant sounds can also be compared with the concept of *weak forms* in the normal speech. Generally, words spoken with all sounds are termed as *strong forms* and those with some sounds elided are termed as *weak forms* (Crystal, 2006).

Both the features, that is, elision and weak forms help in attaining fluency in normal, connected speech. The P’s skipping of the troublesome sounds during speech production was done to achieve the same purpose.

Table XXIII displays the sounds that were elongated in some words.

### Table XXVIII

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) (with Elongated Sound)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>ki:: (to female)</td>
</tr>
<tr>
<td>6</td>
<td>meyri:: (my female)</td>
</tr>
<tr>
<td>8</td>
<td>cho:ti::, ki:: (young, to)</td>
</tr>
<tr>
<td>13</td>
<td>key:: (their male)</td>
</tr>
<tr>
<td>24</td>
<td>maaraa::: (our male)</td>
</tr>
<tr>
<td>Page</td>
<td>Translation</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>25</td>
<td>ey::, maari:: (---, our)</td>
</tr>
<tr>
<td>31</td>
<td>najmaa:::, ey:: (Najma, eh)</td>
</tr>
<tr>
<td>35</td>
<td>roti::, do:: (bread, give)</td>
</tr>
<tr>
<td>46</td>
<td>haan:::, to:: (yes, then)</td>
</tr>
<tr>
<td>62</td>
<td>kaa::, ain:: (her male, are)</td>
</tr>
<tr>
<td>67</td>
<td>haan:::, oo::k (yes, ---)</td>
</tr>
<tr>
<td>69</td>
<td>taniaa:: (coriander)</td>
</tr>
<tr>
<td>73</td>
<td>chee::z (thing)</td>
</tr>
<tr>
<td>78</td>
<td>namaa::z (prayer)</td>
</tr>
<tr>
<td>79</td>
<td>namaa::z (prayer)</td>
</tr>
<tr>
<td>81</td>
<td>haan:: (yes)</td>
</tr>
<tr>
<td>84</td>
<td>apney::, un:::, hamaarey:: (their, they, ours)</td>
</tr>
<tr>
<td>88</td>
<td>haan:: (yes)</td>
</tr>
<tr>
<td>105</td>
<td>haan:: (yes)</td>
</tr>
<tr>
<td>106</td>
<td>too::, jaa:: (you, go)</td>
</tr>
<tr>
<td>111</td>
<td>thee::k (well)</td>
</tr>
<tr>
<td>126</td>
<td>naan:::, pailey:: (no, first)</td>
</tr>
<tr>
<td>127</td>
<td>ko:: (to)</td>
</tr>
<tr>
<td>129</td>
<td>kareyn:::, ey:: (do, ---)</td>
</tr>
<tr>
<td>135</td>
<td>haan:: (yes)</td>
</tr>
<tr>
<td>139</td>
<td>main:: (I)</td>
</tr>
<tr>
<td>140</td>
<td>tey:: (---)</td>
</tr>
<tr>
<td>141</td>
<td>key:: (to)</td>
</tr>
<tr>
<td>145</td>
<td>do:: (give)</td>
</tr>
<tr>
<td>153</td>
<td>phupo::, neyee:: (paternal aunt, no)</td>
</tr>
<tr>
<td>154</td>
<td>hui:(x2) (happened)</td>
</tr>
<tr>
<td>159</td>
<td>meyn:(x2) (in)</td>
</tr>
<tr>
<td>160</td>
<td>ai:: (is)</td>
</tr>
<tr>
<td>162</td>
<td>or:: (and)</td>
</tr>
<tr>
<td>163</td>
<td>ey:: (---)</td>
</tr>
<tr>
<td>165</td>
<td>phir::, pane::r(x2) (then, cheese)</td>
</tr>
<tr>
<td>173</td>
<td>țaniaa:: (coriander)</td>
</tr>
<tr>
<td>175</td>
<td>yey:: (this)</td>
</tr>
<tr>
<td>176</td>
<td>țo::, ey::, YEY:::, yey:: (then, ---, this, this)</td>
</tr>
<tr>
<td>183</td>
<td>bi:: (also)</td>
</tr>
<tr>
<td>192</td>
<td>yey:: (this)</td>
</tr>
<tr>
<td>193</td>
<td>YEY:: (this)</td>
</tr>
<tr>
<td>194</td>
<td>yey::, țey:: (this, ---)</td>
</tr>
<tr>
<td>197</td>
<td>aîn::: (are)</td>
</tr>
<tr>
<td>212</td>
<td>haan::: (yes)</td>
</tr>
<tr>
<td>223</td>
<td>ihtney:::, khoobsoo::r, murghey::: (so, beautiful, chickens)</td>
</tr>
<tr>
<td>225</td>
<td>beyshumaa::r (innumerable)</td>
</tr>
<tr>
<td>238</td>
<td>haan::: (yes)</td>
</tr>
<tr>
<td>242</td>
<td>main:::, sab::: (I, all)</td>
</tr>
</tbody>
</table>
(ii) Analysis & Interpretation. Table XXVIII reveals that the P prolonged sounds in the content words as well as in the function words. Thus, in Lines 31, 35, 69, 73, 78, 79, 153, 165, 173 and 223 she elongated sounds in a noun. In Lines 35, 129, 145, 154, 160, 197 and 255 she elongated sounds in a verb. In Lines 8, 111 and 223 she elongated sounds in an adjective and in Lines 126, 165, 183 and 223 she elongated sounds in an adverb whereas in Lines 2, 8, 127 and 141 she elongated sounds in a preposition. She also elongated a sound in a conjunction in Line 162 and in determiners in Lines 6, 13, 24, 25, 62, 84, 175, 176, 192, 193, 194, 225, 249 and 252. Thus, in Session 3, she elongated sounds in function words as well along with content words. This indicates that during Session 3 of the study, the P was paying attention to the abstract phenomena as well along with the concrete and her speech was becoming more complex as compared with her previous speech. Elongation of only the vowel sounds can be because the process of elongation takes place in the same part of the vocal tract (Crystal, 2006) involving less muscular activity. So, by skipping a consonant and elongating a vowel, the P reduced her effort in the process of articulation by involving fewer muscles in speaking.
Table XXIX below displays the sounds that the P changed in some words.

**Table XXIX**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Wrong Sound(s)</th>
<th>Correct Sound(s)</th>
<th>Actual Word(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>narak (---)</td>
<td>/r/</td>
<td>/m/</td>
<td>namak (salt)</td>
</tr>
<tr>
<td>103</td>
<td>athar (---)</td>
<td>/th/, /r/</td>
<td>/kh/, /t/</td>
<td>akhar (headstrong)</td>
</tr>
<tr>
<td>106</td>
<td>laahol (---)</td>
<td>final /l/</td>
<td>/t/</td>
<td>laahor (Lahore)</td>
</tr>
<tr>
<td>107</td>
<td>laahol (---)</td>
<td>final /l/</td>
<td>/t/</td>
<td>laahor (Lahore)</td>
</tr>
<tr>
<td>148</td>
<td>kanoor (---)</td>
<td>/k/</td>
<td>/t/</td>
<td>tandoor (bakery oven)</td>
</tr>
<tr>
<td>226</td>
<td>imraa:m, khaa:m (- --, ---)</td>
<td>final /m/(x2)</td>
<td>/n/ (x2)</td>
<td>Imraan, Khaan (Imran, Khan)</td>
</tr>
<tr>
<td>229</td>
<td>imraam (---)</td>
<td>final /m/</td>
<td>/n/</td>
<td>Imraan (Imran)</td>
</tr>
</tbody>
</table>

(iii) **Analysis & Interpretation.** The P continued to change sounds in some words. Table XXIX reveals that usually, she changed consonant sounds within the same category. Thus, she changed a consonant with another consonant (Lines 73, 103, 106, 107, and 148), an aspirated consonant with another aspirated consonant (Line 103) and a nasal consonant with another nasal consonant (Lines 226 and 229). Thus, if she was unable to pronounce a sound, she replaced that sound with another sound that she could yet there was a close connection between the place and manner of articulation of the sounds that she produced and the original sounds (terms used by Jones, 1976, p. 42). Thus, her speech was a true manifestation of idiolect (individual language use) and reflected Barthes’ ideas (1986) about the aphasic speech.

Table XXX displays another feature of the P’s speech at the phonemic level during Session 3.
Table XXX

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Inverted Sounds</th>
<th>Actual Word(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>167</td>
<td>waasap (---)</td>
<td>/sl, /p/</td>
<td>waapas (return)</td>
</tr>
<tr>
<td>168</td>
<td>khurs (---)</td>
<td>/kh/, /s/</td>
<td>surkh (red)</td>
</tr>
<tr>
<td>209</td>
<td>keetaa (x4) (---)</td>
<td>/kl/, /l/</td>
<td>teekaa (injection)</td>
</tr>
</tbody>
</table>

(iv) Analysis & Interpretation. Table XXX reveals that during Session 3, actual sounds were emerging yet the P had problems in sequencing them. This happened with initial and final position of words as well as at the medial and final positions in certain words. Thus, in Line 167 the sound at the medial position of the word was inverted with sound at the final position of the word. In Line 168, the sound at the initial position of the word was inverted with the sound at the final position of the word and in Line 209 the sound at the initial position of the word was inverted with the sound at the medial position of the word. Thus, the sounds previously missing or substituted in the P’s speech had started appearing. Table XXX displays only three such examples during Session 3 yet it can be said that actual sounds had started emerging in Session 3 but the P had a problem of sequencing them in the proper order. The inversion of sounds in the P’s speech can be the result of the continuing speech planning process resulting in what Clark & Clark (1977) call wrong “sound sequences” (p. 276).

Inversion of sounds in the P’s speech can also be compared with the feature of assimilation in “normal” speech yet it is different from assimilation. As assimilation takes place when a sound changes its identity under the influence of its neighboring sounds resulting in simplifying the process of articulation (Lass, 1985). The P’s inversion of sounds was different in that it did not involve creation of a new sound. It included all the sounds of the target word but in a wrong sequence.

4.20 Lexical Level. Table XXXI displays the words that were missing in the P’s speech during Session 3.
(i) **Analysis & Interpretation.** During Session 3, the P skipped function words in Lines 14, 15 and 173 but in certain cases, the content words were also skipped as in Lines 150, 151, 152, 173 and 176 verbs were skipped. Except in Line 152, where the main verb was skipped, she usually skipped the auxiliaries as in Lines 150, 151, 173 and 176 she skipped the auxiliaries but uttered the main verb. Chomsky talks about an *internal simplicity measure* at work in every “normal” language user’s brain which orients it to choose the simplest possible structures (as cited in McGilvray, 2009). The same was active in the P’s speech production process.

Table XXXI

<table>
<thead>
<tr>
<th>Line #</th>
<th>Sentence(s) Used</th>
<th>Missing Word(s)</th>
<th>Correct Sentence(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14,15</td>
<td>DOST bi they khaanda:n they (they were both friends were relatives)</td>
<td>key, bhi (to, also)</td>
<td>DOST bi they khaanda:n key bhi they (they were both friends and also relatives)</td>
</tr>
<tr>
<td>150,151</td>
<td>roti un ko dey deynaa kai rey roti haan (give them bread said bread yes)</td>
<td>they (were)</td>
<td>roti un ko dey deynaa kai rey they roti haan (give them bread were saying bread yes)</td>
</tr>
<tr>
<td>152</td>
<td>daadey ney chuti: thi (to paternal grandfather was holiday)</td>
<td>lee (took female)</td>
<td>daadey ney chuti: lee thi (paternal garndfather had taken leave)</td>
</tr>
<tr>
<td>173</td>
<td>thania rakhaa uaa, gudee ab saaraa dey diaa un ko (coriander kept, Guddee now given them all of it)</td>
<td>thaa, ney (was male, to)</td>
<td>thania rakhaa uaa thaa, gudee ney ab saaraa dey diaa un ko (coriander was kept, Guddee has now given them all of it)</td>
</tr>
<tr>
<td>176</td>
<td>maan kai reyee YEE:: yey:: naan (mother saying this this)</td>
<td>hai (is)</td>
<td>maan kai reyee hai YEE:: yey:: naan (mother is saying this this)</td>
</tr>
</tbody>
</table>
Table XXXII displays the words which the P changed during Session 3.

**Table XXXII**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Actual Word(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>baithaa (<em>sat</em>)</td>
<td>paṛaa (<em>kept</em>)</td>
</tr>
<tr>
<td>28</td>
<td>karwaaeyaa (<em>got done</em>)</td>
<td>kheyaal rakhaa (<em>took care</em>)</td>
</tr>
<tr>
<td>57</td>
<td>BISMILAAHIRAHMAANIRAHEEM (<em>in the name of Allah the merciful</em>)</td>
<td>INSHAALAA (<em>God willing</em>)</td>
</tr>
<tr>
<td>117</td>
<td>sheyri, baṭkhi (<em>---,---</em>)</td>
<td>sheyrni, baṭakh (<em>lioness, female duck</em>)</td>
</tr>
<tr>
<td>118</td>
<td>moree (<em>---</em>)</td>
<td>mornee (<em>peahen</em>)</td>
</tr>
<tr>
<td>119</td>
<td>saanpi (<em>---</em>)</td>
<td>sanpni (<em>female snake</em>)</td>
</tr>
<tr>
<td>120</td>
<td>chak maarṭey (<em>bite</em>)</td>
<td>kaatṭey (<em>irritate</em>)</td>
</tr>
<tr>
<td>121</td>
<td>chak maarṭaa (<em>bites</em>)</td>
<td>khaarishkarṭaa (<em>is itchy</em>)</td>
</tr>
<tr>
<td>122</td>
<td>dalwaaeyaa, chak maar (<em>put, bite</em>)</td>
<td>khilaayaa, khaarish kar (<em>eat, itchy</em>)</td>
</tr>
<tr>
<td>123</td>
<td>phansi (<em>caught female</em>)</td>
<td>chupi (<em>hidden female</em>)</td>
</tr>
<tr>
<td>124</td>
<td>chak maarey (<em>bite</em>)</td>
<td>zakhmi karey (<em>wound</em>)</td>
</tr>
<tr>
<td>125</td>
<td>dalwaaau (<em>put</em>)</td>
<td>banaao (<em>make</em>)</td>
</tr>
<tr>
<td>135</td>
<td>karwaaeyn (<em>get it done</em>)</td>
<td>chaaneyn (<em>sift</em>)</td>
</tr>
<tr>
<td>136</td>
<td>rakhwaa (<em>kept</em>)</td>
<td>dhoeyn (<em>wash</em>)</td>
</tr>
<tr>
<td>143</td>
<td>diey (<em>gave male</em>)</td>
<td>deen (<em>gave female</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>152</td>
<td>daadey <em>(paternal grandfather)</em></td>
<td>daadaa <em>(paternal grandfather)</em></td>
</tr>
<tr>
<td>155</td>
<td>phansaa <em>(caught male)</em></td>
<td>chupaa <em>(hidden male)</em></td>
</tr>
<tr>
<td>168</td>
<td>laal khurs <em>(blood red)</em></td>
<td>masaaleydhaar <em>(spicy)</em></td>
</tr>
<tr>
<td>175</td>
<td>kaaleyn(x2), ki <em>(black, to)</em></td>
<td>badsoorat, ko <em>(ugly, to)</em></td>
</tr>
<tr>
<td>183</td>
<td>kaalaa <em>(black male)</em></td>
<td>kaamchor <em>(work-shy)</em></td>
</tr>
<tr>
<td>191</td>
<td>kaalaa: seyaa <em>(jet black)</em></td>
<td>bohat badsoorat <em>(very ugly)</em></td>
</tr>
<tr>
<td>196</td>
<td>dalwaa <em>(put)</em></td>
<td>lagwaa <em>(get)</em></td>
</tr>
</tbody>
</table>

(ii) **Analysis & Interpretation.** Table XXXII reveals that the P used only three verbs karwaanaa, dalwaanaa and rakhwaanaa *(to get done, to put, and to keep)* with different endings according to number, case and gender in the sentence (Lines 28, 122, 125, 135, 136 and 196). Every time she meant a different action for the same verb that she used, for example, for the verb karwaana *(to get done)* used in Lines 28 and 135, she meant kheyaal rakhnaa *(to take care)* and chaannaa *(to sift)*, the verb dalwaanaa *(to put)* in Lines 122, 125 and 196, meant khilaanaa, banaanaa and lagwaanaa *(to eat, to make, and to get)* and the verb rakhwaanaa *(to keep)* in Line 136 meant dhonaa *(to wash)*. It has been discussed in the analyses of Session 1 and Session 2 that the P used the same verbs to mean many other actions. Thus, she overextended these three verbs to mean many different actions. Similarly, the verb chak maarnaa *(to bite)* with different endings *(in Lines 120, 121, 122 and 124)* was used to mean kaatnaaa, khaarish karnaa and zakhmi karnaa *(to irritate, to be itchy, and to wound)*. Thus, it was also overextended. She also used the word kaalaa *(black male)* in Lines 175, 183 and 191 to mean more than one things for example, badsoorat and kaamchor *(ugly and work-shy)*. The P overextended this word as well. The word kaalaa *(black male)* was used as a noun *(Line 183)* as well as an adjective *(Lines 175 and 191)*. She also overregularized the nouns in Lines number 117, 118 and 119 by using the regular ending while making irregular plural nouns. Most of the words
changed in Table XXXII were content words. All these substitutions made at word level were done within the same word category. Thus, the *formal* aspects of the P’s speech were damaged whereas the *functional* aspects were intact (Halliday’s terms, 1994) as the P could convey her message despite her faulty linguistic performance.

Table XXXIII displays the words that the P created after mixing two different words either from the same language or from different languages that she knew.

*Table XXXIII*

<table>
<thead>
<tr>
<th>Line #</th>
<th>Word(s) Used</th>
<th>Actual Word(s)</th>
<th>Punjabi/English Potohari word(s) Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>-</td>
<td><em>khaalaazaad</em> (<em>maternal cousin</em> in English)</td>
<td>kazan</td>
</tr>
<tr>
<td>20</td>
<td>chaat, chaayy (--, --)</td>
<td>chaachaa+taayya, chaachaa+taayy (<em>paternal uncle younger than the father</em> + <em>paternal uncle older than the father</em> all words in Punjabi &amp; also in Urdu)</td>
<td>-</td>
</tr>
<tr>
<td>31</td>
<td>past (--,--</td>
<td>parchaa+test (<em>paper</em> in Punjabi &amp; Urdu+<em>test</em> in English)</td>
<td>-</td>
</tr>
<tr>
<td>36</td>
<td>past (--,--)</td>
<td>parchaa+test (<em>paper</em> in Punjabi &amp; also in Urdu+<em>test</em> in English)</td>
<td>-</td>
</tr>
<tr>
<td>37</td>
<td>potar (--,--)</td>
<td>parchaa+peypar (<em>paper</em> in Punjabi &amp; also in Urdu+<em>paper</em> in English)</td>
<td>-</td>
</tr>
<tr>
<td>64</td>
<td>past (--,--)</td>
<td>parchaa+test (<em>paper</em> in Punjabi &amp; Urdu+<em>test</em> in English)</td>
<td>-</td>
</tr>
<tr>
<td>73</td>
<td>narak (--,--)</td>
<td>namak+mirich (<em>salt</em> in Urdu+<em>chillies</em> in Punjabi &amp; also in Urdu)</td>
<td>-</td>
</tr>
<tr>
<td>159</td>
<td>garney (--,--)</td>
<td>garam+kartey (<em>heat up + do</em> both words in Urdu)</td>
<td>-</td>
</tr>
</tbody>
</table>
(iii) **Analysis & Interpretation.** The P combined two words and created single words (Lines 20, 31, 36, 37, 64, 73, 159, 199, 254 and 257). She hybridized words in Lines 31, 36, 37 and 64 by picking words from Punjabi, Urdu and English, clipping initial part of one, final part of the other and combining them in a brand new way. In Lines 20, 73 and 159 she created words using the *compounding* technique. She coined words by clipping certain parts of words and joining them in a creative, idiosyncratic way (Lines 20, 73, 159, 199, 254 and 257). The feature of being a multilingual aided her in *switching* to a language of convenience and ultimately facilitated her in the communication process.

**4.21 Syntactic Level.** The P’s performance at the syntactic level during Session 3 of the study appears below. Table XXXIV displays her performance in short utterances.

**Table XXXIV**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Sentence(s) Produced</th>
<th>Total # of Sentences Produced</th>
<th>Correct Sentence(s) Produced</th>
<th>Total # of Correct Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>tishoo baithaa uaa ai <em>(the tissue is sitting)</em></td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>meyri:: ye yaa kon ai wo:: kazan ai yaa wo <em>(my she’s my cousin, she’s cousin)</em></td>
<td>2</td>
<td>kazan ai yaa wo <em>(she’s cousin)</em></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>wo: choti:: ai naan, wo (wo naaŋ (1.0) us ki:: (2.0) meyri: (she’s young, she she’s her my)</td>
<td>2</td>
<td>wo: choti:: ai naan (she’s young)</td>
<td>1</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>11</td>
<td>main choti thi, wo [ barī ai] (I was younger, she’s older)</td>
<td>2</td>
<td>main choti thi, wo [ barī ai] (I was younger, she’s older)</td>
<td>2</td>
</tr>
<tr>
<td>23</td>
<td>meyrey Ṭbaaee (3.0) naaŋ meyrey, kon saa oṭaa ai (my brother my, what is it)</td>
<td>2</td>
<td>kon saa oṭaa ai (what is it)</td>
<td>1</td>
</tr>
<tr>
<td>31</td>
<td>najmaa kaa past ai (Najma has an ---)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>33</td>
<td>tast ai naan (ok it’s a ---)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>36</td>
<td>aaj riḍaa kaa bi past ai (today Rida also has a ---)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>44</td>
<td>jaa raa ai (. ) apney gar, neyee kaiṭaa ai main jaa raa oon (is going back to his home, no he says I’m going)</td>
<td>2</td>
<td>jaa raa ai (. ) apney gar, neyee kaiṭaa ai main jaa raa oon (is going back to his home, no he says I’m going)</td>
<td>2</td>
</tr>
<tr>
<td>46</td>
<td>sameenaa ṭo:: kaam kar reyee ai naan (Samina is working)</td>
<td>1</td>
<td>sameenaa ṭo:: kaam kar reyee ai naan (Samina is working)</td>
<td>1</td>
</tr>
<tr>
<td>51</td>
<td>abi ṭak neyee aae, solo abi ṭak neyee aae (hasn’t come yet, Solo hasn’t come yet)</td>
<td>2</td>
<td>abi ṭak neyee aae, solo abi ṭak neyee aae (hasn’t come yet, Solo hasn’t come yet)</td>
<td>2</td>
</tr>
<tr>
<td>55</td>
<td>yeyee ṭpar sakṭi oon (can recite only this much)</td>
<td>1</td>
<td>yeyee ṭpar sakṭi oon (can recite only this much)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>bas woee ai, bismilaa ee ai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(is only that, it's Bismillah)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>bas woee ai, bismilaa ee ai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(is only that, it's Bismillah)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>subaa us [↑kaa:]a ai:n:: (hers is in the morning)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>past ai, ↑haan, chalo subaa us kaa tast ai (it’s ---, ok it’s a ---)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>bulbul oṭi ai, BULBUL (1.0) wo aaee thi, bulbul (1.0) subaa subaa (it’s a nightingale, the nightingale came, the nightingale early in the morning)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>bulbul oṭi ai, BULBUL (1.0) wo aaee thi (it’s a nightingale, the nightingale came)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>aaeε thi idar, oo:o:k lagi ooe thi:oo (came here, it was feeling ---)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>aaeε thi idar (came here)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>har chee::z us ney: yey: (.) yey: ⊤narak (she everything such as ---)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>mircheyn: or (1.0) yey cheezeyn yey taniaa: (chillies and these things this coriander)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>wo naan ↑wo: karṭey ain, apney nanar meyn jaatey ain (they they do, they go to their ---)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>go:shṭ neyee khaatey, ab ťo shuroo kar ḏiaa ai khaanaa (don’t eat meat, go:shṭ neyee khaatey, ab ťo shuroo kar ḏiaa ai khaanaa (don’t eat meat,)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>now they’ve started eating</td>
<td>now they’ve started eating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>maañ ai, us ko kaiyte ain, meyri maañ ai (is mother, call it, is my mother)</td>
<td>maañ ai, us ko kaiyte ain, meyri maañ ai (is mother, call it, is my mother)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>93</td>
<td>yey keyaa kar rey ain, meyraa kheyaal ai, jaa rey ain (what are they doing, I think, they’re going)</td>
<td>yey keyaa kar rey ain, meyraa kheyaal ai, jaa rey ain (what are they doing, I think, they’re going)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>94</td>
<td>abi jaa rey ain gaari meyn (are still going in the car)</td>
<td>abi jaa rey ain gaari meyn (are still going in the car)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>yey neyee paṭaa naan, abi deykhoon gi naan (have no idea, I’ll watch first)</td>
<td>yey neyee paṭaa naan, abi deykhoon gi naan (have no idea, I’ll watch first)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>tumaarāa daadāa athar thaa (your paternal grandfather was ---)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>moree īṭi khoobsoorat to neyee jiṭnaa mor (the --- isn’t as pretty as the peacock is)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>119</td>
<td>saanpi nikal geyee ai (--- has left)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>yey kapṛey mujey chak maṛṭey ain (these clothes bite me)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>123</td>
<td>idar makhi phansi uee ai (there’s a fly caught in here)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>neyee aap ko chak maarey gaa (no it will bite you)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line</td>
<td>Translation</td>
<td>Frequency</td>
<td>Comment</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>moo̱n naa dalwaau (don’t put face)</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>saa:f kareyn, us kareyn:, paani paani meyn (do clean, that do, in water water)</td>
<td>3</td>
<td>saa:f kareyn (do clean)</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>dhoeyn phir us meyn (wash then in it)</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>133</td>
<td>GANDEY oṭey ain naan (are dirty)</td>
<td>1</td>
<td>GANDEY oṭey ain naan (are dirty)</td>
<td></td>
</tr>
<tr>
<td>155</td>
<td>idar keeaa phansaa uaa ai (there’s an insect caught in here)</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>koi ḍeytaa ai, PHAT jaataa ai (somebody gives, gets fermented)</td>
<td>2</td>
<td>koi ḍeytaa ai, PHAT jaataa ai (somebody gives, gets fermented)</td>
<td></td>
</tr>
<tr>
<td>163</td>
<td>pailey garam karṭey ain (first it is heated up)</td>
<td>1</td>
<td>pailey garam karṭey ain (first it is heated up)</td>
<td></td>
</tr>
<tr>
<td>168</td>
<td>pailey gudee ney pakai, laal laal khurs thi (previously Guddee cooked it, it was red blood red)</td>
<td>2</td>
<td>pailey gudee ney pakai (previously Guddee cooked it)</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>YEY: laṛkaa us kaa baa:ee ai (this boy is her brother)</td>
<td>1</td>
<td>YEY: laṛkaa us kaa baa:ee ai (this boy is her brother)</td>
<td></td>
</tr>
<tr>
<td>187</td>
<td>yey ṁaan ai, yey: larkaa ai quotaa (this is the mother, this is the younger brother)</td>
<td>2</td>
<td>yey ṁaan ai, yey: larkaa ai quotaa (this is the mother, this is the younger brother)</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>yey: chotaa ai naan, yey chotaa ai, doosraa kaa:laa: seyaa waalaa bachaa ai (he’s younger, he’s younger, the other one is black jet black child)</td>
<td>3</td>
<td>yey: chotaa ai naan, yey chotaa ai (he’s younger, he’s younger)</td>
<td>2</td>
</tr>
<tr>
<td>196</td>
<td>laal murgh ey ki nazar chali geyee ai, usey ainak dalwaa do naan (the red rooster has lost its eyesight, get it glasses)</td>
<td>2</td>
<td>laal murgh ey ki nazar chali geyee ai, usey ainak dalwaa do naan (the red rooster has lost its eyesight, get it glasses)</td>
<td>2</td>
</tr>
<tr>
<td>197</td>
<td>achar: lagtey: tain::: (love them)</td>
<td>1</td>
<td>achar: lagtey: tain::: (love them)</td>
<td>1</td>
</tr>
<tr>
<td>201</td>
<td>koteey or kugiaan (--- and doves)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>208</td>
<td>hoon bimaa ar ai (yes is ill)</td>
<td>1</td>
<td>hoon bimaa ar ai (yes is ill)</td>
<td>1</td>
</tr>
<tr>
<td>215</td>
<td>mojaa t hoota aai naan wo: (jasmine is)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>218</td>
<td>haan otaa ai, YEY: bi pha phoo:l otaa ai (yes it is, it’s also --- a flower)</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>229</td>
<td>imraam mujey bau t achara lagtaa aai (I love --- a lot)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>231</td>
<td>kaa:m kartha aai t naan (does work)</td>
<td>1</td>
<td>kaa:m kartha aai t naan (does work)</td>
<td>1</td>
</tr>
<tr>
<td>233</td>
<td>mujey bau t achara lagtha aai (I love him a lot)</td>
<td>1</td>
<td>mujey bau t achara lagtha aai (I love him a lot)</td>
<td>1</td>
</tr>
<tr>
<td>235</td>
<td>mujey khoobsoorat larkaa ai (to me is a handsome boy)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Table XXXIV reveals that the P produced 85 sentences in her short utterances. Out of these, 47 were correct. Generally, she produced a short utterance with all correct sentences when she was talking about an idea with which she was attached. In Lines 11, 44, 46 and 51 she was talking about her family. In Lines 90, 92, 93, 98, 178 and 187 she was talking about her favorite TV program. In Lines 133, 162 and 163 she was talking about cooking. In Lines 197 and 208 she was discussing about her pets and in Lines 231, 233, 235, 238 and 245, she was talking about her favorite person (Imran Khan) and about her country (Pakistan). Thus, attachment with a topic aided her in correct language production. The P’s ability for holding discussions and an ability to explain phenomena such as recipes displays her growth as a language user (Piaget’s ideas about child’s speech development, 1959). In some cases, she skipped the subject (Lines 44, 51, 55, 57, 67, 90, 92, 94, 98, 129, 133, 162, 163, 196, 197, 208, 231, 238 and 257) because the context made it clear.
Table XXXV displays the sentences produced in long utterances.

**Table XXXV**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Sentences Produced</th>
<th>Total # of Sentences Produced</th>
<th>Correct Sentence(s) Produced</th>
<th>Total # of Correct Sentences Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,3</td>
<td>ki:: †neyee:, meyri bain naan ey baar jo geyee ↓ai, mumtāaz us kaa pa waisay pa aeyaa thaa, keyaa oṭāa ↑ai (not hers, my sister who has gone abroad, Mumtaz her --- by the way --- came, what is it)</td>
<td>4</td>
<td>meyri bain naan ey baar jo geyee ↓ai, keyaa oṭāa ↑ai (my sister who has gone abroad, what is it)</td>
<td>2</td>
</tr>
<tr>
<td>20,2</td>
<td>chaatāa they, ṭaaey (1.0) eyk do ṭeēn chaar ↓they, chaachaa ↑eyk (had ---, had paternal uncles older than my father one two three four, paternal uncle younger than my father one)</td>
<td>3</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>28,2</td>
<td>bachaaraa MAR geyaa, daadi ney ka karwaaeyaa, BAUT ameer log they wo, un key keyaa oṭā aîn, baat thin, keyaa oṭāa ↑ai: (the poor man passed away, the paternal grandmother ------, they were very rich people, to them what are they, were plenty, what is it)</td>
<td>6</td>
<td>bachaaraa MAR geyaa, BAUT ameer log they wo, keyaa oṭāa ↑ai: (the poor man passed away, they were very rich people, what is it)</td>
<td>3</td>
</tr>
<tr>
<td>Page</td>
<td>Text</td>
<td>Page</td>
<td>Text</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>34,35</td>
<td>main deykh reyee oon naan, phir neyee sakťi naan, maın kaiťi oon, najmaa ko roti:: do:: (I’m watching it, can’t walk, I say, give bread to Najma)</td>
<td>4</td>
<td>main deykh reyee oon naan, phir neyee sakťi naan, maın kaiťi oon, najmaa ko roti:: do:: (I’m watching it, can’t walk, I say, give bread to Najma)</td>
<td></td>
</tr>
<tr>
<td>49,50</td>
<td>apney gar meyn jaa raa ai ↑naan, chaa:ey pi li ai: us ney, kaiťaa ai, maın jaa: raa oon (is going back to his home, he has taken tea, says, I’m going)</td>
<td>4</td>
<td>apney gar meyn jaa raa ai ↑naan, chaa:ey pi li ai: us ney, kaiťaa ai, maın jaa: raa oon (is going back to his home, he has taken tea, says, I’m going)</td>
<td></td>
</tr>
<tr>
<td>52,53</td>
<td>sameenaa paas ho jaaey gi, oo’meyri bachioo ↓inshaalaa paas ho jaaey gi, sameenaa inshaalaa PAAS ho JAAEY ↑gi (Samina will pass, God willing my child will pass, God willing Samina will pass)</td>
<td>3</td>
<td>sameenaa paas ho jaaey gi, oo’meyri bachioo ↓inshaalaa paas ho jaaey gi, sameenaa inshaalaa PAAS ho JAAEY ↑gi (Samina will pass, God willing my child will pass, God willing Samina will pass)</td>
<td></td>
</tr>
<tr>
<td>59,60</td>
<td>bas yey karoön gi, bismilaahirahmaaniRAHEEM (2.0) paroon gi, kaoon gi, inshaalaa meyri ↑BACHI (1.0) ↑SAMEENAA paas HO JAAEY ↑GI (will do only this, will recite in the name of Allah the merciful, will do it, God willing my child Samina will pass)</td>
<td>4</td>
<td>bas yey karoön gi, bismilaahirahmaaniRAHEEM (2.0) paroon gi, kaoon gi, inshaalaa meyri ↑BACHI (1.0) ↑SAMEENAA paas HO JAAEY ↑GI (will do only this, will recite in the name of Allah the merciful, will do it, God willing my child Samina will pass)</td>
<td></td>
</tr>
<tr>
<td>Line Numbers</td>
<td>Arabic Text</td>
<td>English Translation</td>
<td>ROWS</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
<td>---------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>78,7 9</td>
<td>deykho ↑naan, subaa subaa uthtey ↓ain, wo apni taraf sey, ham namaa::z partey ain, wo bi apni taraf sey namaa::z partey ain</td>
<td>(see, wake up early in the morning, in their opinion, we offer prayers, they also offer prayers in their own way)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>81,8 2</td>
<td>karṭey ain, partey ain, ookeyaa karṭey ain oo (do, read, what do they do)</td>
<td>(do, read, what do they do)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>84,8 5</td>
<td>ham keyaa oṭey ↑ain, hamama:rey (1.0) (        ) keyaa oṭey ain, ham namaa:z partey ain</td>
<td>(what are we, what are ours, we offer prayers)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>116,117</td>
<td>sheyr sheyri ko maartaa ai, do cheezeyn oṭi ain, eyk doosrey ko maartī ain, sheyr ki sheyri oṭi ai, batākh ki batkhi oṭi ai</td>
<td>(the lion beats the --- up, there are two things, beat each other up, the lion has a ---, the male duck has a ---)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>159,160</td>
<td>karṭey ain, koe deyṭaa ai:, keyaa deyṭaa ai:, GARAM karṭey ↑ain (do, somebody gives, what does he give, are heated up)</td>
<td>(what does he give, are heated up)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Page 165, 166</td>
<td>paneer be made, paneer be made, heated up, something is put, cheese is made</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>173, 174</td>
<td>tania be: or: rakha naa, tania rakha uaa, gudee ab saaraa dey diaa un ko, dey reyee ai (coriander and kept, coriander kept, Guddee now gave it all to them, is giving)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>175, 176</td>
<td>yey: is ki maan ai naa, kaalay la:kei ki maar reyee ai, kai’ti ai, yey: is ki maan ai naa, maan ka reyee YEE:: yey:: naa (this is his mother, is beating to the black boy up, says, this is his mother, the mother saying this this)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>183, 184</td>
<td>maan us ko maar reyee ai, kaalaa too: ey: kaa:m neyee kartaa (the mother is beating him up, black boy why don’t you work)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 192, 193 | yey: yey ai’n, yey:: baraa be, baraa yey ai naa, maan: is ki kai’ti ai, kaam NEYEE kartaa, YEE:: baraa haraami: ai PAKAA: (these these are,)

| Page 298 | paneer be made, paneer be made, heated up, something is put, cheese is made  |
| 173, 174 | None |
| 175, 176 | yey:: is ki maan ai naa, kai’ti ai, yey: is ki maan ai naa, maan ka reyee YEE:: yey:: naa (this is his mother, says, this is his mother) |
| 183, 184 | maan us ko maar reyee ai, kaalaa too: ey: kaa:m neyee kartaa (the mother is beating him up, black boy why don’t you work) |
| 192, 193 | yey:: baraa be, baraa yey ai naa, maan: is ki kai’ti ai, kaam NEYEE kartaa, YEE:: baraa haraami: ai PAKAA: |
| 194, 195 | yey: โทรศัพท์: สาย: เยียกลาาน แนน, yey: (1.0) นั้น-เห็น daandaa ai, yey: KUTAAN: rakhaa uaa ai, yey kidar key log นั้น (this ------ what is this, this is ---, there’s a dog kept, where are these people from) | 4 | yey: KUTAAN: rakhaa uaa ai, yey kidar key log นั้น (there’s a dog kept, where are these people from) | 2 |
| 205, 206 | murghiaan bi bauτ bauτ: อาทิ ลาเจีย น, ชิติ นกนก or ได้รู้ นกนก, murghiaan bauτ อาทิ ลาเจีย น (love hens a lot, the white hen and the other one, love hens a lot) | 3 | murghiaan bi bauτ bauτ: อาทิ ลาเจีย น, murghiaan bauτ อาทิ ลาเจีย น (love hens a lot, love hens a lot) | 2 |
| 209, 210 | ค่า: เยียกลาาน แนน; ค่า: เยียกลาาน น้าา น้าา, daaktar saab kaiτey นั้น, yey theek o jaay นั้น, INSHAALAA theek o jaay นั้น (--- has been done, it’s ---, the doctor says, she’ll get well, God willing will get well) | 5 | daaktar saab kaiτey นั้น, yey theek o jaay นั้น, INSHAALAA theek o jaay นั้น (the doctor says, she’ll get well, God willing will get well) | 3 |
| 219, 220 | phoo:l mujey aчeey laجeey นั้น, main aap ko paisey doon นั้น, aap phool mujey dey: deynaα (I love flowers, I’ll give you money, you give flowers to me) | 3 | phoo:l mujey aчeey laجeey นั้น, main aap ko paisey doon นั้น, aap phool mujey dey: deynaα (I love flowers, I’ll give you money, you give flowers to me) | 3 |
| 222, 223 | murghey gudee kiτeey soney: พวก, gudee นีย deyκhey, | 4 | murghey gudee kiτeey soney: พวก, gudee นีย deyκhey, | 3 |
(ii) Analysis & Interpretation. The P produced a total of 95 sentences in her long utterances during Session 3. Out of them, 65 were correct. Overall, the P produced 170 sentences (85 in short utterances and 95 in long utterances). Out of these, 112 were correct (47 in short utterances and 65 in long utterances). Thus, the ratio of producing correct sentences in Session 3 was 65.88%. She also made some agentless sentences (in Lines 34 &35, 49 &50, 59 &60, 78 &79, 81 &82, 116 &117, 159 &160, 165 &166, 175 &176, 209 &210, 242 &243 and 246 &247). This can be treated as her technique to reduce effort in speaking at the sentential level.
Table XXXVI below displays the utterances produced by the P which were fully correct at all linguistic levels.

**Table XXXVI**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>mai̇n choti ḥi wo [ bari ai] <em>(I was younger she’s older)</em></td>
</tr>
<tr>
<td>34,35</td>
<td>mai̇n deykh reyee oon naȧn phir neyee sak̇ti naȧn isi wajaa sey mai̇n kaiṫi oon <em>(1.0) najma ko roti: do: (I’m seeing it I can’t walk that’s why I say give lunch to Najma)</em></td>
</tr>
<tr>
<td>44</td>
<td>jaa raa ai *(.) apney gar *(1.0) neyee kaiṫaa ai mai̇n jaa raa oon <em>(is going back to his home no he says I’m going)</em></td>
</tr>
<tr>
<td>46</td>
<td>ṭhaaṅ: *(.) sameennaa ṭo: kaam kar reyee ai naȧn <em>(yes Samina is working)</em></td>
</tr>
<tr>
<td>49,50</td>
<td>apney gar meẏn jaa raa ai ṭnaaṅ *(1.0) chaa:ey pi li ai: us ney *(.) ab kaiṫaa ai mai̇n jaa: raa oon <em>(to his home he has taken tea now says I’m going)</em></td>
</tr>
<tr>
<td>51</td>
<td>abi ṭȧk neyee aaėe solo abi ṭȧk neyee aaėe <em>(she hasn’t come yet Solo hasn’t come yet)</em></td>
</tr>
<tr>
<td>55</td>
<td>mai̇n *(.) bismilahirahmaaniRAHEEM *(.) yeyee ṭar sak̇ti oon <em>(I can recite only in the name of Allah the merciful)</em></td>
</tr>
<tr>
<td>65</td>
<td>bulbul oṭi ai BULBUL *(1.0) wo aaėe hih *(4.0) bulbul *(1.0) subaa subaa <em>(it’s a nightingale a nightingale it came early in the morning)</em></td>
</tr>
<tr>
<td>68-71</td>
<td>oȯrakḣee uee ai us neyoȯy yey ṭnaaṅ: ey ṭaniiaa: *(1.0) har cheez rakhi: uee ai us ney yey pakaaey gi ṭo: khaaėy gaa bȧnḋaa((voice on TV)) *(3.0) ṭaniiaa:: *(1.0) ṭaniiaa: har cheez us meẏn pakaa reyee ai ṭnaaṅ: deykḣo naȧṅ har cheez ai naȧṅ us meẏṅ *(.) neyee bȧṭaa:o naȧṅ [ ṭujey ] <em>(she’s kept it this is coriander she has kept everything she’ll cook then one will eat coriander coriander she’s cooking everything in it look at it I’ll tell you)</em></td>
</tr>
<tr>
<td>78,79</td>
<td>deykḣo ṭnaaṅ ey subaa subaa ulṫtey ṭaiṅ ey wo apni ṭȧraf sey ṭo ham namaa::z partey ain ṭo ṭo bi apni ṭȧraf sey namaa::z partey ainv (see wake up early in the morning and in their own way as we offer prayers they also offer prayers)*</td>
</tr>
</tbody>
</table>
[ haan::] karṛey ain phir partey ain phir ey: yey: kar key phir (2.0) °°keyaa karṛey ain°° (yes they do then they read then after doing it what do they do)

go:shī go:shī neyee khaatey (.) ab to shuroo kar dīaai khaanaa (meat they don’t eat meat but now they’ve started eating meat)

maan ai us ko kairṛey ain meyri maan ai (it’s our mother they say it’s their mother)

yey keyaa kar rey ain meyraai khēyal ai key jaa rey ain (what’re they doing I think they're going)

abi jaa rey ain gaari meyn (the’re still going in the car)

°°yey neyee paṭaa naan abī deykhoon gi naan°° (I don’t know I’ll watch first)

yey kapṛey mujey chak maartey ain (these clothes bite me)

idar makhi phansi uee ai (there’ a fly caught in here)

neyee aap ko chak maarey gaa (no it’ll bite you)

GANDEY oṭey ain naan (are dirty)

idar keeraa phansaa uaa ai (there’s an insect caught in here)

YEY: laṛkaa us kaa baːːee ai (this boy is her brother)

haan yey ↑maan ai (.) yey: laṛkaa ai chotaa (yes this is the mother this is the younger boy)

yey: chotaa ai naan (6.0) yey chotaa ai or dōosraa °°kaaːːlaa: seyaa waalaa bachaa ai°° (yes he’s the younger one he’s younger and the other one is black jet black child)

yey: yey ain yey:: ↑baraa ai baraa yey ai naan yey maan: is ki kairti ai key (1.0) kaam NEYEE karṭaa (1.0) YEY:: baraa haraami: ai PAKAA: (this is the older one he’s the older one this is his mother she says that he doesn’t do any work he’s a real bastard)

achey: lagtey: ↑ain:: (love them)

haan murghiaan bi baut baut: achi lagṭi ail (.) chiti murghi or dōosri murghi ↑murghiaan murghiaan baut achi lagṭi ain (yes I love hens a lot the white hen the other one hens I love hens)
(iii) **Analysis & Interpretation.** The P responded a total of 106 times during Session 3. Out of these, 33 responses were fully correct. Thus, the ratio of responding correctly or producing grammatically correct sentences was 31.13%. In all the lines mentioned in Table XXXVI, she was talking about a topic with which she was attached. Overall, she produced 44 sentences. Out of these she made 36 simple, single-clause sentences (in Lines 11(x2), 34 &35(x2), 44, 46, 49 &50(x3), 55, 65(x2), 68-71(x4), 78 &79(x2), 92(x2), 93, 120, 123, 124, 133, 155, 178, 187(x2), 191, 192 &193(x3), 205 &206(x2) and 233), two compound sentences (in Lines 78& 79) and six complex sentences (in Lines 34 &35, 51, 68-71, 90, 93 and 192 &193). This shows that she could change the sentence structure according to the communicative intent. The P was able to encode her communicative intent in more than one ways. This exhibits her divergent thinking or creativity (a phrase cited in Shaffer & Kipp, 2007). Her creative language use was reflective of her cognitive development on the ontogenetic (individualistic) plane. Vygotsky describes “normal” cognitive development to start from the phylogenetic (general) plane and moving on towards the ontogenetic (individualistic) plane (Vygotsky, 1962). In the case of the P, it started from the ontogenetic (individualistic) plane, that is, in the opposite direction.

She dealt with some of the linguistic complexity by making some agentless sentences (in Lines 44, 49 &50, 78 &79 and 133). This could be treated as an effort-minimizing technique.
Table XXXVII below displays the features of the P’s speech during Session 3 in prolonged talk.

**Table XXXVII**

<table>
<thead>
<tr>
<th>Line #</th>
<th>Response Time (in Seconds)</th>
<th># of Pauses Taken</th>
<th># of Fumbles Made</th>
<th># of Repetitions Made (in Words &amp; Phrases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-15</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>24-26</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>37-39</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>68-71</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>99-102</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>105-115</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>138-148</td>
<td>-</td>
<td>-</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>150-154</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>169-171</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>250-255</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

(iv) **Analysis & Interpretation.** The P could hold prolonged talk 10 times in all her 106 responses. Thus, 9.43% of her responses were based on prolonged talk. In all these instances of prolonged talk, she gave a spontaneous response to her interlocutor without taking much time. Except in Lines 105-115 and 138-148 she did not pause for
longer time periods neither did she fumble or repeat. In all the lines mentioned in Table XXXVII, the P was talking about a topic with which she was emotionally close. Thus, attachment with the topic facilitated the P in that she took no time to respond, took shorter and less number of pauses, fumbled less and made less repetitions.

Section II

Fluency Check

4.22 Intonation. Table XXXVIII below displays the P’s intonation pattern during Session 3.

Table XXXVIII

<table>
<thead>
<tr>
<th>Line #</th>
<th>Rising Tone (Frequency)</th>
<th>Falling Tone (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>3</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>10</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>18</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>20</td>
<td>Twice</td>
<td>Once</td>
</tr>
<tr>
<td>21</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>23</td>
<td>Once</td>
<td>Twice</td>
</tr>
<tr>
<td>24</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>29</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>46</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>49</td>
<td>Once</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>53</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>55</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>60</td>
<td>Thrice</td>
<td>-</td>
</tr>
<tr>
<td>62</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>64</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>67</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>68</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>70</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>73</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>78</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>79</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>84</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>88</td>
<td>Twice</td>
<td>-</td>
</tr>
<tr>
<td>101</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>105</td>
<td>Once</td>
<td>Thrice</td>
</tr>
<tr>
<td>109</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>111</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>112</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>131</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>135</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>139</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>141</td>
<td>-</td>
<td>Twice</td>
</tr>
<tr>
<td>142</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>143</td>
<td>Once</td>
<td>Once</td>
</tr>
<tr>
<td>144</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>145</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>150</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>151</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>153</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>154</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>160</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>166</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>169</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>174</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>176</td>
<td>Twice</td>
<td>-</td>
</tr>
<tr>
<td>187</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>192</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>194</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>197</td>
<td>Once</td>
<td>-</td>
</tr>
<tr>
<td>201</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>203</td>
<td>-</td>
<td>Once</td>
</tr>
<tr>
<td>205</td>
<td>Once</td>
<td>-</td>
</tr>
</tbody>
</table>
(i) **Analysis & Interpretation.** Table XXXVIII reveals that a rising tone was an indication of confidence in the linguistic performance. This can be detected from the performance following this tone which was generally correct (Lines 2, 24, 46, 49, 60, 64, 67, 70, 78, 79, 109, 131, 143, 153, 166, 176, 187, 192, 205 and 215). It also dropped a hint that something important followed this tone as the word preceding or following a rising intonation was stressed (Lines 53 and 60). In some instances, she achieved the same purpose by elongating a sound in the word following the rising tone (Lines 46, 62, 67, 88, 105, 135 and 197). Thus, a rising tone was a way of demarcating and emphasizing the information surrounding this tone. Contrarily, a falling tone indicated lack of confidence and it can be detected from her faulty linguistic performance following this tone (Lines 73, 84, 194 and 201). At some places, this lack of confidence can be seen in a whisper-like tone (Lines 25, 52, 67, 82, 98, 99, 136, 146 and 229). A falling or whisper-like tone was an indication for the interlocutor to pay more attention to the P for decoding the message. In some situations, the P explicitly asked her interlocutor to provide the words that she herself was unable to utter. This can be noticed in Lines 23, 25 and 82 in which the P directly asked her interlocutor a question.

**4.23 Stress.** Table XXXIX displays the P’s use of stress on certain words during Session 3.
Table XXXIX

<table>
<thead>
<tr>
<th>Line #</th>
<th>Stressed Word(s)</th>
<th># of Stressed Word(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>BARI:, BACHEY <em>(older, children)</em></td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>DOST *(x2) <em>(friends)</em></td>
<td>2</td>
</tr>
<tr>
<td>24</td>
<td>NEYEE: <em>(no)</em></td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>NAANAA:, NEYEE:, DAADI <em>(maternal grandfather, no, paternal grandmother)</em></td>
<td>3</td>
</tr>
<tr>
<td>26</td>
<td>MAR <em>(die)</em></td>
<td>1</td>
</tr>
<tr>
<td>28</td>
<td>MAR, BAUT <em>(die, very)</em></td>
<td>2</td>
</tr>
<tr>
<td>53</td>
<td>PAAS, JAAEY <em>(pass, goes)</em></td>
<td>2</td>
</tr>
<tr>
<td>55</td>
<td>RAHEEM <em>(kind)</em></td>
<td>1</td>
</tr>
<tr>
<td>57</td>
<td>BISMILAAHIRAHMAANIRAHEEM <em>(in the name of Allah the merciful)</em></td>
<td>1</td>
</tr>
<tr>
<td>59</td>
<td>RAHEEM <em>(kind)</em></td>
<td>1</td>
</tr>
<tr>
<td>60</td>
<td>BACHI, SAMEENAA, HO, JAAEY, GI <em>(baby girl, Samina, is, does, will)</em></td>
<td>5</td>
</tr>
<tr>
<td>65</td>
<td>BULBUL <em>(nightingale)</em></td>
<td>1</td>
</tr>
<tr>
<td>99</td>
<td>DEYKHOON <em>(watch)</em></td>
<td>1</td>
</tr>
<tr>
<td>100</td>
<td>GAND <em>(filth)</em></td>
<td>1</td>
</tr>
<tr>
<td>102</td>
<td>IDAR <em>(here)</em></td>
<td>1</td>
</tr>
<tr>
<td>105</td>
<td>DAFAA <em>(get lost)</em></td>
<td>1</td>
</tr>
<tr>
<td>106</td>
<td>UDAR <em>(there)</em></td>
<td>1</td>
</tr>
</tbody>
</table>
IDAR (here)
TANG (x2) (annoy)
THEE:K (well)
TANG (annoy)
GANDEY (dirty)
KIS (how)
GARAM (hot)
PHAT (fermentation)
ACHEY (good)
YEY::: (this)
YEY: (this)
NEYEE, YEY::, PAKAA: (no, this, real)
KUTAA: (dog)
INSHAALAA (God willing)
YEY: (this)
KAROON (I do)
IDAR (x2) (here)
IDAR (here)
IDAR (here)
UDAR (x3) (there)
UDAR (there)
NEYEE (no)
UDAR (x2) (there)
(i) **Analysis & Interpretation.** Table XXXIX reveals that the P stressed the content as well as the function words as she stressed nouns (in Lines 13, 14, 25, 60, 65, 100 and 194), verbs (in Lines 26, 28, 53, 60, 99, 105, 108, 115 and 257), adjectives (in Lines 13, 55, 59, 112, 133, 160, 169 and 193) and adverbs (in Lines 28, 102, 106, 107, 246, 249, 250, 251 and 253) as well as demonstratives (in Lines 176, 178, 193 and 218). Thus, she stressed the content words as well as the function words. So, her speech was becoming richer and more complicated with the passage of time. The words displayed in Table XXXIX reveal that not all the words that she stressed were the ones that she loved. Thus, the P stressed words in her speech during Session 3 regardless of whether she liked the idea or not.

**4.24 Tempo.** Table XXXX displays the tempo of the P’s speech during Session 3 in terms of the number and length of pauses in her utterances.

**Table XXXX**

<table>
<thead>
<tr>
<th>Line #</th>
<th># of Pauses</th>
<th>Duration of Pause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>6</td>
<td>One</td>
<td>4 sec.</td>
</tr>
<tr>
<td>8</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>13</td>
<td>One</td>
<td>3 sec.</td>
</tr>
<tr>
<td>23</td>
<td>One</td>
<td>3 sec.</td>
</tr>
<tr>
<td>59</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>65</td>
<td>One</td>
<td>4 sec.</td>
</tr>
<tr>
<td>69</td>
<td>One</td>
<td>3 sec.</td>
</tr>
<tr>
<td>Line</td>
<td>Type</td>
<td>Duration</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>----------</td>
</tr>
<tr>
<td>81</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>99</td>
<td>One</td>
<td>5 sec.</td>
</tr>
<tr>
<td>100</td>
<td>One</td>
<td>6 sec.</td>
</tr>
<tr>
<td>101</td>
<td>One</td>
<td>3 sec.</td>
</tr>
<tr>
<td>107</td>
<td>One</td>
<td>4 sec.</td>
</tr>
<tr>
<td>126</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>152</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>160</td>
<td>One</td>
<td>3 sec.</td>
</tr>
<tr>
<td>169</td>
<td>One</td>
<td>2 sec.</td>
</tr>
<tr>
<td>191</td>
<td>One</td>
<td>6 sec.</td>
</tr>
<tr>
<td>246</td>
<td>Two</td>
<td>2 sec., 3 sec.</td>
</tr>
</tbody>
</table>

(i) **Analysis & Interpretation.** The P responded spontaneously in almost all exchanges in Session 3 (except in Line 228 where she took two seconds to respond), she responded to the R in less than a second’s time and she paused during utterances not necessarily due to a language problem (except in Line 81, where she had a genuine language problem). It can be checked from Lines 69, 99-101 and 191 that the P was watching a TV program and was describing the action going on at the same time. She kept on speaking till there was activity and paused when there was no change in the scene. As soon as the scene changed, she started speaking again. Sometimes, she took a pause during a long stretch of talk to take a breath as in Line 107 (she had been continuously talking from Line 105 to 115) and in Line 152 (as she had been continuously talking from Line 150 to 154).

4.25 **The Doctor’s Opinion about the P’s Speech in Session 3.** After the completion of Session 3, the R discussed with the Doctor about the P’s linguistic performance during the whole session. Both agreed that the grammatical accuracy in the P’s speech had improved because she could produce more language in that she could hold
prolonged talk. Attachment with the topic of speaking helped in better linguistic performance (refer to DD IV on the CD). Thus, the Doctor agreed with the R that the P’s linguistic zone of proximal development had expanded by this time.

Section III

Overall Analysis & Interpretation of Session 3

In the production of language it appears that though there were sounds still missing in some words (see Table XXVII) but they had started emerging. Though they were sometimes combined in a wrong order (see Table XXX) yet they were appearing.

In Session 3, the P had started to pay attention to the function words along with the content words as she had started making them prominent in her speech by elongating sounds in function words and by occasionally stressing them (see Tables XXVIII & XXXIX).

Table XXXII reveals that the P was handling some of the problems at the lexical level through the techniques of overextension and overregularization and sometimes through neologism (Crystal, 1999) and switching to a language of convenience (see Table XXXIII). The proportion of producing grammatically correct sentences in her speech was also improving (see the analysis of Table XXXVI).

At the phonemic and lexical levels, the topic did not affect her speech during Session 3 (see the analyses of Tables XXVII-XXXIII). However, it did affect her performance at the syntactic level, as she produced more and grammatically accurate sentences when she was talking about a topic that she loved (see the analysis of Table XXXVI).

The analyses of Tables XXXVII-XXXX reveal that the P could manage the intonation, stress and tempo of her speech efficiently in Session 3. Thus, her speech was quite fluent. Attachment with the topic resulted in a spontaneous response (see Table XXXVII and the analysis of Table XXXIX). It also helped the P in controlling the tempo of her speech (see the analysis of Table XXXX) and in tone management (see the analysis of Table XXXVIII) but the stress pattern was not much influenced by the topic of speaking (see Table XXXIX).
Comparison between Session 1, 2 & 3

The overall analysis and interpretation of all the three sessions disclose that the P had problems in uttering consonant sounds. She dealt with the problem during Session 1 by skipping the consonant sounds altogether. The skipping of sounds in the P’s speech is what is termed as *elision* in “normal” speech involving deletion of troublesome sounds which brings fluency in connected speech. However, there is a tendency in the P of substituting these sounds with the ones that were relatively easier for her to utter during Session 2 (see the comparison between Session 1 & 2). She continued substituting for the problematic sounds during Session 3 as well.

It can also be seen that actual sounds had started emerging (see the overall analysis of Session 3). Thus, at the phonemic level of the language recovery, a trend can be detected. A transition in this process can be treated as the stages of recovery which are: (i) Absence (ii) Substitution (iii) Inversion of sounds. The P’s speech was not yet accurate at the end of Session 3 yet it can be conjectured that the next stage of recovery would be restoration of the correct sequence of sounds.

At the lexical level, the P tended to skip the function words during Session 1 but during Session 2, function words had started appearing in her speech (refer to the comparison between Session 1 & Session 2) and during Session 3, they were not only included in her speech but some of them were even made prominent (see the overall analyses of Session 3).

It can also be noticed during all sessions that if the P could not say a word correctly, she sometimes formed words in a purely idiosyncratic, creative way and this caused *neologism* in her speech. She kept on coining words through certain techniques (Crystal, 1999). Sometimes, she created *hybrid* words (Crystal, 1999) by using the word formation techniques of *compounding* and *clipping* (Yule, 1999). Her use of compounding technique can be seen in Table V of Session 1, Table XVIII of Session 2 and Table XXXIII of Session 3 and the use of clipping technique can be seen in Table V of Session 1 and Table XXXIII of Session 3. The analyses of the tables mentioned above reveal that the P was experimenting with language independently and this shows her self-reliance in communication.
Keeping in mind the strategies adopted by the P during different sessions of the study and the transitions in them, her language recovery process at the lexical level can be viewed to proceed in these stages: (i) Absence (ii) Substitution (iii) Appearance of correct words.

A comparison between different sessions at the sentential level reveals that the P could produce more grammatically accurate language over time. Thus, her performance improved at the sentential level as she could create more sentence types in her speech during Session 2 and Session 3. The ability to produce such multiple-clause sentences requires a high degree of planning and control over the articulators and exhibits creativity and variety in terms of language production (see the analyses of Table VIII, XXI & XXXVI and also Figure 1). Thus, overall, the circle of her explorations expanded at the syntactic level as she could produce more language and could experiment with the process. Aphasia had only affected her langage (speech) while langue (language system) was intact and she could experiment with it (Saussure’s ideas as discussed in Bally & Sechehaye, 1915).

![Figure 1. Sentence types produced](image)

In all the sessions, the P produced grammatically correct talk and she could produce more language when she was talking on a topic that she was attached with. This can be checked from the overall analyses of Session 1 and Tables IX & VII, the
overall analyses of Session 2 and Tables XXII & XX and the overall analyses of Session 3 and Table XXXVII & XXXV (also see Figures 2 & 3).

*Figure 2. Ability to produce fully correct sentences*

*Figure 3. Ability to produce prolonged talk*
Thus, emotional attachment with a topic caused accuracy in speech and resulted in successful communication. This can be checked from Session 1 (see the analysis of Table VIII), Session 2 (see the analysis of Table XXI) and Session 3 (see the analysis of Table XXXVI) and from Figure 4.

While discussing “normal” human communication at the sentential level, Chomsky talks about the *surface structures* (related to the *form*) and the *deep structures* (related to the *content*) (Chomsky’s ideas as explained in McGilvray, 2009) which are connected to each other through invisible *transformational rules* (Aitchison, 1986). There can be a difference between both which can cause misunderstandings and ambiguity or what Foucault termed as *discontinuity* (Chomsky & Foucault, 2006). The P’s communication was mainly based on the use of *content words* and can be called *monosemantic* (Halliday, 1994) as it lacked the *duality* of meanings. Thus, her speech was clear and conveyed exactly what it aimed at. In her speech, the ideal unification between the *signifier* and the *signified* can be found. Thus, it can be postulated that the true *signification* process takes place in the speech of an aphasic as the signifier exactly conveys the signified.

*Figure 4. Ability to communicate successfully*
In aphasics’ speech recovery process, the sensory perceptions are important as they provide visible access to the signified and thus, help in initiating the signifiers. The signification process has to be synchronized in a visible, concrete manner. Thus, through aphasics’ speech recovery process, the signification process can be best understood and explained. This can be explained in Vygotsky’s terms of *flexibility* and *mobility* as nothing new is constructed. The existing structures are mobilized and utilized in a brand new, fresh way (Vygotsky’s ideas as cited in Veer & Valsiner, 1994).

As far as fluency is concerned, in all the three sessions, the P could handle *intonation, stress* and *tempo* of her speech in an effective way (see the overall analyses of Session 1, 2 & 3). A slight difference can be detected in the use of stress pattern between Session 1, Session 2 and Session 3. She stressed only the content words in Session 1 and 2 but in Session 3, she started stressing the function words as well.

The P’s ability to use the paralinguistic features of her speech effectively reveals that this ability was intact during all three sessions. Though attachment with a topic resulted in a quick response (see Tables IX, XXII, XXV, XXXVII & XXXX) yet intonation, stress and tempo of speech were not much affected by the topic of speaking (see Tables X, XXIII, XXXVIII, XI, XXIV, XXII, XXVI & XXXIX). Thus, fluency was not affected by the topic of speaking in any session.

The analysis and interpretation of the P’s speech over one year study indicate that the strategies that she was using to combat the linguistic challenges at each level were planned. Her creativity can also be detected from the way they were being used. This proves that she was actively participating in the language recovery process. Her self-reliance on her idiosyncratic strategies proves that she was becoming communicatively independent as she was creating strategies and was using them in a purely individualistic way. Her language recovery process was rule-governed but in a totally individualistic way.

**Aphasia & the Linguistic Recovery Process**

Vygotsky claimed that thought and speech both are damaged after aphasia and are recovered separately (Vygotsky, 1962). However, this study suggests that thought...
remained intact during aphasia and speech only hibernated. This can be detected from the fact that mentalese, that is the language of thought (Gaynor, 1995) or Vygotsky’s concept of private speech (Vygotsky’s idea as cited in Shaffer & Kipp, 2007) becomes prominent and pushes out verbal speech. Thus, initially, at the mute stage, thought dominates. Mentalese becomes more active at this stage as the aphasic feels that direct communication between his/her caregiver and himself/herself exists (through thought channel) and it does not need to be verbalized (through vocal channel). S/he treats verbal speech as a mere redundancy which gets activated in the next stage as a result of exposure to tangible, sense experience which makes the aphasic’s speech rich in content words. In the aphasics’ early speech, the signifiers go underground and the physical presence of the signified helps bring them on the surface. The signification process, that is the process through which the signified and the signified become fixed and unified (Barthes, 1986), takes on a new turn and remains in a state of flux throughout the linguistic recovery process.

The aphasic’s use of certain techniques such as skipping, substitution as well as overextension and overregularization are ways of mending and amending his/her existing communication system and serve as Krashen’s concept of a monitor does in normal speech production process (Krashen, 1982).

Krashen was of the view that in case of right hemisphere damage the creative ability gets severely affected (Krashen, 1981). In case of left hemisphere damage, it can be postulated that creativity becomes more active than usual. This can be detected from the purely idiosyncratic communication, for example, amalgamation of linguistic and non-linguistic communication, experiments at different linguistic levels such as word forms and techniques used at other linguistic levels.

The study displays that the P created her own communication system which she used in a rule-governed way at all linguistic levels. This displays that her logical abilities were not only intact but were rather more active and creative than a normal human’s because normal human language use is mostly automatized at a mature age (Vygotsky’s term as cited in Veer & Valsiner, 1994), involving nominal conscious effort. Thus, aphasia with the left hemisphere damaged had not deteriorated the P’s rational abilities.
Biological accounts suggest human brain remains plastic till age 20 (Kalat, 2004) as the neural functions become fixed at this age and neuron specialization becomes unchangable after losing plasticity (Shaffer & Kipp, 2007). Thus, brain plasticity is never retrieved after losing it. The P’s ability to deal with the linguistic challenges in a purely idiosyncratic way by devising her own communication system at a much maturer age challenges this idea. There are undertones that neural plasticity is never lost. It only hibernates during maturity and can show up later in life when a person has crossed the so-called critical period.

It is suggested that hearing, being the strongest sense provides the foundation for speech development in a normal human child. However, this study suggests that the P’s speech retrieval process heavily depended upon vision (her reliance over the concrete, tangible phenomena for speech generation). Thus, in her case, vision proved to be the strongest sense for speech initiation.

The aphasic’s communication system is a combination of linguistic as well as non-linguistic signs and can best be termed as semiotic system (Webster, 2004). The aphasics with the left hemisphere damaged have a weaker logical side and a stronger emotional side (Lorch, Borod & Koff, 1998). Thus, the communicative signs acquire more emotional connotations. Emotions are thus an indispensable feature of the recovery process as they provide motivation for improvement (Hulse, Deese & Egeth, 1975). The study suggests that aphasia pushed the linguistic abilities to communicate in the background but it also brought the non-linguistic and paralinguistic features in the forefront.

The study also implicates that the linguistic recovery after aphasia is a purely individual, creative and constructive process and it is misleading to consider it as deterioration of the human intellect.

**Anomalies and Serendipities in the Recovery Process**

The overall analyses of the study reveal that the P produced grammatically correct and fluent speech when she was speaking on a topic with which she was attached in a positive way yet at certain points she became annoyed or mildly aggressive even in the middle of her favorite activity and this also resulted in grammatically accurate and fluent talk.
The R as the *more knowledgeable other* had taken care to initiate the topics of speaking with which the P was attached in order to generate positive and joyous emotions. This would motivate the P to speak more and if the P became annoyed at any point, the cause of annoyance was instantly removed by intervening and removing the stimulus causing that annoyance yet the analyses done afterwards disclosed that the P’s linguistic performance at all those brief moments was accurate and fluent. This can be checked from the linguistic performance of the P in all sessions when she was in a state of mild aggression (Lines 31, 34, 53 & 54, 117, 171, 176, 241 & 242, 245, 264 & 265, 271, 278, 291 and 305 of Session 1, Lines 45, 57, 96 and 128 of Session 2, and Lines 101, 108, 133, 169, 192 & 193 and 231 of Session 3) because of an unexpected change in the situation (as in a TV drama or her inability to say something due to her illness). Though in Lines 241 & 242 and 245 of Session 1, she was laughing but the context makes it clear that she was not happy, she was annoyed due to her linguistic inabilities. At times, she even became abusive due to her annoyance (see Line 34 of Session 1, Lines 35(x2) and 149 of Session 2, and Lines 101 and 193 of Session 3). The analyses of these lines in each session reveal that annoyance and anger resulted in grammatically accurate and fluent speech. Her Doctor had also talked about aggression and anger as strong emotions (refer to DD I on the CD) and this study also exhibits that they remained fully intact during all stages of language recovery and aphasia could not damage them.

The R was testing the effects of attachment and initiation of positive emotions on the process of language recovery and theoretically, anger and aggression which are negative emotions, were to be controlled at the time of data collection yet they appeared unexpectedly as *anomalies* and led to a *serendipitous* discovery (terms discussed in Palys, 1997): Aggression and anger also cause grammatically accurate and fluent speech in an aphasic. This discovery had the germs of an idea latent in the data. This idea is discussed in detail in the next chapter.

**Transition in Speech over Different Sessions**

It has been discussed in the beginning of this chapter that during her initial mute and speechless period, the P assumed that the R could *decode* the message without her actually *encoding* it. Thus, she imagined a telepathic communication to exist between herself and the R which did not need mediation of language.
The analysis of Session 1 reveal that most of her communication at the lexical level was based on the content words (see the analysis of Table III). This feature made her speech telegraphic in nature (a term cited in Shaffer & Kipp, 2007). Eventually, information seeking questions started appearing. This feature of her speech can be noticed in all sessions (in Lines 41, 44 &45, 61, 64, 67 and 98 during Session 1, in Lines 18, 76, 143, 210, 218, 221 and 227 &228 during Session 2 and in Lines 3, 6, 23, 29, 82, 127, 159 &160, 195 and 254 during Session 3). Information seeking questions are a feature of socialized speech. As through such questions in dialogs with a more knowledgeable other, a developing individual makes discoveries and mends his/her speech according to the set, social standards (Shaffer & Kipp, 2007). Thus, the P’s speech development process can be understood in three stages: telepathic, telegraphic and socialzed.

The analyses of the P’s language recovery process also reveal that it was constructive, creative and unique in which the P actively participated along with the R. Thus, it is not just to discuss it in negative terms and by treating it as a decline in human intellect. It deserves to be discussed using new and fresh terminology. That is why the R has suggested some terms for studying the language recovery process after aphasia in the next chapter.

**Techniques used during Linguistic Recovery & the Stages of Recovery**

In the beginning of this chapter, it has been discussed that the P was conscious about her language problems and was struggling to overcome them. Her consciousness provided the basic stimulus for the recovery process. This process was expanded by the R as she provided physical security to the P by first establishing a bond of trust with her and then providing emotional security to her through responsivity and emotional expressivity. She aided the P in her linguistic explorations in a planned way by providing her a chance to speak on the topics that the P was comfortable with and gradually helped in expanding the circle of her explorations by increasing the amount of speech production in the form of prolonged talk. The outcome of the R’s efforts and the P’s explorations can be seen through an increase in the circle of her linguistic abilities. This can be checked from the analyses of Session 1 (see Table IX), Session 2 (see Table XXII) and Session 3 (see Table XXXVII) and from Figure 2.
The data reveal that the P dealt with the linguistic difficulties by devising some strategies. Repetition of the same strategies in all sessions discloses that these were the techniques that she had devised in an idiosyncratic way. Refer to Session 1 (see the analyses of Tables I, IV & V), Session 2 (see the analyses of Tables XIV, XVII & XVIII) and Session 3 (see the analyses of Tables XXVII, XXXII & XXXIII). Figure 5 displays these techniques graphically. The P tended to change her strategies over time.

![Figure 5. Techniques used during language recovery](image)

**The Critical Period in Linguistic Recovery after Aphasia**

It is clear from the analyses of the P’s speech and the transitions in her recovery process over one year that she could actively use her language resources in purely creative, individual ways. Her ability to devise techniques to overcome her linguistic challenges and her capability to change them over time according to the “normal” language system shows that she could meet the communication challenges and was becoming self-reliant even after crossing the so-called critical period of language recovery. Thus, the R concludes that for language recovery after aphasia there does not exist any critical period in terms of physical age of the aphasic. However, the study also indicates that the language recovery process of the P could not proceed smoothly without the guided collaboration with the R. Thus, in terms of attachment formation between the aphasic and the principal attachment figure, there
does exist a critical period and it should be established as early as possible after the outset of aphasia.

Vygotsky claimed that in normal language use, there is a harmonious blend between language and thought process and this harmony is lost in aphasia. However, this damaged connection can be repaired. In this study, this damaged connection was repaired by motivating the P to speak on the topics with which she was attached. This resulted in more grammatically correct and fluent language production. This can be checked from the linguistic as well as graphic analyses revealing that the P’s zone of proximal development was expanding over time. Thus, the P was linguistically becoming self-reliant and independent and this validates Vygotsky’s claim about a close connection between recovery and emotional attachment (Veer & Valsiner, 1994).

The next chapter is about the conclusions drawn from the study. It relates the understanding gathered from this study to the broader spectrum of knowledge. It also gives directions for future research in the same discipline.
CHAPTER 5

CONCLUSION

Ideas Explored in the Study

This study is placed on the interface of many disciplines such as linguistics, psychology, psychiatry, neurology, philosophy and sociolinguistics and so, is a cross disciplinary research. It aimed at exploring the connection between the language recovery process after aphasia and the emotional stability of the aphasic. Generally, the disciplines mentioned above discuss aphasia as a destructive process as a result of which human capabilities decline and the aphasic becomes passive. From such discussions, it seems as if the aphasic depends on others for physical and communicative needs and can never become independent again, especially if s/he has crossed the critical period in terms of age. This study challenges this idea and suggests that an emotionally competent caregiver can manage the emotions of the aphasic and thereby restore “order” in his/her physical as well as emotional life as it is emotional security that can facilitate in linguistic recovery after aphasia.

The study also implicates that aphasia, no doubt, destructs certain aspects of human intellect yet it also activates some others. The previous chapter discusses an aphasic’s brain functions which become more active than a “normal” human’s brain functions such as neural plasticity, creativity and paralinguistic forms of communication. It is a point in an aphasic’s life from where his/her intellect takes a new turn. Thus, aphasia should not be discussed in sheer negativity. It is a broad topic with multiple dimensions and thus, deserves to be discussed as an independent, separate discipline.

Vygotsky’s ideas on language development and Bowlby’s Attachment Theory were used as guiding principles in the study. The audio recordings and fieldnotes about the daily linguistic performance of the P in daily situations (during one year of the study) make the exploration process authentic. Being an individual case study, the insights drawn are true in situ, that is, situated and without any generalization claims.
The dialogs from all sessions of the study exhibit that there exists a strong correlation between the language recovery process and the emotional security of the aphasic. Emotional charge serves as a catalyst for initiating and accelerating the language recovery process.

Eric Lenneberg’s idea of a critical period for language acquisition has historically been tested in case of first language and second language acquisition (Richardson, 2008). It has also been used by neurologists for understanding the physical development of language in the human brain and language recovery after aphasia. The neurologists claim that the human brain’s ability to self-repair lasts till age twenty (Shaffer & Kipp, 2007). In the domain of language acquisition and language learning, many theorists have totally refuted the concept of a critical period. Overall, the idea remains debatable as some recent experiments favor this idea because for some aspects of language acquisition; there does exist a critical period (Clark, 2009). Some of the second language acquisition theorists have also favored the existence of a critical period in language use with cultural understanding (King & Mackey, 2007). The debate still persists in different disciplines and is not yet resolved (Mitchell & Myles, 2004).

Strict adherence to the concept of critical period can have negative bearings for the caregiver as it curtails the efforts and energies invested for the betterment of the aphasic by instilling pessimistic feelings. This particular study refutes the existence of a critical period in terms of age of the aphasic for language recovery after aphasia yet it favors the idea for the formation of a close bond between the aphasic and the caregiver. It suggests that there does exist a critical period for establishing a close connection between the aphasic and his/her caregiver. For the betterment of the aphasic, it is imperative that such a connection is made as early as possible after the onset of aphasia. The connection thus established has to be continuously and consciously cultivated and transformed into an attachment in which the aphasic feels secure. Language recovery after aphasia is a slow and time taking process which demands patience on the part of the aphasic as well as the caregiver yet it can be made smooth by the efforts of the caregiver.

This study stresses that the process of language recovery can start and proceed in the right direction only if one of the caregivers of the aphasic takes on the role of an
attachment figure as early as possible. This implicates that the importance of a critical period should not be underestimated.

**Language Recovery after Aphasia: A Hierarchically-Structured Process**

The analyses in Chapter 4 indicate that the P’s voyage of language recovery followed a path and proceeded in stages. Linguistically analyzing, it started from recovering the lower levels and moved on to the higher levels. Thus, it was a hierarchically-structured process. This initiates the idea that language practice exercises can be planned for the aphasic and should be structured and in Vygotsky’s terms, they need to be carefully scaffolded. In case of this particular study, the language recovery process of the P improved and excelled when she came across the actual, sense experiences. Throughout the study time, she was able to speak in a relatively controlled manner when she was talking about tangible ideas. Many developmental psychologists suggest that all types of learning and cognitive development start from a re-training of the inborn reflexes such as, Piaget (as cited in Shaffer & Kipp, 2007) and Vygotsky (as cited in Veer & Valsiner, 1994). These inborn reflexes are limited but they can generate limitless abilities. Thus, there are innumerable possibilities of learning new skills during the developmental phase. This means that the sensory perceptions serve as “starters” for the developmental process (Shaffer & Kipp, 2007).

The R used this idea and concentrated on one sensory perception of the P, that is, vision and used it as a motivation for speaking. She used language practice exercises that involved a lot of visuals in the form of pictures, television programs, displays in the markets, parks, story books and pets. These phenomena were emotionally important for the P and therefore, this emotional attachment was used as a motivation for speaking.

**Trustworthiness and Authenticity of Insights Drawn from the Study**

Though the insights drawn from the study are a form of interpretive understanding, the discussions with the doctor (refer to the audio recordings on the CD) were used to double check the analyses and to minimize the chance of bias. Thus, the authenticity criteria for qualitative inquiry were fulfilled yet there is
considerable amount of subjectivity and interpretation involved and the R makes no generalization claims.

**Implications from the Study**

It can be extrapolated from this study that there exists a strong fit between language recovery and a close emotional bond between the aphasic and his/her principal attachment figure. Such a close emotional bond might not be present before aphasia but can be intentionally formed and nurtured as the physical and linguistic future of the aphasic depends on having an *emotionally intelligent* and competent caregiver (Oatley, 2004).

Emotions work as impetus behind behavior and there is a close connection between emotions, motivation and the developmental process (Hulse, Deese, Egeth, 1975). This means that emotions can be changed into motivation for learning and improving. This feature about human cognitive make-up can be utilized in the linguistic developmental process of aphasics. Emotional elasticity and neural plasticity are interlinked and emotional charge can serve as a catalyst for neural activity.

The aphasic’s linguistic life can be improved by regulating his/her emotional life and this can be done with the aid of a competent attachment figure. Such an attachment figure has to be linguistically, emotionally and socially more knowledgeable other. Only a trained and emotionally intelligent caregiver turns into the principal attachment figure who knows the value of initiating positive emotions which are constructive and healing, and controlling the negative ones which are counterproductive and destructive.

**Guidelines for Potential Caregivers**

The physical and linguistic recovery of the aphasic, to a great extent, depends on the caregiver. Physical proximity and emotional expressivity on the part of the caregiver are necessary features for the recovery process to start. S/he has to be not only linguistically able but also emotionally intelligent. S/he has to first take up the role and then decide upon the obligations that s/he has to perform. This sometimes demands a role reversal. The potential caregiver in many cases is the daughter or the
son of the aphasic. The changed situation demands that the caregiver adopts the role of a mother or a mother-like figure. The aphasic, being dependent on his/her caregiver behaves like an infant and thus, gets transformed into an infant-like role. This role transition has to be recognized first by the caregiver and it is only after this realization that s/he can perform his/her undertaking well.

Sometimes, the caregiver’s job exceeds beyond these limits as s/he not only has to work with the aphasic but also with the entire family of the aphasic. It is s/he who discusses with the family what to discuss and how as it is significant for a smooth, speedy recovery. The caregiver’s job is multi-faceted and it sometimes requires his/her parentification (Anonymous, n. d.) and infantallization of the aphasic (Epstein, n. d). The potential caregiver needs to undertake this role consciously and with full responsibility. Being parentified, more responsibility lies on the shoulders of the caregiver and thus s/he has to establish and cultivate a bond of trust, reliability and availability. S/he has to invest more like a parent in that s/he is more tolerant of the communicative inabilities of the aphasic and also is more overt in appreciating the aphasic’s correct linguistic performance and careful in pointing out his/her incorrect performance. This recognition of role and adoption on the part of the caregiver is mostly permanent as the feeling of having someone who cares and is available and responsive is invaluable for the aphasic and will always be needed by the aphasic. The attachment formed between the two has to be sustained because an indifferent or unfeeling attitude on the part of the caregiver at any stage can cause insecurity in the aphasic and thereby, result in regression.

The study also suggests that the best way to work with the aphasic is in a planned way, that is, move from known to the unknown (in terms of ideas), from easy to difficult (in terms of practice), from intact to damaged (in terms of language) from concrete to abstract (in terms of vocabulary), from primary to secondary (in terms of emotions), from favorite to neutral (in terms of physical and linguistic practice) and from controlled and guided to free (in terms of activities). Initially, infantalization of the aphasic helps a lot. In that the aphasic feels stress-free and thus, can experiment with his/her linguistic resources as s/he is not afraid of making mistakes (like an infant). It also helps in developing confidence and reliance on the caregiver. The infant-like behavior on the part of the aphasic has to be revived for the language retrieval process to thrive. It sheds the tension to mold his/her communicative abilities
to the “standard” forms and motivates him/her to use his/her existing abilities in a playful manner. Language recovery process should be made enjoyable yet the ultimate goal of the caregiver should be to support the aphasic in “growing up” and becoming independent and self-reliant.

The aphasic also needs to be trained and tuned for a new life style that s/he enters into. The understanding and adjustment in new roles for the aphasic as well as the caregiver is important for the recovery process to start. In the linguistic voyage of recovery, the caregiver’s concern and empathy can convert the linguistic deficiency of the aphasic to communicative efficiency. Social detachment and disapproval also have to be replaced with emotional attachment in order to insure progress in the recovery process.

5.1 Initial Stages of Aphasia. The first few days of aphasia are crucial. The potential caregiver should closely observe the ideas that make the aphasic aggressive and the ones that please him/her. This understanding can be utilized in devising the future strategy.

5.2 Emotional Adaptation and Linguistic Recovery. Vygotsky’s concept of reflexology is all about retraining of the innate, basic reflexes in case of a linguistic handicap. His concept of reflexology can be helpful in regaining the lost linguistic abilities (Veer & Valsiner, 1994). The same idea can be applied in case of emotions as emotions are also flexible, undergo transition and can be adapted.

Emotional adaptation means molding the most primary emotions into an impetus for communication. Through emotional orientation, an aphasic’s most basic emotions can be used for motivation to speak. Aphasics with a damaged left hemisphere and intact right hemisphere have their emotions intact. Their sensitivity to emotions can be utilized in the healing process. Aggression and attachment are the two most extreme as well as the most powerful emotions. The proof of their being powerful is that they do not get damaged even after severe brain damage as this study exhibits. They do affect the emotional and physical life of everyone and can be used as stimuli for activating the speech process in the aphasic.

The R suggests that the lost linguistic abilities of the aphasic can be retrieved by working on the strong emotions. It involves a retraining and transition of the
primary emotions (Oatley, 2004). This means modification and transition of aggression and love. The P’s doctor in this study pointed out that aggression is the strongest human emotion and usually it remains intact even after brain damage (refer to DD I on the CD). The analyses of this study indicate that aggression and attachment remained intact during aphasia as the P retained the names of her immediate family members and many religious expressions. At times, she fumbled or hesitated in recalling some of them, so avoided using them frequently, especially the religious expressions yet aggression was noticed as the strongest emotion. That is why; she retained abusive expressions at all linguistic levels and never made a mistake or hesitated in saying them. Thus, aggression was discovered as the strongest emotion. This implicates that not only attachment but also aggression, in controlled and guided ways, can be used as a motivation for speaking.

The strength of aggression can be detected from the P’s speech performance throughout the study. It was flawless when she was talking about the ideas that made her angry. Thus, she made no mistakes while being aggressive and using abusive language (refer to Lines 31, 34, 53 & 54, 117, 171, 176, 241 & 242, 245, 264 & 265, 271, 278, 291 and 305 of Session 1, Lines 45, 57, 96 and 128 of Session 2, and Lines 101, 108, 133, 169, 192 & 193 and 231 of Session 3). It was perfect at all linguistic levels. It can also be checked that she sometimes made mistakes at some level while talking about topics and ideas she was attached with. This proves that aggression is much stronger than attachment. That is why even aphasia could not affect it and it remained fully intact during all stages of aphasia. This strength should not be overlooked and must be utilized. The researcher has suggested ways of using aggression as a speech regulating aid through her theory of emotionicology.

5.3 Emotional, Linguistic and Non-Linguistic Training of Caregivers. The most important thing after aphasia is that someone nearest to the aphasic should adopt the role of the caregiver. The next step is his/her training into this new role. This includes a conscious role acceptance and then adjustments in the emotional, linguistic and non-linguistic patterns of communication. Goleman (2006) suggests that the rational mind communicates through linguistic or verbal methods and the emotional mind communicates through non-linguistic ways such as bodily gestures, facial expressions, etc. (p. 97). A holistic communication involves both. The trainer of the potential caregiver can be the physician of the aphasic who being in the field and
having knowledge about aphasia knows the physical and psychological state of the aphasic. S/he can thus orient the caregiver about his/her role and future responsibilities. For speech recovery, the speech therapist can brief the caregiver what s/he is expected to do and how.

Linguistic and non-linguistic training of a potential caregiver involves orientation and preparedness for being responsive and expressive in both ways. It has been discussed earlier in Chapter 4 that the communication of the aphasic is semiotic rather than just linguistic, that is, it includes signs that are linguistic as well as non-linguistic. During the initial phases of recovery it is more non-linguistic and the aphasic becomes overly sensitive to non-linguistic communication. It is crucial to pay more attention to non-linguistic communication at this stage. Thus, the potential future caregiver needs to learn how to be explicit. Physical proximity and emotional expressivity are crucial at this stage as they set the stage for the future developmental process. Physical presence and closeness of the caregiver instill the feeling that the most trusted person is around and accessible at the time of need which provides security to the aphasic and emotional expressivity further strengthens it.

The recovery process of the aphasic whether physical or linguistic and emotional, initially depends on tangible, visible phenomena. Thus, concrete display of both matters a lot. Emotional attachment and concern has to be explicitly displayed for the emotional security of the aphasic whose language has been affected. Non-linguistic training means an overt display of emotional concern such as sitting close to the aphasic can be invaluable. It also includes training in how to touch while helping in sitting down or standing up. A caressing, soothing, soft and warm touch is healing and encouraging whereas an unfeeling, hard and cold touch is disturbing and unhealthy. A friendly smiling face would help create optimism. Similarly, physical display of love like hugging, tapping, kissing at successful communication and helping and forgiving for the unsuccessful ones are also important. Facial expressions of the caregiver also need to be worked on. Friendly expressions, readiness to help and concern go a long way in the recovery of lost abilities. Emotional expressivity has to be learned as an art. The caregiver also needs to learn how to evoke a desired emotion in the aphasic and how to avoid an undesired one. It is important because a sustained undesired emotion is destructive and counterproductive and such a situation can be handled by distracting the aphasic and thus removing the stimulus that caused
the undesired response. Negative emotions sustained for a long period of time (say more than 10-15 seconds) can be harmful and are dangerous. Attention should be quickly diverted to do that and the caregiver needs to know what s/he can use as a distraction when a negative emotion persists longer than desired. One way of doing that is to change the topic and start talking about something with which the aphasic is attached.

Linguistic training of a potential caregiver involves use of special tonal patterns that sound supportive. Affirmative responses avoiding rejection of the agitated aphasic, displaying that the caregiver understands or at least is trying to understand whatever the aphasic is communicating aids the aphasic a lot. The aphasic and his/her caregiver are the ones who devise and revise the communication system for the aphasic and both contribute as the aphasic starts with whatever is left functional in his/her communication. The caregiver contributes by helping to “fix” that system as s/he responds to the aphasic’s signs and communicates it to others. Eventually, a system gets established. However, it is not fixed but transitory and purely idiosyncratic which continuously undergoes change as the aphasic keeps on recovering and revising his/her signs with those of the broader conventional system that s/he belongs to. The caregiver needs to continuously update the aphasic’s system to others by keeping in mind the fact that this is a system always in a state of flux.

The caregiver should be able to detect when the aphasic is securely attached, has been taking linguistic challenges on his/her own previously and can take a mild aggression experience as an exploration and challenge for example, in certain situations if the caregiver pretends that s/he does not know a particular word or is unable to express a simple idea, the aphasic can say it in anger. The caregiver’s emotional intelligence aids him/her in aggression management of the aphasic. Sometimes, empathy can help. Sustained aggression can be hostile. Thus, if the caregiver feels that aggression is being sustained for a longer time, s/he can divert the attention of the aphasic. Distraction from the ongoing topic helps in releasing tension (Dolf Zillman as cited in Goleman, 2006).

Each and every language practice exercise designed for the aphasic has to be well thought out and well-planned involving a level bit higher than the existing linguistic level of the aphasic. This means careful scaffolding (sequencing) of the
exercises that have some speaking challenge and gradually raise the aphasic’s existing level of competence. The basic, limited reflexes (responses) or innate behavioral patterns can be modified for acquiring unlimited skills. Similarly, the basic, natural limited emotions can be improvised and converted into a desire to speak and communicate independently. Emotional regulation can thus be used for language activation and improvement.

**Some Activities Suggested for Speaking**

The analyses of this study implicate that an aphasic can perform well only if s/he is physically and emotionally relaxed. This study also exhibits how the P could speak fluently in a self-motivated way when she was involved in one of her favorite activities such as during a drive, watching television or discussing about her favorite persons. Thus, the time for speaking practice should be flexible and should be decided according to the situation, mood and willingness of the aphasic.

Language revival is impossible without an intellectual ability. The aphasic’s intellect also has to be worked on. Vygotsky suggests that intelligence depends on sensory perceptions, attention spans and strong memory. Thus, intelligence builds on sensory perceptions. It means that if the senses are strong, the degree of intelligence will be high. Some activities are suggested below which can be used for improving the intellect of aphasics.

5.4 **Sensory Perceptions.** Vision can be improved by giving the aphasic a chance to see objects of his/her choice. This can be done with actual objects, places, people and television programs. Family pictures, story books with colorful demonstrations can also be invaluable in such activities. They help in recalling concrete words, that is, nouns, verbs, adjectives and adverbs as they display words in a context. Clothes in different colors can be shown to the aphasic and s/he can be asked to differentiate first by only picking a specific color and then by asking the color of a piece of cloth.

Actual places can be visited to initiate natural language retrieval. For hearing, the caregiver can speak in a low tone in order for the aphasic to pay attention and make conscious efforts for listening. Another way to improve hearing ability is to turn the volume of the television low and ask the aphasic to say what is being said. For the
aphasic to take interest and perform well, the caregiver should do this activity with the aphasic’s favorite program.

Vygotsky’s idea of lip-reading can also be used for improving vision. Conscious visual practice in lip-reading can be converted into speaking. Reading practice done informally such as from the television screen or from signboards can be used for initiating the speech process. In such activities, the preferable idea is to motivate the aphasic for some idea written with which s/he is emotionally close, such as the name of someone dear and to start from single, short words written in bold and in a big font size. Such practice can be extended to involve two word reading practice at later stages and so on.

Speaking is a non-manifest or secondary function of the organs involved in speaking (in Vygotsky’s terminology as cited in Veer & Valsiner, 1994). The aphasic cannot be expected to perform well if his/her manifest or primary performance is flawed. Speaking needs flexibility and control over muscular activity. The articulators include organs whose primary function is something else. Speech production is their secondary function that they acquire during development. For this secondary function to proceed properly, the primary and more natural functions of these organs have to go on smoothly. So, there are undertones for the aphasics to have physical therapy or activities along with speech therapy. A better control over the physical activities boosts the confidence and is necessary for a better control over the speech apparatus. For physical activities also, the caregiver should start with the favorite activities of the aphasic. Such as for a better hand control, the aphasic can be given his/her favorite food and asked to eat on his/her own. Spoon holding, picking food and taking it into the mouth and chewing involve a sequence of tasks. Practice can help in attaining a better control over hand and jaw movement. Success in executing such a series of related tasks can be motivating. S/he can also be engaged in doing something that s/he loves doing for example, sorting out clothes, arranging pictures in a sequence, arranging spices in a tray or arranging fruits on a plate. Things can be disarrayed and the aphasic can be asked to arrange them. Putting on the socks and gloves also requires some degree of skill and some degree of intelligence as they also demand short decision making such as which sock or glove is fit for a particular body part. Such activities can help in getting confidence and eventually, in attaining self-reliance.
In speaking exercise, practice has to be scaffolded by starting with simple activities just for motivating to speak followed by adding levels of difficulties step-wise. First, the aphasic can be involved in prolonged talk for fluency and while the aphasic is speaking, information seeking questions can be asked in order to give practice for coherence and cohesion. To expand the zone of proximal development, first yes-no questions can be asked and then information taking questions can be asked. Pretension for not knowing the answer can be used as a drive to speak. This might initiate the aphasic to try hard to give answer and deliver the information. Levels of difficulty in speech need to be introduced carefully so that the aphasic does not get irritated and gradually moves towards independence. Fluency can be worked on by showing the aphasic a television program and putting it on mute. In which s/he sees the action going on and the scenes changing quickly. A quick change in scenes can be used as an aid in attaining speed and fluency in speech.

5.5 Attention Spans. Attention spans can be improved gradually and can also be worked on in a planned way. The caregiver can start with the favorite ideas of the aphasic. Freud’s idea of talking cure can be used for chimney sweeping, that is to remove hurdles and hesitation and to motivate the aphasic for getting involved in an activity. Prolonging an activity that is dear to the aphasic can increase the possibility of involving him/her more and consequently, increasing the duration of attention spans.

5.6 Memory Cultivation. The aphasic can be shown a picture sequence of a family event such as a marriage ceremony or a birthday party and can be asked questions related to it. This can be helpful in recalling the names of the family members and in attaining coherence. The aphasic’s favorite drama serials can be used for memory cultivation in that the aphasic can be asked to narrate what happened in the previous episode. At times, pretension on the part of the caregiver that s/he does not know what happened before can initiate the talk process in the aphasic.

Reinforcement Schedules

Overt appreciation for successful communication and covert correction for the incorrect one is recommended. Overt coaching is also not recommended. Only language activation is not enough. It will be of no use if the aphasic is unable to retain
a newly retrieved expression. Different expressions are retrieved at different times and at a different pace. So, when some expression is in the beginning stage of retrieval, reinforcement is all that is needed. Positive reinforcement has to be done as early as possible after such an improvement has been noticed. Extended practice of a newly retrieved expression is necessary as it provides the aphasic a chance to revise the newly retrieved expression. It also gives a chance to activate some of the muscles in the vocal tract.

Timely response and practice are the ingredients of positive reinforcement and help in retaining a newly retrieved linguistic expression. Initially, there is a need for visible display of the encouragement and appreciation to the aphasic. A kiss, a hug, a tap can be of immense help as they matter the most to the aphasic. Later, this can be transformed into other forms such as a comment. The point to remember is that emotional display has to be used for encouragement. Pampering of the aphasic is necessary in order to temper his/her language.

**Terms Suggested for Discussing Language Recovery after Aphasia**

Language recovery after aphasia has historically been juxtaposed with first language acquisition or second language learning ignoring its own uniqueness. The researcher thus suggests that new terminology should be devised and used for discussing this phenomenon. In many cases of language recovery after aphasia, the aphasic’s brain is fully or partially saturated with language. The only problem is to activate it and/or to use it actively. The hurdle can be physical or psychological and can be removed by applying physical or speech therapy. Thus, the language recovery process starts from the abstract and moves on to the concrete forms. In case of first language acquisition and second language learning, the order is reverse. Application of terminology from those domains of study onto this can be misleading. Through analogy, the researcher has coined some terms which are as under yet she emphasizes that these terms should be treated as part of the metalanguage (Jakobson’s term, 1980) used for discussing language recovery after aphasia and they do not have a generalized explanation. The “normal” linguistic system tends to generalize terms; contrarily, the aphasic’s communication system is specific to one individual and thus, is unique. Thus, for example, one caregiver’s use of caress or the phenomenon of
semioticentrism in case of one aphasic will definitely differ from other aphasics. Some terms are suggested below:

(i) Carese as compared to motherese. The special language devised by the caregiver that is expressive, responsive and has strong emotional charge. It is accompanied by special intonation patterns, friendly facial expressions and supportive body language.

(ii) Telepathic speech as compared to telegraphic speech. The aphasic depends a lot on his/her caregiver and assumes that all the ideas that s/he wants to communicate are shared and the caregiver is “naturally” following him/her thus, language is not needed to verbalize them. Thus, s/he assumes that a telepathic communication exists between him/her and the caregiver. The aphasic depends a lot on mentalese and assumes that intervention of language to communicate thought content is redundant and unnecessary.

(iii) Self-centrism as compared to egocentrism and self-centric as compared to egocentric. The situation when the aphasic assumes all others to converge to his/her communication system and disregards the “normal”, conventional linguistic signs.

(iv) Aphasiocentric talk as compared to egocentric talk. The stage in language recovery when the aphasic devises and uses communicative symbols in a purely individual, idiosyncratic way.

(v) Semioticentrism (signs, gestures, linguistic signs all are used). Adapted from Jakobson’s idea of semiotics. A communication system devised by the aphasic with the help of the caregiver that includes different types of signs and demos depending on the linguistic resources left with the aphasic. This system is unique for every aphasic in that no aphasic is the same as another in terms of language mastery before aphasia, language loss etc.

(vi) Aphasicalization. It involves cutting and reduction of the speech sounds and syllables to economize the effort for speaking. This can be compared with fluency devices in normal speech such as contractions, elision, assimilation, weak forms.

(vii) Effort minimizing techniques as compared to fluency devices in the normal speech.
(viii) Overexpansion as compared to *overextension* and *overregularization*. The aphasic extends the meaning of an expression to more than one situations. Thus, what occurs is a semantic overexpansion of linguistic expressions.

(ix) Semioticons as compared to *emoticons*. A combination of signs and emotions. The caregiver has to participate in the formation of a semiotic system that serves best for the aphasic and is mutually understood. S/he has to communicate it to the immediate family members who often interact with the aphasic. This will act as a proxy symbol system until the aphasic modifies it and is able to retrieve the normal symbol system. It will initially be aphasiocentric but over time, will become *socialized*.

(x) Parentalize as compared to *infantilize*. Infantilize is a term used by the first language acquisition and second language learning theorists. This term puts the language learner in the center. Parentalize is the opposite phenomenon as it puts the caregiver in the center. It is s/he who adopts the role of a parent and takes on more responsibilities. S/he does the emotional orientation of the aphasic as well as his/her own, helps in devising the semiotic system of communication which is unique for every aphasic and also communicates it to those who interact with the aphasic. S/he makes more adjustments and sacrifices in developing a continuous, emotional bond with the aphasic like a parent. Thus, for the language recovery of the aphasic, s/he is in the center around whom all explorations of the aphasic revolve.

The R made it clear in the beginning of this study that she would be open-minded towards *serendipities* and *anomalies*. She expected and tried to initiate happiness in the P during the language practice exercises. Theoretically, the presence of aggression was not intended yet during certain activities, the P became aggressive, especially when the R did not understand her. In her aggression, the P’s speed of speaking improved and she also spoke clearly. It can be detected from the audio recordings how the P spoke without hesitation and any error while using abusive expressions. This generated the idea that aggression can be productive in terms of language production and in attaining fluency and accuracy.
Anomaly during the Study

Aggression was the emotion that was expected to be avoided during language practice exercises yet at certain places when the R kept silent while responding to the P with an intention of giving her time to self-correct or speak independently, the P became aggressive and at times, abusive. Aggression was theoretically supposed to be controlled during the study by avoiding the topics that could aggravate the P and calmness was supposed to be initiated by suggesting the topics for speaking with which the P was attached yet for certain aspects in language recovery, aggression was found to be effective for example, the speed of speech production and fluency. This generated the idea that used sparingly along with positive, joyous emotions, aggression could also be used as a drive to speak. Aggression was, thus, discovered as an anomaly. However, the R emphasizes that initiation of aggression in the aphasic has to be done at an advanced stage of language recovery when the aphasic is physically and emotionally secure. It has to be done sparingly and only by the *principal attachment figure* whose presence should instill a feeling of being emotionally secure in the aphasic. It is important not to initiate aggression in the aphasic at earlier stages of recovery as it can be disastrous yet at an advanced stage, it can be used for expanding the existing radius of explorations of the aphasic.

The application of aggression as a drive to speak has to be done by the principal attachment figure as his/her presence insures the security of the aphasic. S/he is the one who shares with the aphasic his/her communication system. Thus, is the most capable person in terms of providing security to the aphasic. S/he observes the situation keenly and is ready to intervene in case of aggression exceeding the “safe” limit and becoming uncontrollable. S/he quickly intervenes and supplies the missing language item to the aphasic and thus insures security to him/her.

5.7 Serendipity. The serendipitous discovery was that sometimes negative feelings can also be helpful for recovering certain aspects of language. The overtures were that not only positive emotions are helpful in language recovery but some negative emotions also aid in regaining certain aspects of speech. This led the R towards devising her own theory that emerged from the study.
5.8 The Core Category in the Study. The core category in the study was found to be the most recurrent feature of the P’s speech production. It was her correct linguistic performance about ideas that she was emotionally attached with and an accurate performance for the abusive expressions about ideas that irritated her. This was a recurrent feature as whenever she produced an abusive expression in aggression or in anger, it was accurate. The P made no mistake in the execution of such expressions at any linguistic level. This generated the idea the aggression could be used as a stimulus for speech production.

5.9 The Concepts Guiding towards Theory Generation. The R started this study with a focus on emotional attachment of the P and explored its effect on the language recovery process. The idea at the beginning of the study was that emotional attachment with an idea aids in generating positive feelings and causes happiness that brings forth language production. As a side discovery, it was explored that not only positive emotions but also negative emotions (in controlled ways) aid in language production. Aggression is one such negative emotion discovered in this study.

5.10 Theory Grounded in the Study: The Theory of Emotionicology. This study started off with Vygotsky’s Theory of Reflexology and Bowlby’s Theory of Attachment. It has been pointed out that it was mainly a qualitative study and thus, these theories were only guiding the exploratory process. They were not controlling it. The R was open to unexpected findings as she was not testing these theories. She wanted to explore the language recovery process of the P and the factors that contributed or hindered in this process were being closely scrutinized. This scrutiny was applied at each level of analysis. The categorization was done after intensive analyses.

The theory presented below is an attempt not to reject or destruct these grand theories but to bridge the gap between these theories and the empirical evidence. Thus, it is an attempt to supplement these grand theories. It has practical applications in real life situations. The audio recordings of the P provide empirical evidence and make it a substantive form of grounded theory. The level of generality is low. The researcher describes her theory of emotionicology or emotional adaptivity as: Language recovery after aphasia (at an advanced stage of recovery) and aggression (initiated sparingly and in controlled ways) are related in a positive way. Thus,
aggression can be used as a stimulus for language recovery, especially speech recovery. It aids in improving the speed of speech and also in attaining fluency.

5.10.1 The Basic Premise of the Theory of Emotionicology. Aggression being a negative emotion has generally been treated as counterproductive but it can be productive if used with *emotional competence*.

This theory is based on the idea that emotions are an indispensable feature of the speech recovery process after aphasia. In order for the aphasic to regain his/her affected or lost linguistic abilities, s/he should have a healthy relationship with his/her environment which is rich in emotions that are conducive to the recovery process. This emotional rehab is created by the caregiver. Aggression and love are the strongest in the hierarchy of emotions. An emotionally intelligent caregiver can manage the emotional life of the aphasic through a happy blend of these powerful emotions and thereby, regulate the speech recovery process.

Aggression being one of the strongest emotions is a storehouse of energy. The massive energy inherent in this emotion is like nuclear energy. The theory of emotionicology suggests utilizing this energy in the process of speech recovery of the aphasics. Speaking is a process that involves many muscles in the vocal tract. In most cases of aphasia, a blood clot disturbs a steady flow of blood which creates hindrance in the smooth functioning of the articulatory muscles. Aggression increases the speed of blood flow. Brief episodes of aggression can be used as a means of removing these clots. The theory draws upon some tenets which are discussed as under.

5.10.2 Tenets of the Theory. The theory of emotionicology has certain features which are:

1. Willingness and readiness on the part of the aphasic act as stimuli for speech recovery.

2. Aggression on the part of the aphasic can be used a strategy of safeguarding his/her self-esteem.

3. The intermingling of aggression and love in the aphasic can be used as an aid for speech recovery.
4. The mixing of aggression and love should be done only by an emotionally competent caregiver after discussions with the doctor of the aphasic and after thorough planning.

**5.10.3 Discussion.** The word “emotionicology” can be analyzed as a combination of two words: “emotion” and “ecology”. An aphasic with the left hemisphere damaged and an intact right hemisphere has a “strong” emotional orientation as emotions acquire more importance in his/her life than in a “normal” individual’s life. Maybe, because a normal brain having both the hemispheres intact has a balanced approach as the logical left side as well as the emotional right side of the brain both function “properly”. Theoretically speaking, the aphasic with a left hemisphere damaged loses the logical control over the speaking process but can exert power over the emotional aspects. In fact, s/he is left with only the emotional brain. S/he is thus, an emotional being. His/Her emotional ecology rich in intelligently aroused and managed emotions can serve as an active agent in restoring the balance and beginning the transformation. The aphasic gradually develops a particular *habitus*, that is, a unique pattern of thinking and behaving based on his/her personal experiences after aphasia (Pierre Bourdieu’s term as discussed in Burke, Crowley & Girvin, 2001) which is rich in emotions. His/Her emotional ecology can be regulated by the caregiver.

Every normal human has an emotional mind (the right hemisphere) and a logical mind (the left hemisphere). The brain studies suggest that the emotional mind is much older as it evolved millions of years earlier than the logical mind did (as discussed in Goleman, 2006). Thus, the emotional foundations of the human history are much sounder than the logical mind. Thus, the entire human mental development builds on the emotional mind. This means that someone having an intact emotional mind has bright chances of recovering the logical mind, recovering the balance and transforming the condition of aphasia.

Aggression and love occupy top positions on the emotional scale but lie on the opposite extremes. This generates the idea that they both might be equal in intensity but a close scrutiny proves aggression to be much stronger than love as it takes less time to infuriate someone than to console and heal. Generally, love being on the positive side is preferred during the healing process by the speech therapists and aggression being on the negative side is strictly avoided. So, although powerful, it
remains an underrated and underestimated emotion. Energy inherent in both these emotions can be utilized through careful planning. The theory of emotionicology favors using a combination of both. While making a combination of both for aiding the speech recovery process of the aphasic, aggression should be used as an interspersed emotion while love as a dominant and powerful one as it should precede as well as follow the initiation of aggression. It is to be emphasized that the function of aggression is that of a catalyst as its only purpose is to facilitate and not damage the speaking process. Thus, it has to be applied with caution.

5.10.4 Concepts/Disciplines Contributing towards the Theory of Emotionicology.
The theory of emotionicology lies on the intersection of concepts from many disciplines such as:

(i) *Biology*. In his theory of evolution of emotions, Charles Darwin talks about primary and secondary emotions. He discusses aggression as one of the universal emotions whose combination with other emotions gives rise to secondary emotions and many possibilities of behavior. Emotions also regulate human motivational system (Oatley, 2004). The theory of evolution of emotions also states that the basic emotions can intermingle in countless ways and thus, there are endless possibilities of acquiring secondary emotions. In its earliest forms, aggression is believed to have emerged as a strategy of self-defense. For the aphasic at an advanced stage of recovery, aggression can be used as a strategy to safeguard self-esteem and self-image.

(ii) *Developmental Psychology*. Vygotsky talks about innate, manifest reflexes or patterns of behavior and non-manifest reflexes through his idea of reflexology which are the outcome of experience and exposure. Vygotsky also talks about the retraining of the innate, basic reflexes (patterns of behavior) and the adaptability of basic sensory perceptions which to him, can undergo transition and thus, there are innumerable possibilities of acquiring and learning skills from a limited number of innate basic sensory perceptions.

The theory of emotionicology stresses the re-structuring of one of the oldest, basic emotions, that is, aggression. It also suggests using a combination of aggression and love for speech recovery in the aphasics. The aphasic’s emotions can be mixed together in creative ways and thus, there can be innumerable possibilities of
secondary emotions which can be easily converted into a motivation to improve as emotions regulate human actions (Oatley, 2004). Aggression instills feelings of being challenged which the aphasic strives to win by speaking quickly. This increases the blood flow which can improve fluency and speed of speaking. Love has caressing, soothing effects. Thus, it can be used for harmonizing and regulating the process of speech production. A combination of aggression and love can be beneficial for the aphasic.

(iii) Physics. Generally, aggression has been underestimated by focusing and projecting its negative effects. For the emotionally disturbed individuals like aphasics, it is considered to be a setback that only hinders progress. In terms of energy inherent in aggression, it can be compared with the two nuclear chain reactions of fission and fusion. Once initiated without controlling them both these processes continue without stopping just like a chain, producing massive amounts of destructive energy (as discussed in Hyperphysics, Anonymous, n. d.) yet in controlled conditions, fission and fusion both can be used as great sources of energy. Just like these two nuclear reactions, aggression is also destructive and counterproductive when unchecked and uncontrolled but when controlled and thoughtfully used, it can be a great source of energy for activating and greasing the speaking process.

An analogy can be drawn between the speech process in the aphasic and the electric current passing in a wire connected to an electrical appliance. A short circuit results in power failure causing an interruption in the smooth working of the appliance. The same happens to the aphasic. The brain sends “orders” to the speech organs in the form of electric waves (Chudler, n. d.). Aphasia either deadens or weakens the nerves connecting the brain with the articulators. This results in a stoppage or malfunctioning of the speech apparatus. Aggression being a great energy source provides the charge needed for the speaking process to proceed uninterruptedly. Thus, it has a resurrecting effect for the aphasic.

Two more ideas were taken from physics in order to enrich the theory of emotionicology: Newton’s concept of a color circle (that he presented in 1666) through which he described blue, red and yellow to be the basic or primary colors which can be mixed in numerous ways giving rise to secondary and tertiary color combinations (Morton, n. d.). Emotions can also be understood as different shades in
the color spectrum. Aggression and love are just like the primary colors (as discussed in Ask.com, n.d.) and provide the base for all the other secondary emotions.

Newton’s Third Law of Motion was also among the inspirations for formulating this theory. This law states that every action has an equal and opposite reaction (as discussed in physics tutorials in the Physics Classroom, n. d.). Initiation of mild aggression in the speech recovery process worked as an action in this study and the resultant speech production occurred as a reaction. Aggression being a negative emotion and correct linguistic performance as a positive consequence. Both the processes were not necessarily in equal amounts but surely were in opposite directions.

Aggression and love are two of the most powerful but opposite emotions. A combination of both these emotions can speed up the language recovery process of the aphasic. Aggression, generally treated as a destructive emotion, can be used to initiate a constructive process of speech production. The processes of using emotions to start or accelerate speaking can be understood as action (initiation of aggression) and reaction (speech production).

(iv) Psychiatry. Two concepts from psychiatry have been used: the Shock Therapy and the Talking Cure. The idea of bringing the aphasic in a high arousal (excited) position and thereby generating energy in the speech apparatus has been derived from the Shock Therapy. Historically, extreme aversion and negativity have been linked with the Shock Therapy downplaying its positive effects. Similar situation persists in the use of aggression for clinical purposes. The reality is that despite misunderstandings and controversies surrounding the Shock Therapy, it continues to be among the safest and the most effective techniques in psychiatry for treating severe forms of depression (as discussed in WebMD, n. d.). The Shock Therapy helps to get rid of some severe forms of mental illnesses. It suggests that brief episodes of current, maximum for about 20 seconds, should be applied by a trained physician, the patient should be given a muscle relaxant and anesthesia and the application of the therapy should be in a clinic where the patient can have medical aid in case of emergency (WebMD, n. d.). Aggression does the same for the aphasic and like the Shock Therapy, its application and frequency should be under the strict and guided
supervision of the doctor of the aphasic who is fully aware of the mental and physical state of the aphasic.

In using aggression as a speech stimulator, the caregiver of the aphasic acts the same as the trained physician in the Shock Therapy does as it is done in the most relaxing, comforting setting usually in the aphasic’s own home during informal conversations. The caressing attitude of the caregiver has anesthetic effects. The most relaxing feeling for the aphasic is the presence of his/her caregiver on whom s/he relies and trusts. Just like the Shock Therapy, the application of aggression should not exceed beyond a limit (the estimated time for passing electric current in shock therapy is about 20 seconds (as discussed in Electroboy, n. d.). Its frequency varies between twice to thrice a week and the total duration for the therapy is four weeks (WebMD, n. d.). Aggression should also be checked and when it exceeds the safe limits, it should be removed. The removal process involves providing distraction, by changing the topic or by providing the exact linguistic expression that the aphasic is striving for.

Freud used the Talking Cure in his technique Psychoanalysis. It was a process of talking with the patient in a warm, relaxed way for establishing an intimate relationship which Freud thought was necessary for the healing process to start. Thus, for starting the healing process in the mentally disturbed individuals, he made use of love, one of the basic human emotions.

In psychiatry, it is believed that emotional support can be miraculous in curing the emotionally disturbed individuals. It is even more important than drugs as the effects of developing a close, trustworthy relationship with emotionally insecure patients are much more positive than those attained through regular medication. (as discussed in Launer, 2005). An emotionally intelligent caregiver establishes the bond of trust and love with the aphasic which helps in achieving emotional stability.

Aggression and love both generate energy yet they are opposite in nature. An apt use of both can bring about phenomenal results. Aggression being a negative emotion has to be applied with caution otherwise the outcome can be catastrophic. The application of aggression as well as love and happiness can be understood as a happy blend of the Shock Therapy and the Talking Cure when the most “tried, tested and trusted” caregiver does not “respond” or “help” the aphasic, s/he feels threatened and challenged but being in his/her home base, s/he is secure (Bowlby’s terms) and
thus, is ready to safeguard his/her self-esteem or self-image (a concept in psychology). According to Maslow, self-esteem evokes elevating feelings which can be turned into a motivation to perform correctly (Anonymous, 2015).

The emotional competence of the caregiver gives the actual locus of control to him/her. His/Her presence keeps the aphasic relaxed and prepares him/her to deal with the unforeseen situations as it equips him/her with techniques of handling the aphasic and scrutinize the situation like a trained physician. S/he is all set to take charge of the situation in case the aphasic becomes outrageous. S/he controls the situation by doing different things: Sometimes s/he distracts the aphasic by changing the topic of discussion and sometimes provides the actual linguistic expression causing rage. In case of a correct performance following rage, s/he has to explicitly admire the aphasic. This visible display of encouragement can be in the form of a kiss, a hug, a comment, a positive nod or even a gentle pat and it has the same effect as a coolant has in the nuclear reaction as both serve to control the situation (Omar, 2011).

The important thing is that whether the aphasic performs correctly or incorrectly after aggression, there should be a follow-up through an obvious display of love and concern by the caregiver. This resurrects and restores the affection/affiliation bond between the two whereas an apathetic attitude on the part of the caregiver can make the recovery process defunct.

Love and care are, no doubt, emotions conducive to the speaking process of the aphasic yet at times they become ineffective and mild aggression can be used as a stimulator for fuelling and greasing the speaking process. However, while scaffolding or sequencing speaking exercises, it should be used as an upgrading technique for improving fluency and accuracy. Thus, should come at advanced stages of linguistic recovery.

(v) Psychology. The theory of emotionicology also draws upon some concepts from psychology. Thus, the concepts of eustress and distress and Abraham Maslow’s Heirarchy of Needs were inspirational. Eustress is the level of stress that is manageable and actually aids in taking up challenges and persevering as it provides motivation. Distress is counterproductive as it damages the positive, healthy attitude by being excessively suppressing (as discussed by the experts in Brock Univesity,
2010 & also discussed by Rose, 2014). Thus, eustress is a desired feature, if a person wants to improve and achieve something in life.

In Maslow’s theory, there are five levels in the human motivational hierarchy staring from the basic physiological needs and moving on towards the safety, love, self-esteem and self-actualization needs (as discussed in Luthans, 2008). He calls the first three the primary needs and the last two the secondary, higher-order needs (p. 168). To him, both are important and both provide motivation to act. Initially, the primary and the more basic needs have to be fulfilled. At this level, all human activities converge towards one objective: to fulfill the basic needs which are usually physical in nature but once they are fulfilled, they can no longer motivate. Thus, when one level of needs has been satisfied, the next level of needs has to be activated in order for the individual to move on. An individual who is physically satisfied, is safe and emotionally secure has actually crossed the first two primary levels in the needs hierarchy. Thus, in order to stimulate him/her further, the tertiary level in the needs hierarchy has to be activated, that is, the self-esteem level.

The same concept of self-esteem can be used for speeding up the speech production process in the aphasic but just like the need hierarchy in Maslow’s model, aggression as a technique of safeguarding self-image should be used at advanced stages of aphasia when the aphasic’s physiological and emotional life is secure, as self-esteem needs cannot be evoked unless the basic, primary needs are fulfilled (self-esteem needs in Maslow’s needs model come at the fourth level in the hierarchy. Thus, they are among the higher-order, secondary needs).

Maslow also says that positive comments and appreciation coming from the caregiver and family members are especially invaluable as they easily turn into a motivation to perform well and have a healing effect (Anonymous, 2015). Thus, the aphasics who frequently experience positive comments from others have brighter chances of recovering than those who often experience apathy or a negative feedback.

(vi) Organizational Behavior. Luthans (2008) talks about two forms of energy: tense energy and calm energy, both control laborers’ behavior and resultantly, determine the overall work environment of an organization (p. 247). Happiness and satisfaction generate calm energy by keeping the muscles relaxed whereas aggression and competition cause tense energy as they cause muscle tension. Both are important
in controlled ways but excessive amounts of both are counterproductive. Calm energy is a great source of getting work motivation. Same is the case with tense energy. In controlled ways, aggression causes mild stress and activates body muscles. This mild form of stress is also called tense energy or *eustress* which means “good stress” (Luthans, 2008) and is a great source of work motivation. It provides a sense of competition and is necessary for improvement. For the aphasic, aggression and love do the same as tense energy and calm energy do for the laborer. Both are indispensible features of the productive process.

Intermingling of aggression and love can also be used as a motivation for speaking. This can be done by introducing mild aggression when the aphasic is deeply engrossed in talking about one of his/her favorite topics and a point is reached when s/he cannot say a specific expression. A brief episode of pretension on the part of the caregiver as if s/he does not know that expression can motivate the aphasic to try hard in aggression and complete his/her sentence/talk. The linguistic forms recovered as a result of aggression can be revised by initiating joyous, pleasurable emotions. Thus, aggression can be used as a stimulus for initiating speech production and happiness can be used as a way of reconciling and thereby, restoring harmony.

(vii) Pragmatics. In 1962, John Langshaw Austin analyzed language use in a unique way through his Speech Act Theory. He considered language use as context-bound (Oishi, 2006). He thus, focused on the *functional* side of language use rather than the *formal* side.

Austin describes speech as an “act”, performed by the speaker through which s/he exerts influence on the listener which causes the listener to “react” in a particular way. According to the Speech Act Theory, a speaking action works as a *stimulus* that brings about a desired *response* from the listener yet in order to bring this desired response, certain conditions have to be fulfilled. Austin calls them *felicity conditions*. The felicity conditions for a speech act include certain degree of preparedness and sincerity on the part of the speaker and Austin names them *preparatory conditions* and *sincerity conditions* (Allwood, 1977).

Austin divides the communicative process into three steps: the first step is the *illocutionary act*, the second step is the *locutionary act* and the third step is the *perlocutionary act* (Spenader, 2004). By the illocutionary act he means speech...
planning on the part of the speaker which includes the message encoding techniques, the situational details, the relationship between the interlocutors etc. The locutionary act is the utterance itself whereas the perlocutionary act is the aftereffect of the utterance. Perlocutionary act can be detected from the way the listener “reacts”. That is, whether the “desired” response has been extracted from the listener or not. The Speech Act Theory puts the speaker in the center of the communicative process from where s/he can exert influence on the responses of the listener.

The theory of emotionicology uses these ideas. It puts the caregiver of the aphasic in the center. His/Her commitment defines the preparatory conditions for the speech production process in the aphasic. His/Her conscious undertaking about role establishes the sincerity conditions for the aphasic’s betterment. The process of speech production depends on the willingness of the aphasic. The soothing presence of the caregiver and the comforting environment of the speaking practice insure that the felicity conditions are met.

In initiating rage as a stimulus for speaking, the illocutionary, locutionary and perlocutionary acts need to be planned. The successful execution of a well thought out speech act is a unique blend of the caregiver’s intention (illocutionary force) and a communicative move (locutionary act) whose result can be detected from an improvement in the aphasic’s linguistic abilities (perlocutionary act).

Thus, in the linguistic recovery process of the aphasic, the caregiver takes on more responsibilities in that she plans his/her speech acts and enacts/performs them consciously in order for the aphasic to respond in desired ways.

A Word of Caution

According to Paul Ekman, the full heat of an emotion lasts only a few seconds (as cited in Goleman, 2006) yet a sustained emotion, especially a negative one like aggression that raises blood pressure, can be dangerous. This causes high level of chemical secretion in the blood which can be fatal. Thus, at the initial stages of recovery after aphasia, an emotion like aggression that puts the body in a high arousal position and increases the blood pressure can be harmful. However, at the advanced stages of recovery when the aphasic is physically and emotionally stable, it can be productive if sustained for only a few seconds (say 10-15 seconds). It increases blood
flow in the veins and thus, can be helpful in removing clots that form as a result of stroke and create hurdles in the movement of the muscles involved in speaking. In more than 80% cases of stroke, aphasia is caused due to a blockage in the arteries (Topol, 2014). The caution is that aggression needs to be applied at the advanced stages of recovery, with care, by a trained caregiver and not frequently. For overcoming aggression, the caregiver should remove the cause of aggression after 10-15 seconds of retaining it.

Though emotional apparatus provides the mold in which the language is cast before it is uttered yet experimenting with emotions has to be done at a later and advanced stage of recovery after aphasia when the aphasic feels physically and emotionally secure. Aggression and anger initiate negative emotions and pose challenge to the aphasic. In the initial stages of recovery, the aphasic is weak and emotionally insecure. Initiation of negative emotions at this stage can raise the level of insecurity and might add to the difficulties of the aphasic. At this stage, s/he needs physical and emotional security in abundance that boosts confidence. The theory of emotionicology strictly directs to avoid aggression at this stage. Thus, initially only those ideas should be mentioned in front of the aphasic which are soothing. They will generate happiness and equip him/her with a shield of security. As a result, the aphasic will feel relaxed and the chances of recovery will improve. Emotions of aggression and anger can be used as a challenge when the aphasic is emotionally secure and is in a position to take up mild adventures.

This study indicates that aggression and anger were the emotions that remained intact at all stages of aphasia. It is the caregiver’s job to detect which emotions are intact in the aphasic because every aphasic is unique. Starting speaking practice from intact language and emotions can be much easier as it helps in planning what to add in each succeeding stage rather than starting without any foundation. Working with emotions that are joyous and generate happiness is mandatory when the aphasic is in the initial stages of recovery and is more insecure as s/he needs to feel secure. Initiation of negative emotions can add to the feeling of insecurity and thus, can be counterproductive. However, at advanced stages of recovery when the aphasic has formed a secure emotional bond with his/her caregiver, s/he is in a position to explore on his/her own. At this stage, aggression in controlled ways can be used as a strategy to make the responses of the aphasic quicker and spontaneous. However, it is
recommended that their application should be after consultation and strict guidance and supervision of the physician.

No matter how positive the outcome of using aggression as a stimulus is, it should be sparingly used and the reinforcement of the retrieved items should always be done by arousing pleasurable, joyous emotions because excess of aggression is always detrimental like the nuclear chain reactions.

**Directions for Future Research**

For researchers in the fields of linguistics, psychology, psychiatry and psychotherapy, the researcher recommends the following areas for further research:

5.11 Linguistics. These areas can be explored further:

(i) It can be checked how the paralinguistic features of speech (that is, stress, intonation and pause) can be used in the speech recovery process of the aphasics because they had acquired special importance in the P’s communication system. Her reliance on these features for achieving different communicative objectives exhibits her sensitivity towards them (see the analyses of Section II of each session in Chapter 4). It can be extrapolated that she was equally sensitive towards the same about her caregiver’s communication. As far as the R is concerned, she found intonation as the most sensitive feature while communicating with the P. Affectionate tonal patterns helped the R in toning up the speech of the P. Thus, she suggests to the future researchers to explore more about the use of paralinguistic features in the caregivers’ speech for the speech recovery process of the aphasics.

(ii) It has been discussed earlier that the P had lost three of her linguistic skills as a result of aphasia namely speaking, reading and writing. Due to emotional stability and practice, she was able to retrieve much of her speaking faculty. Chapter 4 displays that she had also started recovering her reading skills as she could recognize some of her favorite words in written form. Though her maximum achievement in terms of word recognition was up to three-word phrases (see Line 207 of Session 1), it can be conjectured that she would be able to retrieve this skill as well. The future researchers in the same field can explore how far reading and writing skills can be retrieved after aphasia when the aphasic has crossed the so-called critical period.
(iii) Research can also be done to explore whether a person who has a well-formed personal language system in terms of intonation patterns, body language and facial expressions can transform into a caregiver who can change these features according to the aphasic’s needs or not.

5.12 Psychology, Psychiatry & Psychotherapy. These areas can be investigated further:

(i) Parentification is a phenomenon that generally becomes fixated. It is a serious role and has to be consciously undertaken and performed, if betterment of the aphasic is desired. Sometimes the role of the caregiver has to be adopted by a person who is mentally and emotionally not ready for the job. Thus, it can be explored whether there can be a phenomenon as “learned” parentification, and if yes, how this can be acquired.

(ii) It can be discovered whether the phenomenon of parentification of the caregiver can ever be reversed or not (in case the aphasic fully recovers his/her lost linguistic abilities and gets over the emotional insecurities).

(iii) Research can also be done to find out whether caregivers can learn emotional competence and if yes, how.

(iv) The future researchers can explore whether negative emotions such as hatred, jealousy and aversion can be used for supporting the linguistic recovery of the aphasics. All three are strong emotions but generally, they are not recommended to be initiated in the physically and mentally weak individuals during their recovery process. They are believed to be risky as their negative side is usually focused. This practice undermines their strength. Thus, the energy inherent in them remains unexplored. The R recommends research in how negative emotions (at advanced stages of recovery) can be used as a motivation to safeguard self-image. At advanced stages of recovery and with emotionally stable groups of linguistically handicapped people, all of these emotions can be converted into a sense of competition and thereby, used as a motivation to perform well. Similarly, it can be explored whether ambivalence, sympathy and empathy can be turned into a motivation for speaking or not. These three emotions are relatively late arrivals in our emotional repertoire and less explored emotions but all are strong.
Research can also be done to explore whether the aphasic can regain *self-actualization* (the highest and the most advanced level of motivation in Abraham Maslow’s Theory of Motivation) or not.

The future researchers can discover the type of emotional training and orientation that can be given to the aphasics and their caregivers for the new life style. Explicit role realization and undertaking both on the part of the caregiver as well as the aphasic is crucial in the initial stages of aphasia. The future researchers can explore how infant-like role acceptance on the part of the aphasic can be done especially when s/he is in a traumatic phase.

Emotional hazards are involved in the role-reversal between the aphasic and the potential caregiver because usually it happens on a permanent basis. Research can be done on how emotional security and stability can be provided to the caregiver so that s/he can pass it on to the aphasic because for an emotionally insecure caregiver, it is impossible to provide emotional security to the fragile aphasic.

**A Final Word**

Based on the in-depth study of aphasia and the condition of an aphasic, it is suggested that training for the potential principal caregiver of the aphasic should be done as early as possible. This includes directions about role recognition. An aphasic feels insecure after the outset of aphasia and the very first feelings are of helplessness and frustration. The presence of a caregiver who takes care and handles communication matters on behalf of the aphasic is invaluable. The training of the caregiver needs to include sessions about how to generate feelings of security in the aphasic and transform it into trust and attachment. The orientation of the potential caregiver should also include training in how to be explicit in emotional display. This must also include how to be patient while handling the linguistically deprived individuals.

In the early stages of aphasia, the aphasic behaves like an infant and wants explicit display of love and care. Sometimes, the caregivers take it for granted to be explicit and overt in exhibiting their responses which affects the healing process and performance of the aphasic. Management of one’s own and other’s emotions is an art and should be learned as a skill. This can make a potential caregiver emotionally
intelligent and only emotionally competent caregivers can manage emotions of the aphasic.

Emotions can be understood on a continuum including happiness, surprise, fear, sadness, disgust, jealousy and aggression. This is the basic spectrum of emotions like the primary or basic colors of the rainbow. The rest of emotions are only secondarily acquired as a result of amalgamation of the basic ones in different proportions. The primary emotions are very strong and are present in every human being; the secondary ones are all a matter of exposure and experience. The primary emotions being strong in nature can be utilized in the linguistic recovery process after aphasia. On the right extreme of the emotional continuum lies happiness that constitutes the positive emotional extreme and on the left extreme, aggression is located which forms the negative extreme. Both extremes are emotional apexes on which emotional charge is at its highest. Opposites work well. So, imagining the initial stages of aphasia and the aggressive, tense, agitated aphasic on the left side of the emotional spectrum, only love and care can balance out. Similarly, at the advanced stages of aphasia when much of the lost linguistic resources have been restored and the aphasic is secure, calm and happy, mild aggression being challenging in nature, can be used as a technique for gaining fluency.

Emotions on either extreme of the continuum are energy boosters. It’s all a matter of invoking the right one. Emotional intelligence of the caregiver helps in making the right decision.

The aphasics with left hemisphere damaged have a weak logical mind but they have a strong emotional mind. Their emotional strength can be used as a basis for starting the physical and linguistic rehabilitation process. The R focused on attachment and aggression in the P for this study but in the overall human psychological make-up, there are other strong emotions as well such as surprise, fear, disgust and jealousy. Their importance should not be undermined.

“Normal” language production uses the emotional as well as the logical channel of thought. Aphasia (on the left hemisphere) damages the nerves carrying blood to the left side of the brain. Thus, it weakens the logical side. As a result, the blood that had to be distributed between both the hemispheres has to go to the right hemisphere only, activating it more than a normal brain. That is why; aphasia
strengthens the emotional side of the brain. Consequently, the basic emotions (such as aggression and love), which are already strong in every brain, become even stronger and more activated than usual and acquire extreme connotations causing an emotional disbalance.

Language recovery in the aphasic, thus, has only one channel to follow, that is, the emotional channel. This is why emotional training of the potential caregiver is mandatory as only an emotionally competent caregiver can bring back emotional stability and restore the order. It is the caregiver who has to strive hard in order for the language recovery process in the aphasic to thrive. Thus, the training of the potential caregiver should precede the linguistic revival process of the aphasic. This study suggests that the linguistic resurrection of the aphasic can happen only in the hands of an emotionally strong caregiver. Thus, it places the caregiver in the center of the rehabilitation process to start yet the aphasic is not on the periphery as the emotional bond between the two unites them and acts like the centripetal force due to which, the aphasic does not become directionless. S/he gets his/her orbit in which s/he feels connected and continues to grow linguistically.

This study in the field of psycholinguistics conjoins the disciplines of linguistics and medicine/medical health and ends with an optimistic note for lovers of language and humanity.
REFERENCES


Kaye, K. *The Language of Thought*. Retrieved from: 
http://host.uniroma3.it/progetti/kant/field/lot.html


http://jpma.org.pk/full_article_text.php?article_id=1444


Menn, L. n. d.. *Neurolinguistics*. Retrieved from:  
http://www.linguisticsociety.org/resource/neurolinguisticsics


Morton, J. L. n. d. Basic Color Theory. Retrieved from
http://www.colormatters.com/color-and-design/basic-color-theory


http://www2.units.it/eserfilo/art106/oishi106.pdf


American Psychological Association, 750 First Street, NE, Washington, DC 20002.


APPENDIX A

Consent from the Research Participant

1 R: bismilaahirahmaanirahim (2.0) amee main aap ki beyti salmaa qayoom apnaa pe
2 ech dee kaa thisis likh reyee ↑hoon: aap ki (.) zabaan ki (1.0) jo theek ho reyee hai
3 ↑naan us key oopar jo aap boli hain to aap ko maslaa hojaa thaa
   (in the name of Allah the merciful the gracious maa I, your daughter, am doing
my PhD thesis on your language problem though you are recovering but still you face
problems in speaking)
4 P: ↓jee
   (yes)
5 R: ab ab ṭhojaa kam ho
   (now it's getting better)
6 P: ↓zaraa "" theek] ho geyee hoong ""
   (I'm a little bit better now)
7 R: [ to ] (1.0) leykin abi chal raa hai maslaa
   (yes but the problem is still there)
8 P: ↓naan theek ↓hai
   (yes right)
9 R: to main us pey (.) EYK saal (.) tak aap ki rikordingz karoon gi takreeban rooz:
   (so I'm going to record your speech for one whole year almost every day)
10 P: ACHAA
   (ok)
11 R: aur us meyn (1.0) phir eyk phir saal tak main aap ki roz karoon gi rikording
   (and so I'll record your speech every day)
12 P: inshaalaa
   (God willing)
13 R: to aap ki ṭaraaf sey ↑jiaazaat hai
   (so do you allow me to do that)
14 P: ↑JEE (2.0) ↑JEE (1.0) ↑JEE (.) ↑JEE (2.0) ↑theek ai (1.0) ↑TEEK ai (.)
15 ↑TEEK ai ↑TEEK ai
   (yes yes yes it’s ok it’s ok it’s ok it’s ok)
APPENDIX B

Consent from the Doctor

CONSENT STATEMENT

I have read the above statement, and am ready to participate in this study. I give permission to be audio taped.

[Signature]

HUMANHoop Asaf Alavi
Name of the Participant

20.5.2011
Date

[Signature]

Salma Olayan
Name of the Researcher

20.5.11
Date

[Signature]
APPENDIX C

Guide to Transcription Symbols

[]

Square brackets mark the start and end of overlapped speech. The left square bracket [ indicates the start of the overlap and the right square bracket ] indicates that the overlap was over.

↑↓

Vertical arrows preceding speech represent a change in the tone from 'normal', flat one. An upwards arrow ↑ indicates a rising tone, and a downwards arrow ↓ indicates a falling tone.

( )

A micropause that was noticed but was too brief to measure.

(()

The language enclosed in double parenthesis represents the additional comments from the transcriber, e.g. about features of context or delivery.

"help"

Double degree signs represent whispering or whisper-like speech.

< >

Speech enclosed in 'greater than' sign shows that it was faster than the surrounding talk.

> <

Speech enclosed in 'lesser than' sign shows that it was slower than the surrounding talk.

CAPITALS

Exhibit that the word in capital was stressed in speech.

: ;

One or more colons indicate lengthening of the preceding sound.

go:::d

One or more colons indicate lengthening of the preceding sound. Each additional colon represents a lengthening of one beat.
(1.0)

Numerals in parentheses mark pause in seconds.

( )

A stretch of talk that was unintelligible.

The space between the parentheses indicates the length of the unintelligible talk.

Adapted from Gail Jefferson’s Transcription Symbols as cited in Have (2004), pp. 183 & 184
# APPENDIX D

**Key to Roman Symbols of Urdu Sounds (along with examples)**

Note: Each Urdu monophthong or consonant sound in the chart below comes in the initial position of the word(s) in front of it except in the words ْی، ُّ، ِّ، َّ، ْ and ّ where the sound comes in the medial position.

## Monophthongs & Consonants

<table>
<thead>
<tr>
<th>Serial #</th>
<th>Roman Symbol</th>
<th>Specimen Word(s)</th>
<th>Urdu Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>a</td>
<td>ای</td>
<td>ای، ع</td>
</tr>
<tr>
<td>2.</td>
<td>i</td>
<td>ای</td>
<td>ا</td>
</tr>
<tr>
<td>3.</td>
<td>u</td>
<td>ای</td>
<td>ا</td>
</tr>
<tr>
<td>4.</td>
<td>e</td>
<td>ای</td>
<td>ا</td>
</tr>
<tr>
<td>5.</td>
<td>o</td>
<td>ای</td>
<td>ا</td>
</tr>
<tr>
<td>6.</td>
<td>b</td>
<td>ای</td>
<td>ا</td>
</tr>
<tr>
<td>7.</td>
<td>p</td>
<td>ای</td>
<td>ا</td>
</tr>
<tr>
<td>8.</td>
<td>t</td>
<td>ای</td>
<td>ا</td>
</tr>
<tr>
<td>9.</td>
<td>s</td>
<td>ای</td>
<td>ا</td>
</tr>
<tr>
<td>10.</td>
<td>j</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>11.</td>
<td>ch</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>12.</td>
<td>h</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>13.</td>
<td>kh</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>14.</td>
<td>d</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>15.</td>
<td>t</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>16.</td>
<td>z</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>17.</td>
<td>r</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>18.</td>
<td>r</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>19.</td>
<td>y</td>
<td>جی</td>
<td>جی</td>
</tr>
<tr>
<td>20.</td>
<td>sh</td>
<td>جی</td>
<td>جی</td>
</tr>
</tbody>
</table>
### Aspirated Consonants

<table>
<thead>
<tr>
<th>Serial #</th>
<th>Roman Symbol</th>
<th>Specimen Word(s)</th>
<th>Urdu Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>bh</td>
<td>ایوانی</td>
<td>ہو</td>
</tr>
<tr>
<td>2.</td>
<td>ph</td>
<td>ہکل</td>
<td>ہک</td>
</tr>
<tr>
<td>3.</td>
<td>th</td>
<td>تیٹر</td>
<td>ٹر</td>
</tr>
<tr>
<td>4.</td>
<td>th</td>
<td>ہیکر</td>
<td>ہر</td>
</tr>
<tr>
<td>5.</td>
<td>jh</td>
<td>جہانگیر</td>
<td>جد</td>
</tr>
<tr>
<td>6.</td>
<td>ch</td>
<td>چکل</td>
<td>چک</td>
</tr>
<tr>
<td>7.</td>
<td>dh</td>
<td>ڈھند</td>
<td>ڈم</td>
</tr>
<tr>
<td>8.</td>
<td>dh</td>
<td>دھند</td>
<td>ڈم</td>
</tr>
<tr>
<td>9.</td>
<td>rh</td>
<td>ڑھنی</td>
<td>ڑنہ</td>
</tr>
<tr>
<td>10.</td>
<td>kh</td>
<td>کھنی</td>
<td>کنہ</td>
</tr>
<tr>
<td>11.</td>
<td>gh</td>
<td>گھر</td>
<td>گر</td>
</tr>
<tr>
<td>12.</td>
<td>mh</td>
<td>ڈھر</td>
<td>ڈر</td>
</tr>
</tbody>
</table>

**Note:** Each Urdu aspirated consonant sound in the chart below comes at the initial position of the word(s) in front of it except in the word گھر where the sound comes at the medial position.
**Note:** Each Urdu long vowel sound or diphthong in the chart below comes at the initial position of the word in front of it.

**Long Vowels & Diphthongs**

<table>
<thead>
<tr>
<th>Serial #</th>
<th>Roman Symbol</th>
<th>Specimen Word(s)</th>
<th>Urdu Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>aː</td>
<td>اور</td>
<td>aː</td>
</tr>
<tr>
<td>2.</td>
<td>oː</td>
<td>او</td>
<td>oː</td>
</tr>
<tr>
<td>3.</td>
<td>eː</td>
<td>ایچ</td>
<td>eː</td>
</tr>
<tr>
<td>4.</td>
<td>eː</td>
<td>ایک</td>
<td>eː</td>
</tr>
<tr>
<td>5.</td>
<td>ai</td>
<td>آئیہ</td>
<td>aː</td>
</tr>
</tbody>
</table>

**Note:** Each Urdu nasalized vowel sound in the chart below comes at the final position of the word in front of it.

**Nasalized Vowels**

<table>
<thead>
<tr>
<th>Serial #</th>
<th>Roman Symbol</th>
<th>Specimen Word(s)</th>
<th>Urdu Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>oːn</td>
<td>ائیں</td>
<td>oːn</td>
</tr>
<tr>
<td>2.</td>
<td>oːn</td>
<td>ائیں</td>
<td>oːn</td>
</tr>
<tr>
<td>3.</td>
<td>eːn</td>
<td>ائیں</td>
<td>eːn</td>
</tr>
<tr>
<td>4.</td>
<td>aiːn</td>
<td>ائیں</td>
<td>aiːn</td>
</tr>
<tr>
<td>5.</td>
<td>eːen</td>
<td>ائیں</td>
<td>eːen</td>
</tr>
</tbody>
</table>
APPENDIX E

Discussion #3 with the Doctor (Held on: 12.1 2012)

Note: There are some expressions in English in this discussion. They have been presented as they appear in English.

1 D: jo aap ney jaisey poochi THIN naan cheezey (1.0) wo hai key once initiated the
talk process is much better (1.0) confidence level bi beyhtar hai aur jo pailey atakti thin
3 wo bi khatam ho geyaa hai she’s more fluent now (1.0) leykin: jo jo memory
4 integration hai wo abi (.) us meyn hai SUCAM hai abi (1.0) us meyn hai key I can
5 plant memories in her if I want to (1.0) us ko resist neyee kar sakthi I CAN plant a
6 memory in in her aur us ko wo seyee sanjheyn gi (1.0) wo ab wo kar reyee hai
7 leykin:: doosri cheez ai key (2.0) apney haal aat pey: she’s satisfied she’s not
8 dissatisfied key yey key KEYAA key meyrey saath keyaa ho geyaa ai keyaa ho raa ai
9 (.) neyee she’s fine (.) she’s comfortable (4.0) food wise she’s little way behind key wo
10 thora in ki appetite THEEK neyee ai (1.0) us leyhanz sey key wo eyk yaa do slice
11 khaa reyee ain wo neyee ai (1.0) us meyn yey ai key hameyn yey deykhnaa partaa
12 ai key ham ney calories kaisey deyni ain poori ab she has got a sedentary life naan to
13 un ko aap ney aatharaa so calories to deyni hi deyni ain (1.0) eyk slice neyee deynaa
14 un ko phir un ko fluids deyn yaa supplements deyn aap eighteen hundred calories
15 poori jkar deyn (2.0) us kaa best tareeqa hojaai ai chey so (2.0) subaa chey so dopair
16 chey so shaam

(whatever you asked the thing is that once initiated the talk process is much better
her confidence level is also better she previously used to stammer but now she doesn’t
and she’s more fluent now but she has some problems with memory integration and I can
plant memories in her if I want to she can’t resist that and if plant a memory in her she
would think that it’s true she’s still doing this but on the other hand she’s satisfied with
herself she’s not dissatisfied with what’s going on with her food wise she’s little way
behind as her appetite is not good it’s because she’s taking a slice or two we have to see
how to give her full calories that she needs she has got a sedentary life now but still you
have to give her 1800 calories it's best way is to give her 600 in the morning 600 at day
time and 600 in the evening)
17 R: aur doktar saab kaisey deyin
(and how can we do that)
18 D: aan doodh key andar jo supplement add kareyn gey naan aap wo saarhey chaar so
19 tak pohanch janti ai (1.0) saathi wo eyk aadhaar tos khay leyti aih kaam ho jaatia ai (.)
20 set ho jaatia ai
(well when you add a supplement in milk it reaches up to 450 and if she takes a
slice or so with it then it's done)
21 S: doktar saab supplement jo::
(what about the supplement doctor)
22 D: saathi roughage jo hai naan [ ruflage ]
(along with it the roughage)
23 S: [ji ab wo ↓ add karni aiy]
(then it has to be added)
24 D: wo add karni aiy (.) roughage add karni aiy jo hamaaqna pailey kheyal tha key ab a
25 a fiber keyley wo: dey deyin (.) sirf ispaghol ( ) that is not good (.) good enough abhi
26 us mein yey ai kaitey aih ( ) bi deyney chaahieyn us kaa tareeqa yey aii
27 taaqey leyin un ko main ney pailey di ↑thi
(add that add the roughage previously we thought that for fiber intake fleawort
seed was enough that was not good enough now we should add something else and the
best way is to take the fresh ones)
28 S: *%doktar saab mujey yaad neyee**
(I don't remember doctor)
29 D: eyk saashey agar in ko deytay ↑reyn naan ham saarah taaim (.) to in ki bowl
30 movements bilkul NORMAL hong gi (.) or wo jub bandaa evacuation kartaa ai ↑naan
31 to::: full evacuation ki feeling ho to qadra™ to pcy BHOOK lagti aii
(if we keep on giving her one sachet daily her bowl movements will remain
normal and if one feels full evacuation then one' appetite remains ok)
32 R: achaa doktar saab aap memory kaa wo ↓keyaa kai rey they
(ok doctor what were you saying about her memory)
33. D: in kaarey ke cerebral ataxia thaa (1.0) jo beemaari ai (1.0) in ko us meyn yey ai
34 key in ka yey jo BALANCE karney waala (.) jagaai ai naan haraam maghaz meyn
35 idhar cerebellum us meyn:: doosrey attack ney us ko kaafi destroy kiaa (.) pailey
36 sayeey chalit thin (1.0) kothey pey (.) kothey pey chali jaati thin s eerhi key saath
37 (1.0) to ab w:: in ki gait aiseey ai key peecheey sey da da daakaa deyn gey automatic
38 ton ho jaeey gi phir ruk neyee saktin (2.0) is ko kaikey aii cerebral ataxia wo in ko
39 huaa uaa ai wo to reverse neyee ho gaa(1.0) leykin yey ai key jaisey main ney kaa thaa
40 confidence dey:: key baghair sahaarey key yey chal sakti aii tripod key saath ((mobile
41 rings continuously)) (2.0) baghair sahaarey key nay chalaaey (.) wo tripod stick hoti
42 ai un key deyn:: us pey in ko confidence aa jaeey to s**he’ll be all right** inshaalaa
43 (2.0) or aap ney points jo raise kiey they mujey bataaey (.) hello (3.0) ji
44 waalekumsalna::m ((talks on the mobile)) (2.0) ji saaeeymaa kaisaa ai chotaa ((the
45 doctor becomes busy with the patients and the discussion is curtained))

(one of the things that she has suffered from is cerebral ataxia this is caused due
to damage to a place in the vertebural column the second attack caused more damage as
before that she used to walk well and she could go to the roof on stairs but now her gait
is disbalanced and if you push her from behind she will start walking automatically and
won’t stop that cerebral ataxia cannot be reversed but still if you develop confidence in
her she can walk on her own with a tripod after having enough confidence with the tripod
she’ll be all right now tell me more about the points that you raised)
Diary Entry (on: 22.12.11)

Date: 22/12

Time: Evening

Venue: Room

Conversations with Rehman:

Talking about her feet which were reddened due to water.

Talking about Rehman's presentation at RAF's exam.

Use of VB + a word for anything disgusting.

Analysis:

Noted use of English words initially in the wrong pronunciation. In the 2nd attempt, with correct one as a result of self-correction.

Talked on vessel with another vessel, pilot, etc., etc.

Use of colours for indicating good, bad, hot or cold for intensity of goodness or brightness.

Dilapidated