

**Narrative Discourse Characteristics of South African
Afrikaans Speaking Cape Coloureds with aphasia**

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ABSTRACT

The spoken language production of eight Afrikaans speaking Coloured persons with mild to moderate aphasia and eight Afrikaans speaking Coloured persons without aphasia were explored using a narrative discourse analysis procedure. The aim of the study was to investigate the discourse characteristics of the Cape Afrikaans dialect in persons with and without mild to moderate aphasia. Furthermore the study aimed to establish the cultural appropriateness as well as the clinical applicability of the newly developed Discourse Test Battery (Ulatowska et al., 1998) for the Afrikaans speaking Coloured population. In addition the adaptation features as well as the dialectal and discourse ethnic markers features were identified. The narrative Discourse Test Battery devised by Ulatowska et al., (1998) consisting of two composite pictures, a picture sequence story, a story retell and personal experience task was administered to all subjects. For the purpose of investigating the higher cognitive and linguistic processes, the formulation of main ideas, providing the lessons for the stories as well as proverb interpretation tasks were included and analysed. The narrative discourse productions were transcribed and analysed using more stringent reliability measures. Measures of reliability were obtained by calculating inter-rater and intra-rater reliability measures. The data was analysed in terms of the length of narratives, propositional units, quality analysis, analysis of evaluation analysis of dialectal features and ethnic discourse markers as well as adaptation features. The results indicated that for all of these methods of assessment the experimental group performed poorer than the control group. Statistically significant differences were noted on the measures of expressive phonology, lexical items, global structure, suspense, clarity and temporal sequence of some of the narrative tasks. One of the most important clinical as well as theoretical findings was the overlap between some of the dialectal features, general discourse features as well as adaptation features. Analysis of the task effects indicated that the picture sequence and the personal experience narratives showed the greatest differences between the groups and revealed the most information with regard to dialectal features, discourse ethnic markers and adaptation features. The spontaneous proverb and multiple choice proverb interpretation tasks revealed greater difficulties in abstracting and

generalising information for the experimental group than for the control group. The assessment tool was found to be culturally appropriate for the Afrikaans speaking Coloured population of the Western Cape.

Key words: Narrative discourse, aphasia, narrative length, prepositional units, quality analysis, analysis of evaluation, proverbs, aphasic adaptation features, general discourse adaptation features, dialectal features, ethnic discourse markers, narrative tasks effects.

1 INTRODUCTION

The rehabilitation of aphasia is based on an in-depth assessment of the communication disorder in order to establish the specific nature of the impairment¹, disability² and handicap³ (Enderby, 1997). Assessment results also provide the clinician with information for the establishment of treatment goals. The primary goals of health care for clients with long term chronic conditions is to maximize function in everyday life and to achieve the highest level of well-being (Enderby, 1997).

Previously the assessment process was based on the traditional psycholinguistic framework that is characterized by the use of psychometric assessment methods and tools. These language tests are norm based. The individual's performance is measured against that of a population consisting of people of a certain culture and language. Psycholinguistic approaches to assessment of language regard the word or sentence as the basic unit of language and therefore follow a bottom-up approach to assessment. Communication on the other hand consists of more than just words and sentences. It is a dynamic, complex interaction between linguistic, social and cognitive dimensions. An individual's communication system cannot be measured through performance on word and sentence level since communication encompasses more than the sum of its separate components (Werger, Brookshire and Nicholas, 1984). A client's performance on traditional aphasia tests is often used to predict their discourse performance (Armstrong 1991). Armstrong (1991) stated that one cannot use psycholinguistic analysis to predict performance on spontaneous speech performance because the latter is an individual phenomenon. According to Hough (1990), one needs to analyze spontaneous speech from a theory of discourse.

¹ Impairment is defined as any loss or abnormality of psychological, physiological or anatomical structure or function (WHO, 1980)

² Disability is defined as any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being (WHO, 1980)

³ Handicap is defined as a disadvantage for a given individual, resulting in an impairment or a disability, that limits or prevents the fulfillment of a role that is normal (depending on age, gender and social and cultural factors) for that individual (WHO, 1980)

Standardized aphasia tests are very structured in nature. Most of the subtests of these test batteries follow a behaviouristic model of a stimulus-response approach during testing. The client's performance is therefore highly predictive and results in the minimizing of the client's individuality and communicative intent. The client takes on a passive role during testing that is directly in contrast with the definition of communication. Communication is defined as the sharing of needs, experiences, ideas, thoughts and feelings with other persons (Owens, 1992).

Furthermore difficulties with the use of standardized assessment tools are currently being experienced with populations other than those using standard Afrikaans and standard English since these tests are normed on other populations. This is exacerbated in a country such as South Africa with its multilingual and multicultural population. Despite the fact that much research has aimed at devising these tests, many of these are not appropriate for the majority of the South African population (Penn and Beecham, 1992). In addition, these tests have only been translated into standard forms of languages and not into the country's many dialects. Hence these standardized tests penalize the individual for using non-standard versions of Afrikaans. These tests do not acknowledge the use of the dialectal features⁴ or the discourse ethnic markers⁵ of the respective dialects and therefore are not able to correctly assess the individual's exact degree of disability and handicap caused by the brain damage. This leads to faulty diagnosis of the nature and degree of severity of the communication impairment, i.e. aphasia. The use of commercially imported aphasia⁶ assessment instruments in South Africa therefore causes assessment procedures to be culturally biased and are therefore unethical (Wallace, 1998). According to Penn (in Holland and Forbes, 1993), no language test is culture free since language and culture are inseparable. People live in social groups and share common behavioural patterns. These behavioural patterns consist of interactions between the people and their environment. The interaction is established mainly through communication. The

⁴ Dialectal features refers to the grammatical characteristics of the dialect

⁵ Discourse ethnic markers refers to stylistic characteristics of the dialect including code switching and mixing and evaluative elements

⁶ Aphasia is defined as an acquired impairment in language and the cognitive processes that underlie language. Aphasia is caused by organic damage to the brain and is characterized by the reduction in and dysfunction of language content, language form and language use and the cognitive processes that underlie language (Chapey, 1994)

medium of the communication process is language. Language forms the foundation for the development of all behaviour patterns defined as culture (Uys, 1993). Culture therefore refers to the sum total of socially inherited characteristics (Screen and Anderson, 1994). Culture is learned through the medium of language, since it is the primary method of communication by which the members of a culture can express their fundamental thoughts, principles and attitudes. The relationship between language and culture is therefore reciprocal in nature.

The study of the relationship between culture and language includes the concept of a speech society. The latter refers to a group of individuals who learn, share and use a set of linguistic codes reflecting their specific culture (Taylor and Clarke, 1994). However the successful use of the linguistic code is dependent on communicative competence. Communicative competence may be defined as the ability of a speaker to communicate successfully within a speech community (Saville-Troike, 1989; in Taylor and Clarke, 1994). This ability includes both linguistic and sociolinguistic rules as well as cultural rules and knowledge that form the basis of the context and content of communication and interactive processes. Assessment instruments must, therefore, be culturally sensitive in order to establish the individual's ability to function in his/her community and thus the extent of the resulting handicap.

The improvement of communicative effectiveness has always been the primary objective in Speech-Language Pathology intervention. Intervention strategies have been continually refined and revised by the changing theoretical views of language over several decades. During the late 1970's and 1980's the rehabilitation of aphasia moved from the traditional structured intervention methods to a more social approach. According to the WHO (World Health Organisation), it is imperative to distinguish between impairment and disability as well as to determine the nature and extent of the resulting handicap or communicative ability. Communication reflects the complex interrelationships between three types of knowledge necessary for appropriate communication in context, namely: knowledge of language and its structure, knowledge of the world and social knowledge (Penn in Holland and Forbes, 1993). These three types of knowledge are closely connected in the "open system" of

dynamic and inseparable parts, which influence each other and the system as a whole. Communicative competence (also referred to as pragmatic competence) is reflected in the individual's discourse behaviour since it addresses all aspects of language (Ulatowska, North and Macaluso-Hayes, 1981).

One way to compensate for the shortcomings of the standardized assessment instruments is the inclusion of discourse analysis in the assessment battery. Discourse analysis provides the clinician with a qualitative description of an aspect of the client's language use. Discourse analysis also lends itself to criterion referenced testing. Performance can be measured against the communicative behaviour of the respective culture in order to determine the extent of the handicap since handicap is a social phenomenon (Bickenbach, Chatterji, Badley and Üstün, 1999).

Discourse analysis includes both microlinguistic and macrolinguistic aspects of language use, following a top down approach to assessment. This allows for assessment of both intrasentential (microlinguistic) and suprasentential (macrolinguistic) discourse abilities. Microlinguistic functions refer to language-specific procedures for processing phonological and syntactic aspects of single words and sentences. These procedures are specialized for processing linguistic units in a relatively decontextualized manner (Glosser and Deser, 1990). The traditional standardized language tests assess microlinguistic functions. Macrolinguistic functions involve cognitive procedures for integrating linguistic and nonlinguistic knowledge for the purposes of maintaining the conceptual, semantic and pragmatic organization of discourse (Glosser, 1993). Two prominent aspects of macrolinguistic functions in discourse are coherence and cohesion. Coherence refers to the well-formedness of discourse in terms of plausibility, conventionality and the conclusiveness of the text. Coherence can be defined on both global and local level. Global coherence refers to the manner in which discourse is organized with respect to an overall goal, plan, theme or topic. Local coherence refers to the conceptual links between individual sentences, which maintain meaning in a text or discourse. Cohesion is another aspect of macrolinguistic function that refers to specific relations of meaning between elements within discourse (Glosser and Deser, 1990). While the effect of coherence is sustained by an overall thematic unity, it is expressed

reference and anaphora. Cohesion does not encompass as broad a scope of suprasentential meaning relations as coherence, but it appears to capture intersentential meaning relations beyond the microlinguistic level. Cohesion does not encompass as broad a scope of suprasentential meaning relations as coherence, but it appears to capture intersentential meaning relations as coherence (Glosser and Deser, 1990). Macrolinguistic functions are therefore equally, if not more, important to successful functional communication.

Discourse analysis has proven very valuable in the assessment of aphasia. It provides information regarding the manner in which a person gets meaning across to his/her listener. Hough (1990) stated that this type of analysis can be used on all aphasics because one word also constitutes a discourse. Discourse analysis therefore also focuses on the client's strengths, which should form the foundation for treatment. Several authors (Ulatowska et al., 1998; Nicholas and Brookshire, 1995; Chapman and Ulatowska, 1992; Glosser and Deser, 1990; Ulatowska, Freedman-Stern, Weiss Doyel, and Macaluso-Hayes, 1983; Bush et al. 1988) have documented that certain discourse skills are preserved in clients with mild to moderate aphasia. Mild to moderate aphasics differed in the complexity of their language, which was reduced compared to normal control subjects. The aphasics did, however, produce the main elements of the narratives with preserved coherence. The aphasic subjects therefore presented mainly with quantitative differences in discourse performance in comparison to normal control subjects. These findings make it imperative to assess and treat discourse performance in mild to moderate aphasics since they are most likely to return to their professions and perform their pre-morbid social roles.

Narrative discourse is a natural mode of thought. Narrative thought is a way of organizing the world. Through telling stories, humans build their experience of living (Westby, Van Dongen and Maggart, 1989). The representation of events in narrative discourse allows experience to become internalized and comprehended. Hence narratives assist clinicians to comprehend some cognitive and language aspects essential to a person's communicative competence. Narrative discourse analysis facilitates a broad description of an individual's language use and encompass the interaction of sentence formulation, use of linguistic devices to conjoin meanings

interaction of sentence formulation, use of linguistic devices to conjoin meanings across sentences, and the general organization of content (Disegna Merrit and Liles, 1989). The effects of stimulus characteristics and elicitation conditions on narrative discourse performance in adults with aphasia have been investigated (Doyle, McNiel, Spencer, Goda, Cottrel and Lustig, 1998; Ulatowska et al., 1998; Ulatowska et al., 1983 and Ulatowka et al., 1981). These studies have indicated that many variables are a function of the characteristics of the elicitation stimuli and the cognitive and linguistic demands of the task. The assessment of narrative discourse must be conducted using multiple tasks to determine the level of performance.

In South Africa, apart from acknowledging the merits of discourse assessment, to date no research has been conducted to investigate the discourse characteristics of the various dialects spoken by communities such as those situated in the Western Cape. Ethnographic research conducted between 1963 and 1991 confirmed that the working-class Afrikaans speaking Cape Peninsula Coloured community speak a distinctive dialect (Ponelis, 1996; Stone, in Mesthrie, 1995). This dialect is a marker of the community's identity. This is also reflected in endogamy, ties of descent, kinship, preferential voluntary association and shared residential areas. The members of this community have tended, throughout this period of research, to identify themselves informally as "bryn" ('brown'); the formal English translation, 'coloured', has different connotations, although the denotation is identical.

The Afrikaans dialect spoken by the members of the Cape Coloured population on the Cape Flats in the Cape Peninsula is formally known as Cape Afrikaans. According to McCormick (in Mesthrie, 1995) Cape Afrikaans is a dialect that evolved from Cape Dutch/Afrikaans and English with some influence from Portuguese, Malay and other languages spoken by the slaves in the Cape during the seventeenth century. The Cape Dutch vernacular evolved as a lingua franca amongst the Dutch settlers, slaves and their descendents. This vernacular later developed into Cape Afrikaans as it is known today. The Cape Afrikaans dialect is combination of standard Afrikaans, Cape Dutch and English.

Cape Afrikaans (CA) is marked by both situational and conversational code-switching between Afrikaans and English. Situational code-switching refers to language or dialect alternation that is governed by change of topic, participants or situation. Conversational code-switching refers to alternation that occurs within a single conversation, often within a single sentence, even when topic, participants and situation remain constant. Cape Afrikaans and code-switching constitutes the norm in informal discourse in the Afrikaans speaking Coloured population in the Cape Peninsula. The use of either standard Afrikaans (SA) or standard English is viewed as a deliberate choice that signals distance according to the Cape Afrikaans culture (McCormick, in Burman and Reynolds, 1986).

Cape Afrikaans is marked with lexical and syntactical convergence between the two languages (McCormick, in Mesthrie, 1995). The lexicon of Cape Afrikaans shows extensive evidence of lexical convergence in the form of English loan words. The most striking feature of non-standard Afrikaans distinguishing it from standard Afrikaans is the violation of verb placement rules (McCormick, in Mesthrie, 1995).

The marked changes in inter-dialectal and intra-dialectal codes have been caused by various factors. The imposition of the Group Areas Act and the establishment of townships on the Cape Flats; rapid growth of population and the national economy; upward mobility; introduction of television; and the decline of white domination since 1976 (Stone; in Mesthrie, 1995) were amongst the most influential factors. There has been an increasing shift to bilingualism or dominance of middle-class English and, to a far lesser extent, middle-class Afrikaans.

To the best of the writer's knowledge, no previous research has been undertaken to investigate the nature of discourse performance in the Coloured Afrikaans speaking persons with aphasia in South Africa. According to the Central Statistical Services (1980), cerebrovascular accidents (CVA) accounted for 289/100 000 deaths in coloured patients between the ages of 35 and 74 (Fritz, 1997). In addition the National Census of 1996, indicated that the Coloured population in the Western Cape constitutes 54% of the province's 3.9 million people (Census, 1996). According to the World Health Report (1998), morbidity and mortality due to cerebrovascular accident

diseases occur mainly in the geriatric population. Hence these statistics have important implications on the Speech Therapy Profession, since the increase in the geriatric population implies an increased demand for the rehabilitation of aphasia in the Coloured community.

The rationale for conducting research investigating various microlinguistic and macrolinguistic skills of specific speakers of Cape Afrikaans with aphasia and normal controls is clear. Firstly cross-linguistic studies in adult aphasia (Bastiaanse, Edwards and Kiss, 1996; Edwards and Knott, 1994 and Kolk, Heling and Keyser, 1990) have indicated crosslinguistic differences in the frequency of certain grammatical forms. Cross-linguistic comparisons are problematic because of the typological differences of the languages. For this reason one cannot assume that the findings of studies in aphasia in a particular language pertain to aphasia in different languages. The mere fact that Cape Afrikaans shares some of the grammatical characteristics of standard Afrikaans and standard English does not necessarily allow for the direct application of findings of studies of aphasic features in the latter languages. Cross-linguistic research is, however, necessary to determine the overlap of certain features in fluent aphasics from different languages.

Secondly the need for the global assessment of communicative competence and performance as well as the need to develop non-threatening, fast and appropriate tools within the South African Afrikaans speaking Coloured population is clearly needed. The development of these assessment tools is imperative for quality service delivery to the Coloured population. Speech-language pathologists need to become more conscious of social, ethical and clinical responsibility to account for the value and benefits of assessment (Enderby, 1997). The need for culturally appropriate assessment tools for aphasia has been acknowledged previously elsewhere by various researchers. More recently Ulatowska et al. (1998) developed and employed a discourse test battery in the African American population in order to assess its cultural appropriacy. It was found that this test battery was culturally appropriate for the African-American population, because it elicited rich language that manifested ethnic features of discourse and a variety of linguistic styles. In addition, the battery proved to be effective and efficient for the assessment of aphasia in this population. The

African-Americans was significant to the clinical diagnosis in that some features of the Black vernacular could be misinterpreted as pathological features of agrammatism.

From the above discussion it is clear that there is a dire need for culturally sensitive assessment tools to examine the discourse behaviour of speakers of Cape Afrikaans with aphasia. Hence the aim of this study is to investigate the discourse performance of speakers of Cape Afrikaans with mild to moderate aphasia and speakers of Cape Afrikaans without aphasia on a variety of narrative tasks. Furthermore the study also aims to establish the cultural appropriateness of the newly developed Discourse Test Battery (Ulatowska et al., 1998) for the Afrikaans speaking Coloured population in South Africa.

Numerous theoretical and clinical implications may emerge from this study. Theoretically, more reliable findings provide knowledge about the narrative discourse production of Afrikaans speaking Coloured persons with and without aphasia. In addition, this study examines how deficits in narrative discourse may be reliably assessed and measured. Finally it provides information regarding task effects on narrative discourse production.

Hopefully this study may provide clinical information regarding the use of the Discourse Test Battery (Ulatowska et al., 1998) for the comprehensive and client orientated assessment of narrative discourse performance in Afrikaans speaking Coloured persons with and without aphasia. In addition, it may indicate ways of obtaining and analyzing narrative discourse samples using reliable measures. These assessment results will provide a useful guide to more functional, economical and ethical therapy since the assessment is holistic and culturally appropriate in nature.

2 METHODOLOGY

This chapter presents the aims, methodological design, subject selection criteria and description of subjects used in this study. In addition the diagnostic test batteries, methods of data collection, methods of analysis, statistical procedure and measures of reliability are described.

2.1 AIMS

Primary aim:

- To investigate and document the discourse performance of Afrikaans speaking Coloured aphasic subjects and Afrikaans speaking Coloured control subjects on a test battery of discourse tasks and analysis methods devised by Ulatowska et al.(1998).

Secondary aims:

- To determine whether Afrikaans speaking Coloured persons with mild to moderate aphasia and Afrikaans speaking Coloured controls with no neurological impairments differ across the discourse tasks according to the quantity and quality of information.
- To determine the dialectal features and discourse ethnic markers of the Cape Afrikaans dialect in aphasic subjects and normal control individuals.
- To examine the performance on the interpretation of proverbs by Afrikaans speaking Coloured aphasic and control subjects.
- To determine the appropriateness of the test battery for the assessment of Afrikaans speaking Coloured aphasic and normal control subjects.

2.2 RESEARCH DESIGN

This research attempted to provide a qualitative description of the individuals' profiles of discourse performance rather than diagnosing the particular subtype of aphasia. Hence the qualitative, descriptive multiple case research design was the most

appropriate method of research with the aphasic population, considering the heterogeneity of this population group and the danger of overlooking individual variations in group studies.

Although the focus of the study was on a qualitative analysis looking at individual differences and similarities within and across the experimental and control groups, statistical procedures employing non-parametrical procedures were undertaken. The statistical procedures were employed in order to allow the researcher to determine the existence of patterns.

The study was exploratory in nature due to the lack of previous research in this specific population. Hopefully the findings of this study will encourage future research to confirm and expand knowledge in the field of Afrikaans speaking Coloured persons with mild to moderate aphasia.

2.3 SUBJECTS

2.3.1 Sample size

Eight adults with aphasia were assessed in this study. A small sample size was assessed due to the in-depth nature of the analysis and investigation. The two groups could be compared statistically despite the small sample size, due to the large number of dependent variables on which they were compared.

Eight adults with no history of neurological or psychiatric disorders were also included as the controls in this study. These subjects were matched for age, gender, language, education and occupation. The inclusion of these normal controls permitted validation of the assessment tasks and the results obtained.

2.3.2 Subject Selection Criteria

The following criteria were applied in the process of subject selection:

- Subjects were required to have suffered from a cerebrovascular accident (CVA) resulting in an infarct in the left hemisphere. Left hemisphere lesions results in specific linguistic deficits, which differ from language impairments associated with other neurological conditions (Chapey, 1994).
- Aphasia resulting from the CVA had to be three months post onset. Research has indicated that chronic brain changes are usually complete by the third month post CVA (Weisberg, Nice and Katz, 1984). Testing completed prior to the completion of the three-month period will therefore not give a true reflection of the influence of the infarct on the subject's discourse behaviour.
- Degree of severity: Subjects were required to have aphasia of a mild to moderate degree as measured on the Western Aphasia Battery (Kertesz, 1982). Research has indicated that subjects with mild to moderate aphasia present with some preserved basic discourse skills (Nicholas and Brookshire, 1995; Hough, 1990; Ulatowska et al., 1981; Berko-Gleason, Goodglass, Obler, Green, Hyde and Weintraub, 1980). This population is therefore suitable for discourse intervention due to their residue communicative competence.
- Handedness: Subjects were required to be right hand dominant. Right handers have verbal abilities in the contra lateral left hemisphere, whereas left handers tend to display a pattern of cerebral organization that is either the same as the right-handed pattern or less well defined (Sheehan and Smith, 1986; Shaw, 1982).
- Subjects were required to be members of the Cape Coloured Community since the study aims at describing the discourse behaviour of the Cape Coloured dialect. The study of the relationship between culture and language must include the concept of speech community. Speech community is defined as a collection of individuals who learn, share, and utilise a particular set of linguistic codes that represent the universe of meanings characteristic of that culture (Hymes, 1966; in Taylor and Clarke, 1994). Discourse styles are therefore unique to each culture.

- Subjects were required to be South African Cape Coloureds with Afrikaans as their first language. This will be confirmed by the administration of an adapted version of the Paradis Bilingualism Questionnaire (1987). The study aims to examine the Afrikaans Coloured dialect as spoken by first language speakers of the dialect, not bilingualism.

- Age: Subjects were required to be between the ages of 21 and 69 years of age since the study aims to examine adult discourse behaviour. Research indicated a decline in some cognitive processes from the age of 70 years (Shadden, 1997). Since the latter could influence discourse behaviour 69 years will be the maximum age permitted.

- Subjects were required to have Grade 7 as their minimal level of academic qualification due to the linguistic and cognitive demands of the assessment tasks.

2.3.3 Subject description

Prior to administration of the test battery, an initial interview was conducted with each subject, in which information pertaining to the subject selection criteria was obtained. Information regarding personal details, literacy, educational, vocational and medical history as outlined in the American Speech-Language and Hearing Association – Functional Assessment of Communication Skills for Adults (ASHA-FACS) (Frattali, Thomson, Holland, Wohl and Ferketic, 1995) was obtained. The presence of mild to moderate aphasia was confirmed by the administration of the Afrikaans version of the Western Aphasia Battery (WAB) (Kertez, 1982). In addition to this, information regarding language history was obtained by the administration of an adapted version of the Paradis Bilingualism Questionnaire (Paradis, 1987). See Appendix 1.

All the experimental subjects met the selection criteria. All biographical and clinical information is revealed in Table 2.1, 2.2, 2.3 and 2.4 below.

Table 2.1 Aphasic Subject Description

Subject	Age	Gender	Education	Vocation	Aphasia Quotient (AQ)	Time post onset
S1	63	Male	Gr 9	Machine operator/driver	56.5	3 years
S2	63	Male	Gr 10	General assistant in SANDF	55.9	3 years
S3	64	Male	Gr 7	Maintenance worker	54	4 months
S4	30	Female	Gr 8	Seamstress	50.6	2.6 years
S5	66	Female	Gr 8	House wife	54.5	2 years
S6	57	Female	Gr 10	Typist	53.8	4 years
S7	69	Male	Gr 12	General assistant	49.6	7 years
S8	43	Male	Gr 11	Barman	56.4	2 years

As can be seen from Table 2.1 above, six of the subjects covered an age range of 50 to 69 years. One subject was in her thirties and one in his forties. This range is representative of the age group with the highest incidence of cerebro-vascular accidents as mentioned in chapter one. The subject group consisted of 5 males and 3 females. The ratio of men to women is also representative of CVA statistics. The lowest education was that of subject 3 who had completed Gr 7. Most of subjects' level of formal education varied between Gr 8 and Gr 10. Subject 7 was the only subject who completed Gr12.

Table 2.2 Control Subject Description

Subject	Age	Gender	Education	Vocation
C1	63	Male	Gr 8	Shop assistant
C2	63	Male	Gr 10	General assistant
C3	64	Male	Gr 8	Storage worker
C4	30	Female	Gr 10	Nurse aid
C5	66	Female	Gr 8	Factory worker
C6	57	Female	Gr 9	Waitress
C7	69	Male	Gr 12	Teacher
C8	43	Male	Gr 11	Clerk

As can be seen from Table 2.2 above all control subjects were matched with experimental subjects according to age, gender and vocation.

Both subject groups' language history was assessed using the adapted version of the Paradis Bilingualism Questionnaire (1987) to investigate the nature of their exposure to English and Afrikaans Table 2.3 and 2.4 provides an outline of the above for the two subject groups.

Table 2.3 Experimental Subject Language History

Subject	First Language	Exposure to second Language	Nature of Primary Exposure	Nature of Secondary Exposure
S1	Afrikaans	English in home during childhood	English as second language spoken by parents	School friends English instruction at school
S2	Afrikaans	English in home during childhood	English as second language spoken by parents	English instruction at school Work environment
S3	Afrikaans	English in home during childhood	Spoken by father as first language and mother and aunt as second language	Bilingual school English instruction at school
S4	Afrikaans	English in home during childhood	English as second language spoken by parents	English instruction at school Work environment
S5	Afrikaans	English in home during childhood	Mother English first language, spoke English to mother	English speaking friends English instruction at school
S6	Afrikaans	English in home during childhood	Mother spoke English and father Afrikaans	English speaking friends English instruction at school
S7	Afrikaans	English in home during childhood	Mother spoke English at home	English instruction at school Work environment
S8	Afrikaans	School going years	English instruction at school	Work environment

Key: S – Experimental subject

As can be seen in Table 2.3, seven of the eight subjects were exposed to English in their home environment from early childhood. Two sub-types of this type of primary exposure were identified. Subjects 3, 5 and 6 had one parent who spoke only English while the other parent spoke Afrikaans. On the other hand Subjects' 1, 2, 4 and 7 parents or caretakers spoke Afrikaans and English as a second language at home. Subject 8 was only exposed to English at school in the form of formal instruction. The experimental subjects' secondary exposure to English shows less variation than their primary exposure patterns. Subjects 1, 3, 5, 6 and 7 were exposed to the English spoken by English speaking learners at the bilingual school they attended. These subjects' secondary exposure to English comprised of the latter together with formal English instruction at school. Subjects' 2, 4 and 8 secondary exposure to English was in the form of formal instruction. All the subjects were exposed to English at work.

Table 2.4 Control Subject Language History

Control	First Language	Exposure to Second Language	Nature of Primary Exposure	Nature of Secondary Exposure
C1	Afrikaans	English in home during childhood	Mother spoke English as second language at home	English instruction at school
C2	Afrikaans	School going age	English instruction at school	Work environment
C3	Afrikaans	English in home during childhood	Parents and grandmother spoke English as second language at home	Work environment
C4	Afrikaans	English in home during childhood	Parents and grandmother spoke English as second language at home	English instruction at school
C5	Afrikaans	School going age	Most learners at school spoke English as first language	Work environment
C6	Afrikaans	School going age	English instruction at school	Work environment
C7	Afrikaans	English in home during childhood	English spoken by parents as second language at home	Attended English school from age 14
C8	Afrikaans	English in home during childhood	English spoken by parents as second language at home	English instruction at school

Key: C – Control Subject

As can be seen in Table 2.4 above, the control subjects' exposure to English was also marked with variation. Control subjects, 1, 3 and 4 were exposed to English at home where their parents and care takers spoke Afrikaans, as well as English as their second language. Control Subjects 2, 5 and 6 were only exposed to English during their school going years in the form of formal English instruction. Control Subjects' 1, 3 and 4 secondary exposure to English was in the form of formal English instruction at school. Control Subjects' 2, 5, 6 and 8 secondary exposure comprised of English spoken in their work environments.

2.3.4 Subject Consent

Written consent with regard to the subject's participation in the study was obtained prior to data collection. The purpose of the research and the procedures to be used were fully explained to the subjects prior to them giving consent. The subjects were

ensured of the confidentiality of all personal and identifying information. See Appendix 2 and 3 for examples of the consent letter.

2.4 RESEARCH INSTRUMENTATION

2.4.1 Description of tests

The Pre-assessment battery and discourse battery were administered on all subjects to confirm the subjects' first language and to determine the presence of aphasia in the experimental group. The assessment tools employed to obtain this information are outlined in Table 2.5 below.

2.4.1.1 Pre-assessment battery

The pre-assessment battery was administered prior to testing in order to determine the suitability of the potential subjects. Table 2.5 provides an outline of the contents and purpose of the pre-assessment battery.

Table 2.5 Pre-assessment battery

TEST	PURPOSE
Paradis Bilingualism Questionnaire (adapted version) (Paradis, 1987)	To determine and confirm the subjects' first language
Afrikaans version of the Western Aphasia Battery (Kertesz, 1982)	To determine and confirm the presence of mild to moderate aphasia in the experimental group

2.4.1.2 Discourse battery

The discourse battery consisted of two single picture descriptions, a picture sequence description, a fable retelling, a description of a frightening experience and production of spontaneous proverbs and multiple choice proverbs. Table 2.6 provides a description of the tasks and stimuli to be used. These stimuli have recently been employed elsewhere (Ulatowska et al., 1998) within different cultures and were found to be culturally unbiased.

This study aimed to investigate the clinical utility of this battery of stimuli in the adult Afrikaans Coloured population for five different narratives of which three are elicited with pictorial stimuli, one with written stimuli, and one given a probe for a spontaneous personal story. In addition, proverb interpretations were elicited.

Table 2.6 Discourse Test Battery (Ulatowska et al., 1998)

Test Stimuli	Description	Tasks
Two single pictures: Easter Morning Counting money	A Norman Rockwell picture of a family With the mother and children going to church and the father staying home A Henry Roseland picture of an elderly African-American couple counting money at a kitchen table	Story Generation Main idea
Picture Sequence: Boys and apples	Two boys trying to steal apples from somebody's yard	Story Generation Main idea Lesson
Fable: Farmer and Sons	A Farmer dies leaving his vineyard to his Sons	Retell Main idea Lesson
Personal Narrative: Frightening Experience	A Self-generated memorable experience	Story Generation
Proverbs	Five proverbs familiar to speakers of Cape Afrikaans	Spontaneous Interpretation Multiple choice

The battery was used to elicit samples of discourse across various tasks. These tasks included story generation, story retelling, summarizing of the story, formulation of the main idea (gist) and the lesson of the story, elicitation of spontaneous proverb as well as multiple choice proverb interpretation. Each of these tasks required different

cognitive and language skills. Table 2.7 provides an outline of the task type and the skills it requires.

Table 2.7 Skills required for each discourse task (adopted from Ulatowska et al., 1998)

TASK TYPE	REQUIRED SKILLS	
STORY	LANGUAGE	COGNITION
Self-generated story	Joining of sentences	Narrative imaging and employment
Retell	Joining of sentences	Working memory and attention
Summary	More complex language helpful	Reduction of information and generalisation
Gist	Abstract lexicon helpful	Generalisation
Lesson	Abstract lexicon helpful	Generalisation
PROVERB	LANGUAGE	COGNITION
Interpretation	Metaphoric language helpful	Generalisation

2.4.1 Pilot study

A pilot investigation was conducted using one subject with no known history of neurological or psychiatric disorder. A qualified English-Afrikaans translator translated the relevant instructions and subtests into Afrikaans. The full battery was administered on the subject. The purpose of the pilot investigation was:

- to determine the suitability of the test material for the Afrikaans Coloured population and
- to refine methodological or procedural aspects

Following the pilot investigation modifications were made to the Test. The pilot study revealed that the translated proverbs were not commonly used in the Afrikaans Coloured community. Hence in order to determine which proverbs were most common, the following 15 proverbs (including the translated proverbs) were given to 38 Afrikaans speaking Coloured people who matched the age and educational selection criteria. The five translated proverbs have been indicated in italic print in Table 2.8. The participants were requested to mark the five most common proverbs on the list. All the participants were 100% familiar with these five proverbs.

Table 2.8 Questionnaire used to determine common proverbs in the Afrikaans Coloured Community

Merk die vyf spreekwoorde wat die bekendste aan u is
(Mark the five proverbs that are most familiar to you)

1. Waar bloed nie loop nie, daar kruip dit. (Blood is thicker than water)	
2. <i>Elke huis het sy kruis.</i> (No house but has its cross)	
3. Elke kraai dink sy eier is die witste. (The crow thinks her bird the fairest)	
4. <i>Wat jy saai sal jy maai.</i> (You reap what you sow)	
5. Waar daar 'n wil is, is daar 'n weg. (Where there is a will there is a way)	
6. Agteros kom ook in die kraal. (Slow and sure wins the race)	
7. <i>As die kat weg is, is die muis baas.</i> (If the cat is away the mouse will play)	
8. Baie hande maak ligte werk. (Many hands make light work)	
9. Gedane sake het geen keer nie. (No use crying over spilt milk)	
10. Moenie iemand op sy baadjie takseer nie. (Do not judge a book by its cover)	
11. <i>Die koeël is deur die kerk.</i> (It is over and done with)	
12. Hy het altyd 'n eiertjie om te lê. (He is continually chipping in - no equivalent English proverb)	
13. Moenie die bobbejaan agter die berg gaan haal nie. (Do not cross a bridge before you come to it)	
14. Hoe later hoe kwater. (The longer it lasts the worst it becomes - no equivalent English proverb)	
15. <i>Bloed is dikker as water.</i> (Blood is thicker than water)	

The following proverbs were selected as the five most common proverbs:

- Elke huis het sy kruis (Every house has its own cross - direct translation).
- Wat jy saai sal jy maai (You reap what you sow – directly translated proverb).
- As die kat weg is, is die muis baas (If the cat is away the mouse will play – directly translated proverb).
- Bloed is dikker as water (Blood is thicker than water – directly translated proverb).
- Die koeël is deur die kerk (The bullet has been through the church – direct translation).

Proverbs 2 and 3 selected for the five proverbs used in this study were direct translations of two of the proverbs in the original English Test Battery (Ulatowska et al., 1998). Interestingly, the fourth proverb was identified as being more common as a

direct translation rather than the pure Afrikaans translation, which was proverb number 1 in Table 2.8.

2.5 DATA COLLECTION

2.5.1 Data collection procedure

The researcher administered all the tests. All testing conducted in this research was videotaped and later scored and analysed. The instructions, administration and scoring procedures of the standardised tests as well as the experimental test battery were undertaken according to the manner prescribed in the respective test manuals.

2.5.1.1 Setting

All subjects were tested individually. Only the examiner and the subject were present in the room during the test procedure. Testing was conducted in a quiet room. The examiner and the subject were seated at a table. The chairs had no arm rests as to avoid restriction of hand and arm movements. Sufficient lighting was provided to ensure that the stimuli were clearly visible.

2.5.1.1 Equipment

Sessions were videotaped using a Panasonic NV – M10B AF video camera recorder. The camera was set up on a tripod to enable the examiner to freely interact with the subject.

2.6 TREATMENT OF DATA

The videotaped data was subsequently scored and analysed as follows:

2.6.1 Transcription

Orthographic transcription of the videotaped sessions was undertaken by the researcher according to the prescribed procedures provided by the test battery. Unintelligible utterances and false starts were marked in the transcript but were excluded from analysis.

Unintelligible utterances and false starts were marked in the transcript but were excluded from analysis.

2.6.2 Analysis of results

The analysis included an examination of propositions, length of narrative, rating scales, evaluations, analysis of adaptation and compensation, and dialectal features.

2.6.2.1 Propositional Analysis and Length of Narrative

A proposition is defined as an informational unit that contains a verb and an argument (Ulatowska, 1998; Halliday and Hassan, 1976). Propositions were identified and counted in all discourse samples. Repetitions, fillers and corrections were not included as propositions. The length of each narrative was determined by counting each word within the narrative. Repetitions, fillers and corrections were not counted in the word count.

2.6.2.2 Rating Scales

The Discourse Test Battery (Ulatowska et al., 1998) provided rating scales for the quality of the narrative and the fable, the main idea and the spontaneous proverbs. The rating scales are outlined in Table 2.9 below.

Table 2.9 Rating Scale for Quality of Narratives and Fable (Ulatowska et al., 1998)

RATING SCALE FOR QUALITY OF NARRATIVE AND FABLE		
Task	Measurement	Score
Global structure (narrative)	Evaluates presence of setting, complicating action, resolution and coda	0 – 4 points
Completeness (fable)	Completeness of critical story elements	
Temporal sequence	Evaluates chronology on events in the narrative	0 – 3 points
Reference	Evaluates occurrence of reference errors	0 – 3 points
Suspense (narrative)	Evaluates presence of suspense	0 – 3 points
Accuracy (fable)	Evaluates correctness of information	
Coherence	Evaluates continuity of ideas	0 – 3 points
Clarity	Evaluates clarity of language	0 – 2 points
Maximum Score		18 points

2.6.2.2.1 Rating Scale for Quality of Narrative and Fable

The narrative and the fable were analysed using a number of different criteria. The aspects that were investigated include the coherence, cohesion, reference, temporal sequence, global structure, information units and inferencing of each discourse sample. For the purpose of this study suspense was rated for all the narratives in order to determine any difference in performance across the narrative tasks. Previous research using the Discourse Test Battery (Ulatowska et al., 1998) investigated the use of suspense only for the Frightening Experience narrative. The subjects' performance was rated along a point system according to their quality and use of these different aspects of discourse. Table 2.9 provides an outline of the rating scale.

The rating of reference using the rating scale by Ulatowska et al. (1998) was supplemented by an additional analysis of referencing. The use of reference within the narrative was determined by evaluating the occurrence of reference elements. The number of specific referents and pronominal referents were counted. Additionally the ratio of the number of specific referents to the number of pronominal referents for

each respective narrative was calculated. The latter provided information regarding the amount of pronominal referents used for each specific referent.

2.6.2.2.2 Rating of Main Idea

The main ideas of the discourse samples were provided in sentence form, a few words or a short retell of the story. The responses were rated along a number of dimensions. These responses were then evaluated according to their appropriateness and concreteness (Ulatowska et al., 1998).

2.6.2.2.3 Rating of Lesson

These responses were expected to provide a moral lesson that could be deduced from the story or contained an evaluative statement about the characters or the setting. These responses were evaluated according to their appropriateness and generalisation. The responses were also classified as partial if the information was abbreviated or ambiguous so that their intended meaning could not be obtained (Ulatowska et al., 1998).

2.6.2.3 Spontaneous Proverb Rating Scale

In accordance to the prescribed guidelines of the test battery (Ulatowska et al., 1998), the modified rating scale from Delis, Kramer and Kaplan (1984) and Chapman, Ulatowska, Franklin, Shobe, Thomson and McIntire (1997) was used to rate the subjects' performance on proverb interpretation. Table 2.10 below provides an outline of the scale.

Table 2.10 Spontaneous Proverb Rating Scale (Ulatowska et al., 1998)

SPONTANEOUS PROVERB RATING SCALE	
TYPE OF RESPONSE	POINTS
Correct complete abstract response	6 points
Correct partial abstract response	5 points
Response with abstract component	4 points
Correct with concrete responses	3 points
Correct partial concrete responses	2 points
Incomplete responses with a concrete component	1 point
Incorrect abstract component	0 point
Incorrect concrete responses	0 point

2.6.2.4 Analysis of Evaluation

The use of evaluative elements in the Cape Coloured vernacular has been reported by McCormick (1989) and can therefore be considered as a discourse ethnic marker of Cape Afrikaans. The purpose of the narrative is to provide the listener with information as well as to convey the meaning of the events to the narrator or something about the narrator him/herself (Peterson and McCabe, 1983). Peterson and McCabe (1983) describe this as the evaluation of the narrative or 'why the narrative was told' (p.29). Labov (1977) stated that evaluation is one of the very important narrative discourse markers. Evaluative devices are employed to make the complicating actions and resolution more real and vivid. In addition to the tasks of the Discourse Test Battery (Ulatowska et al., 1998) a more in-depth examination of the subject's use of evaluative elements in the form of intensifiers was undertaken. The method of analysis of evaluation was adopted from Labov (1977). This study focused on the intensifier category and its subtypes and not on comparators, correlatives and explicatives. An intensifier selects one of the events of the narrative and strengthens or intensifies it without disrupting the linear series of events (Labov, 1977). The study focussed on the category of intensifiers as firstly, previous research using the Discourse Test Battery (Ulatowka et al., 1998) indicated that subjects used intensifying elements more than the other types of evaluative elements. Secondly, there appeared to be a close relationship between the intensifiers and discourse ethnic

markers. The number of intensifiers in each subtype were calculated and expressed as a percentage of the total number of intensifiers used by each subject. This was undertaken for each narrative task. A total of all the intensifying elements across all the tasks was also calculated. The total number of intensifying elements was calculated in relation to the total number of words. This was expressed as a percentage. See Table 2.11 below for an outline of the intensifier category and its subtypes that were utilised in the analysis of evaluation.

Table 2.11 Analysis of Evaluation (adopted from Labov, 1977)

Category of evaluative element	Subtype	Definition
Intensifiers	Gestures	Gesture used with a specific content word as well as a deictic 'this' and 'that'.
	Expressive phonology	Expressive phonology is superimposed upon other words of the clause. The most common is the lengthening of vowels
	Quantifiers	Quantifiers are used to change the degree of magnitude of certain operations to describe and intensify its significance
	Repetitions	Repetitions intensify actions or suspend the action.
	Ritual utterances	Ritual utterances are utterances, which do not contain any overt markers of emphasis – neither taboo words, nor quantifiers, nor expressive phonology. These unexpressive utterances are typical of a culture and play an evaluative role. They are conventionally used to mark and evaluate situations
	WH-exclamations	Exclamations in question form to express the subject's feelings
	Lexical Items	Words, which express an intensified degree of state or action.

2.6.2.5 Dialectal and discourse features

Past research conducted by McCormick (1989), van der Reede (1983) and Kotze (1983) identified various differences between Cape Afrikaans (CA) and standard Afrikaans (SA). In this study an analysis of the features of Cape Afrikaans was conducted. The features were divided into two categories namely lexical and syntactical features. In this study these dialectal and discourse features typical of Cape Afrikaans were identified and noted. Furthermore, discourse features such as the use of direct speech, historical present tense and repetition were analysed.

2.6.2.6 Analysis of adaptive and compensatory language features

An in-depth analysis of adaptive and compensatory language features was conducted for each subject across the different narrative tasks. Previous research (Glosser and Deser, 1990; Kolk et al, 1990 and Glosser, 1993) documented various morpho-syntactical features typical of aphasic language use. In this study an analysis of repetition, changes in word order, false starts, word-finding difficulties, paraphasias and confabulations that have previously been documented as characteristic features of aphasia has been conducted.

2.7 STATISTICAL PROCEDURES

Although the focus of the study was a qualitative analysis looking at individual differences and similarities within and across the experimental and control groups, statistical procedures employing non-parametrical procedures were undertaken. Although it is acknowledged that eight subjects per experimental and control group is small, it was believed that there were sufficient observations of various aspects in order to search for tendencies and patterns within and across the groups. In addition to tests of normality of variance, non-parametrical analysis, such as the Kruskal Wallis test were undertaken. This was employed to determine the existence of patterns and allow for the examination of tendencies which would support future research and generate generalisations.

2.8

MEASURES OF RELIABILITY

Reliability measures were administered since reliability should be a central concern because it is a necessary, although not sufficient prerequisite to the validity of scores (Strong and Shaver, 1991). Reliability also includes the notion that each measurement is subject to some degree of measurement error (Thorndike, 1988). Data may contain an element of subjectivity since data that relies on perceptual judgement is subject to measurement error (Cucchiaroni, 1995).

For the purpose of this study inter-observer agreement was used to determine transcription and score reliability of the discourse analysis (Ulatowska et al., 1998) and the evaluations (Labov, 1977). This is a common technique for estimating reliability in speech-language pathology research (Cordes, 1994 in Hux, Reid and Maschaka, 1997). The three transcribers and two scorers were all qualified speech therapists.

2.8.1 Inter-rater reliability

Inter-observer agreement was determined in this study. This served to assess the extent to which different observers or raters agree that they see the same phenomena (Hux et al., 1997). According to Hux et al. (1997) inter-rater agreement consists of a number of assumptions. Firstly, the raters must share an understanding of what trait is being rated. Secondly, the raters must be able to determine the occurrence or non-occurrence of what is being measured. Finally, the raters must have a common means of recording the occurrence of the targeted behaviour or trait.

2.8.1.1 Transcription reliability

Transcription reliability was determined by word-by-word reliability (also referred to as a point by point agreement or percentage agreement) (Cucchiaroni, 1995). The transcription agreement indices are generally calculated by a word-by word agreement procedure.

The word-by-word percentages were calculated using the following formula (Cucchiatini, 1995):

$$\frac{\text{Number of Agreements}}{\text{Number of Agreements} + \text{Number of Disagreements}} \times 100$$

(Total Words)

In this study two additional transcribers independently transcribed 20% of all the discourse samples obtained (MacLachlan and Chapman, 1988). Reliability was determined by dividing the total number of agreements by the total number of agreements and disagreements for each sample. The inter-rater word-by-word mean percentage agreements for Transcriber 1 versus Transcriber 2, Transcriber 2 versus Transcriber 3 and Transcriber 1 versus Transcriber 3 are represented in Table 2.12 below.

Table 2.12 Transcription reliability – Mean Percentage Agreement

Transcribers	Mean Percentage Agreement
Transcriber 1 and Transcriber 2	93%
Transcriber 1 and Transcriber 3	96%
Transcriber 2 and Transcriber 3	96%

2.8.1.2 Rating Reliability

The discourse samples were rated by the researcher and two independent raters. The inter-raters were three qualified speech-language therapists familiar with the scoring procedure. Prior to the scoring of the data the researcher trained the raters for two hours. Training included discussion of scoring including types of evaluative elements, quality ratings and adaptation features. Practice trials were carried out on samples that were not included into the final samples used to determine inter-coder reliability. Approximately 20% of the randomly selected discourse samples were analysed (MacLachlan and Chapman, 1988). Word-by-word agreement resulted in mean

percentage agreements of 91.7% for quality ratings, 94.7% for evaluation and 97.3% for adaptation features. The results are represented in Table 2.13, 2.14 and 2.15 below.

Table 2.13 Discourse Rating Reliability – Mean Percentage Agreements

Raters	Mean Percentage Agreements
Rater 1 and Rater 2	91%
Rater 1 and Rater 3	92%
Rater 2 and Rater 3	89%

Table 2.14 Evaluation Coding Reliability – Mean Percentage Agreements

Raters	Mean Percentage Agreements
Rater 1 and Rater 2	95%
Rater 1 and Rater 3	94%
Rater 2 and Rater 3	95%

Table 2.15 Adaptation Feature Coding Reliability – Mean Percentage agreements

Raters	Percentage agreements
Rater 1 and Rater 2	97%
Rater 1 and Rater 3	98%
Rater 2 and Rater 3	97%

2.8.2 Intra-rater Reliability

2.8.2.1 Transcription Reliability

The researcher randomly selected 15% of each narrative sample for transcription (Morris-Frieche and Sanger, 1992). The researcher transcribed the selected samples a second time. A word-by-word agreement was calculated and a mean percentage agreement percentage determined. A mean agreement percentage of 93.8% for intra-rater reliability was obtained, indicating a high inter-rater reliability for transcription.

2.8.2.2 Rater reliability

15% of each narrative sample was randomly selected (Morris-Frieche and Sanger, 1992). The selected sample was scored a second time by the researcher. Again, a word-by-word agreement was calculated and agreement percentages determined for the quality ratings, evaluation, adaptation features as well as the dialectal features. Word-by-word intra-rater reliability measures resulted in a mean agreement percentage of 96.3% for evaluation, 90.2% for quality rating, 95.4% for adaptation features and 97.6% for dialectal features.

This section presented the methodology adopted in this study. In the following section the results of the subjects' performance on the narrative discourse tasks will be presented.

3 RESULTS AND DISCUSSION

In this section the results of the aphasic (experimental) and control subjects' performance on the Discourse Test Battery (Ulatowska et al., 1998) are presented. A description of the aphasic subjects' discourse production is undertaken in an attempt to identify trends, as well as individual differences. Dialectal features and discourse ethnic markers employed by the experimental and controls subjects are presented and discussed. Furthermore an analysis of the aphasic and control subjects' use of evaluative elements in their discourse production as well as adaptation and compensation strategies was undertaken. Finally the subjects' discourse functions in this study, is compared to that of previous research.

3.1 PROPOSITIONAL ANALYSIS AND LENGTH OF NARRATIVE

The results obtained from the propositional analysis, length of the narratives as well as the ratio of propositions and narrative length are outlined in Table 3.1 and 3.2.

Table 3.1 Propositional Analysis, Narrative Length and the Ratio of Words to Propositions in Experimental Subjects' performance on the Ulatowska Battery (1998).

	CM			EM			AT			F&S			FE		
	P	W	Ratio	P	W	Ratio	P	W	Ratio	P	W	Ratio	P	W	Ratio
Subject 1	34	242	1:7,18	9	84	1:9,33	7	74	1:10,57	8	92	1:11,5	33	290	1:8,79
Subject 2	24	250	1:10,42	16	121	1:7,56	34	335	1:9,85	21	207	1:9,86	165	1385	1:8,39
Subject 3	16	131	1:8,19	26	155	1:5,96	9	70	1:7,77	20	211	1:10,55	31	229	1:7,39
Subject 4	6	50	1:8,33	8	61	1:7,63	9	48	1:5,33	10	69	1:6,9	15	91	1:6,06
Subject 5	10	116	1:11,6	12	111	1:9,25	11	92	1:8,36	17	160	1:9,4	25	183	1:7,32
Subject 6	34	294	1:8,65	34	254	1:7,47	6	45	1:7,5	6	45	1:7,5	22	144	1:6,55
Subject 7	13	99	1:7,62	10	70	1:1,7	8	54	1:6,75	10	72	1:7,2	12	84	1:7
Subject 8	13	117	1:9	17	137	1:8,1	13	116	1:8,9	14	86	1:6,1	35	280	1:8

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S – Farmer and Sons narrative, FE - Frightening Experience narrative, P – Proposition, W – word.

Table 3.2 Propositional Analysis, Narrative Length and the Ratio of Words to Propositions in Control Subjects' performance on the Ulatowska Battery (1998).

	CM			EM			AT			Fable			FE		
	P	W	Ratio	P	W	Ratio	P	W	Ratio	P	W	Ratio	P	W	Ratio
Control 1	14	82	1:5,9	10	68	1:6,8	19	119	1:6,26	8	70	1:8,75	34	247	1:7,26
Control 2	63	503	1:7,98	32	220	1:6,88	31	253	1:8,16	26	176	1:6,71	34	245	1:7,21
Control 3	16	121	1:7,81	9	73	1:8,11	11	96	1:8,72	18	144	1:8,0	36	320	1:8,88
Control 4	12	99	1:8,25	19	141	1:7,42	20	157	1:7,85	10	103	1:10,3	36	246	1:6,83
Control 5	20	139	1:6,95	11	87	1:7,9	17	138	1:8,1	15	123	1:8,2	50	348	1:7,0
Control 6	13	92	1:7,1	7	79	1:11,3	12	106	1:8,8	15	123	1:8,2	60	433	1:7,2
Control 7	12	97	1:8,1	18	142	1:7,9	31	259	1:8,4	10	76	1:7,6	60	404	1:6,7
Control 8	17	115	1:6,8	10	86	1:8,6	9	83	1:9,2	12	78	1:6,5	15	116	1:7,7

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S – Farmer and Sons narrative, FE - Frightening Experience narrative., P – Proposition, W – word.

3.1.1 Propositional Analysis

The narrative discourse productions were analysed in terms of the number of propositions or idea units within each narrative as well as the picture description task. A proposition can be defined as an informational unit containing a verb and an argument (Ulatowska et al., 1998). The number of propositions in each subject's picture description was counted and is presented in Table 3.1 and 3.2.

As can be seen from Tables 3.1 and 3.2 the amount of information provided varied across subjects. The range of variation produced by the experimental subjects was larger than that of the matched controls. The experimental subjects presented with a range of 6-165 and the control subjects with a range of 7-63. Experimental Subjects 4, 6 and 7 produced less propositional units than the other experimental subjects. Overall the control subjects provided more propositional or informational units than the experimental subjects. These findings support previous research. The research conducted by Ulatowska et al. (1998); Christiansen (1995); Nicholas and Brookshire

(1995) and Ulatowska et al. (1983) indicate that aphasics of mild to moderate degree of severity presented with reduced propositional or informational units in their narrative discourse production. Although the studies mentioned above used a different unit type for analysis, for example, events or t-units, the results obtained were the same. Although some experimental subjects in this study produced less propositional units than the control subjects they did however include the essential propositions.

Both the experimental and control subject groups produced the least propositions during the Apple Theft task. This might have been due to the nature of the task namely story generation with sequence pictures as the stimulus items. It is the opinion of the researcher that the population used for this study is unfamiliar with narratives consisting of sequence pictures since both the aphasics and control subjects experienced difficulty with this task. This can possibly be ascribed to the lack of exposure to this type of reading material in the education system at the time the subjects attended school. Previous research (Ulatowska et al., 1998) did not indicate any significant problem with sequence picture tasks. In this study both groups, the subjects and controls, produced the most propositional units during the Frightening Experience task. The variation in the control subjects' performance within and across the tasks supports the notion of the wide variation within normal individuals and the variation across the demands of the tasks.

3.1.2 Length of Picture Description and Narrative

The number of words within each discourse narrative and description task served as a measure of the length of the narrative productions. Each word within the narrative was counted although empty fillers were not included. The results are presented in Tables 3.1 and 3.2

The length of the narratives varied across the subjects as well as across tasks. All the experimental subjects produced shorter narratives than their matched controls. These findings correlate with that of previous research, which indicated qualitative differences between the discourse productions of aphasics and controls.

Ulatowska et al. (2000); Ulatowska et al. (1998); Christiansen (1995); Nicholas and Brookshire (1995) and Ulatowska et al. (1983) found that aphasics with mild to moderate degree of severity presented with reduced length in their narrative discourse productions.

Across the tasks both subject groups produced the shortest narratives during the Apple Theft task. As mentioned previously this might have been due to the nature of the task namely; story generation with sequence pictures as the visual stimuli. Both subject groups produced the longest narratives during the Frightening Experience task.

3.1.3 Ratio of Propositions and Narrative Length

The ratio of the number of propositions to the number of words within the narrative (see Tables 3.1 and 3.2) may provide additional information regarding the amount of information provided with respect to the length of the narrative, thus differentiating those who produced long narratives but little information from those who produced narratives rich with informational content. The number of propositions and words within each narrative was compared. As can be seen from Tables 3.1 and 3.2 there was much variation across the experimental subjects. The ratio's ranged from 1:5,6 to 1:11,6. Experimental Subject 4 presented with the lowest ratio's indicating the use of the fewest number of words to express a propositional unit. Experimental Subject 1 presented with higher ratios in three of the tasks. This subject therefore used a greater amount of words in order to produce an information unit. Experimental Subject 2, 3 and 5 also presented with high ratios. Bush et al. (1988) reported similar findings. In their study the experimental subjects with mild to moderate degree aphasia produced more words to communicate a given amount of information than nonaphasic speakers did. The control subjects presented with less variation in their performance than the experimental subjects.

3.2 RATING SCALE FOR QUALITY OF NARRATIVES

As mentioned in Section 2, the rating scales devised by Ulatowska et al. (1998) were employed to evaluate the global structure, temporal sequence, reference, suspense, coherence and clarity as well as completeness and accuracy of the experimental and control subjects' narrative discourse productions. In addition the ability to identify the main idea and lesson of the narratives was analysed and is presented in Table 3.3 and 3.4.

Table 3.3 Rating Scales for Quality of Narrative for Experimental Subjects

		S1	S2	S3	S4	S5	S6	S7	S8
Counting Money	Global structure	2/4	4/4	2/4	2/4	3/4	2/4	2/4	2/4
	Temporal Sequence	3/3	3/3	3/3	3/3	3/3	3/3	2/3	3/3
	Reference	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Suspense	0/3	0/3	2/3	0/3	1/3	2/3	0/3	0/3
	Coherence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Clarity	1/2	1/2	1/2	2/2	2/2	2/2	2/2	2/2
	Total	12	14	14	13	15	15	12	13
Main idea	Lesson Appropriate Concrete	Lesson Appropriate Concrete	Partial	Partial	Summary Appropriate Concrete	Partial	Summary Appropriate Concrete	Summary Appropriate Concrete	
Easter Monday	Global structure	2/4	4/4	2/4	3/4	3/4	2/4	2/4	2/4
	Temporal Sequence	3/3	3/3	1/3	3/3	3/3	3/3	2/3	3/3
	Reference	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Suspense	0/3	0/3	2/3	1/3	1/3	1/3	0/3	1/3
	Coherence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Clarity	2/2	2/2	1/2	2/2	2/2	2/2	2/2	2/2
	Total	15	13	12	15	15	15	13	14
Main idea	Partial	Summary Appropriate Concrete	Partial	Summary Appropriate Concrete	Summary Appropriate Concrete	Partial	Partial	Summary Appropriate Concrete	
Apple Theft	Global structure	2/4	4/4	4/4	3/4	4/4	2/4	3/4	4/4
	Temporal Sequence	2/3	2/3	3/3	2/3	3/3	2/3	3/3	3/3
	Reference	3/3	3/3	3/3	3/3	3/3	1/3	3/3	3/3
	Suspense	0/3	2/3	3/3	1/3	3/3	1/3	2/3	3/3
	Coherence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Clarity	1/2	1/2	2/2	1/2	1/2	1/2	2/2	2/2
	Total	11	15	18	13	17	10	16	18
Main idea	Lesson Appropriate Generalised	Evaluative Appropriate Generalised	Summary Appropriate Concrete	Partial	Summary Appropriate Concrete	Partial	Summary Appropriate Concrete	Partial	
Lesson	Appropriate Generalised	Appropriate Generalised	Appropriate Concrete	Appropriate Generalised	Appropriate Generalised	Inappropriate Generalised	Appropriate Generalised	Partial	
Fable	Completeness	3/4	3/4	4/4	2/4	4/4	2/4	2/4	4/4
	Temporal Sequence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Reference	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Accuracy	2/3	2/3	3/3	3/3	3/3	1/3	1/3	3/3
	Coherence	3/3	3/3	3/3	3/3	3/3	2/3	3/3	3/3
	Clarity	2/2	2/2	2/2	1/2	2/2	1/2	1/2	2/2
	Total	16	16	18	15	18	12	13	21
Main idea	Partial	Lesson Inappropriate General	Summary Appropriate Concrete	Partial	Evaluative Appropriate Concrete	Partial	Summary Inappropriate Concrete	Partial	
Lesson	Inappropriate Concrete	Inappropriate General	Appropriate General	Partial	Appropriate General	Appropriate General	Inappropriate General	Inappropriate General	
Frightening Experience	Global structure	3/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Temporal sequence	2/3	3/3	3/3	3/3	2/3	3/3	3/3	2/3
	Reference	3/3	3/3	2/3	3/3	3/3	3/3	3/3	2/3
	Suspense	1/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Coherence	3/3	2/3	3/3	3/3	3/3	3/3	3/3	3/3
	Clarity	1/2	1/2	1/2	2/2	2/2	1/2	2/2	2/2
	Total	13	16	16	17	17	17	18	16

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S –Farmer and Sons narrative, FE – Frightening Experience narrative.

Table 3.4 Rating Scales for Quality of Narratives for Control Subjects

		C1	C2	C3	C4	C5	C6	C7	C8
Counting Money	Global structure	2/4	3/4	4/4	3/4	3/4	4/4	4/4	3/4
	Temporal Sequence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Reference	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Suspense	1/3	3/2	2/3	2/3	3/3	2/3	3/3	3/3
	Coherence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Clarity	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Total	14	17	17	16	17	17	18	17
Main idea	Summary Appropriate Concrete	Evaluative Appropriate General	Lesson Appropriate General	Lesson Appropriate General	Evaluative Appropriate Concrete	Evaluative Appropriate Concrete	Summary Appropriate Concrete	Summary Appropriate Concrete	
Easter Monday	Global structure	3/4	3/4	4/4	2/4	3/4	4/4	4/4	3/4
	Temporal Sequence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Reference	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Suspense	0/3	2/3	2/3	2/3	3/3	2/3	3/3	3/3
	Coherence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Clarity	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Total	14	16	17	15	17	17	18	17
Main idea	Partial	Evaluative Appropriate Concrete	Lesson Appropriate General	Lesson Appropriate General	Evaluative Appropriate Concrete	Evaluative Appropriate Concrete	Lesson Appropriate Concrete	Partial	
Apple Theft	Global structure	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Temporal Sequence	2/3	3/3	3/3	3/3	3/3	3/3	3/3	2/3
	Reference	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Suspense	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Coherence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Clarity	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Total	17	18	18	18	18	18	18	17
Main idea	Partial	Evaluative Appropriate Concrete	Lesson Appropriate General	Summary Appropriate Concrete	Summary Appropriate Concrete	Evaluative Appropriate Concrete	Lesson Appropriate Generalised	Partial	
Lesson	Appropriate Generalised	Appropriate General	Appropriate General	Appropriate General	Appropriate Concrete	Appropriate Concrete	Appropriate Generalised	Inappropriate General	
Fable	Completeness	2/4	3/4	3/4	3/4	4/4	4/4	3/4	3/4
	Temporal Sequence	3/3	2/3	3/3	3/3	3/3	3/3	3/3	3/3
	Reference	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Accuracy	2/3	2/3	2/3	3/3	3/3	3/3	3/3	3/3
	Coherence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Clarity	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Total	15	15	16	17	18	18	17	17
Main idea	Evaluative Inappropriate General	Partial	Evaluative Appropriate Concrete	Lesson Inappropriate General	Evaluative Appropriate Concrete	Evaluative Appropriate Concrete	Lesson Inappropriate Generalised	Lesson Inappropriate Generalised	
Lesson	Inappropriate General	Appropriate General	Appropriate General	Inappropriate General	Inappropriate Concrete	Inappropriate General	Appropriate Generalised	Inappropriate Generalised	
Frightening Experience	Global structure	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Temporal sequence	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Reference	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Suspense	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
	Coherence	3/3	3/3	3/3	3/3/3	3/3	3	3/3	3/3
	Clarity	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Total	18	18	18	18	18	18	18	18

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S –Farmer and Sons narrative, FE – Frightening Experience narrative.

3.2.1 Quantitative findings

Reliability tests were used to analyse the consistency of the ratings. The means and standard deviations are displayed in Table 3.5, 3.6 and 3.7. Some of the ratings (global structure, temporal sequence, reference, suspense, coherence, clarity, completeness and accuracy) within the narratives deviated or did not contribute at all. Except in the case of the Easter Morning narrative there appeared to be a relationship between performance in reference and coherence. The non-parametric test one way ANOVA, the Kruskal Wallis Test, was used to test the differences or significance. The results are outlined in Table 3.5 below.

Table 3.5 Means and Standard Deviations for Quality Analysis Elements for the Experimental and Control Groups

Analysis Features	Subjects	CM Narrative		EM Narrative		AT Narrative		FE Narrative	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Global structure	Subjects	2.375	.744	2.500	.756	3.250	.886	3.875	.354
	Controls	3.250	.707	3.250	.707	4.000	.000	4.000	.000
Temporal Sequence	Subjects	2.875	.354	2.625	.744	2.500	.535	2.625	.518
	Controls	3.000	.000	3.000	.000	2.750	.463	3.000	.000
Reference	Subjects					2.750	.707		
	Controls					3.000	.000		
Suspense	Subjects	.625	.916			1.875	1.126	2.750	.707
	Controls	2.375	.744			3.000	.000	3.000	.000
Coherence	Subjects								
	Controls								
Clarity	Subjects	1.625	.518	1.875	.354	1.375	.518	1.500	.535
	Controls	2.000	.000	2.000	.000	2.000	.000	2.000	.000
Completeness	Subjects								
	Controls								
Accuracy	Subjects								
	Controls								

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S –Farmer and Sons narrative, FE – Frightening Experience narrative.
Shaded areas – no significance

A MANOVA was used to analyse the difference of the groups with and without differentiating between the narratives. The results are displayed in Table 3.6 and 3.7.

Table 3.6 The means and standard deviations for the experimental and control subjects on the sum of the tasks per stimuli

Narrative		Mean	Standard Deviation	p-value
CM	Total	15.0625	1.9822	
	Experimental subjects	13.5000	1.1952	p< .01
	Control subjects	16.6250	1.1877	
EM	Total	15.1875	1.7212	
	Experimental subjects	14.000	1.1952	p< .01
	Control subjects	16.3750	1.3025	
AT	Total	16.2500	2.6458	
	Experimental subjects	14.7500	3.1053	p< .02
	Control subjects	17.7500	.4629	
FE	Total	17.1875	1.3769	
	Experimental subjects	16.3750	1.5980	p< .01
	Control subjects	18.0000	.0000	

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S –Farmer and Sons narrative, FE – Frightening Experience narrative.

Table 3.7 The means and standard deviations for the experimental and control subjects on the sum of the tasks per stimuli after correcting for the number of words

GROUP	Stimulus tasks totals corrected for word count	Mean	Standard Deviation	p-value	95 % Confidence Interval
Subjects	CM	.111	.068	.054	.168
	EM	.139	.064	.085	.192
	AT	.197	.084	.128	.267
	F&S				
	FE	.100	.073	.039	.161
Controls	CM	.143	.051	.100	.185
	EM	.171	.059	.122	.221
	AT	.135	.050	.093	.177
	F&S				
	FE	.070	.039	.038	.151

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S –Farmer and Sons narrative, FE – Frightening Experience narrative.

The performance of the ratings within a narrative was added to one total per stimulus. When the multivariate test of significance was applied ($p < 0.05$) to each narrative, significant differences existed between groups for overall quality of the narratives. Significant differences existed between the groups for the Counting Money, Easter Monday, Apple Theft and the Frightening Experience narratives. However when word count was taken into account significant differences existed between the groups for the Apple Theft narrative only at level $p < 0.01$

When the univariate test of significance was applied ($p < 0.01$) to determine significant differences between groups on the various ratings across stimuli, four of the ratings were significantly different between groups:

- Global structure was significantly different on the ratings of the Easter Monday ($p = .057$) and the Apple Theft ($p = .027$) narratives. The control subjects performed significantly better on this task.
- Suspense was significantly different on the ratings of the Apple Theft narrative ($p = .011$). The control subjects performed significantly better on this task.
- Clarity was significantly different on the ratings of the Apple Theft narrative ($p = .009$) as well the Frightening Experience narrative ($p = .025$). The control subjects performed significantly better on this task.
- Temporal sequence was significantly different on the ratings of the Frightening Experience narrative ($p = .063$). The control subjects performed significantly better on this task.

None of the other ratings; global structure (all narratives), reference (all narratives) or coherence (all narratives), temporal sequence (all narratives except Frightening Experience narrative), accuracy (fable), completeness (fable), clarity (Counting Money, Easter Monday, fable), global structure (Counting Money, fable and Frightening Experience) showed any significant differences between the groups.

3.2.2 Qualitative findings

Further analysis for the quality of narratives investigated each rating as well as its variation within and between the subject groups. This is followed by an assessment of

the main idea and lesson for each narrative. For all further discussions refer to the results reflected in Table 3.3 and 3.4

3.2.2.1.1 Global Structure (Narrative)

The global structure of the narrative evaluates the presence of setting, a complicating action, a resolution and a coda (Ulatowska et al. 1998). As can be seen from Table 3.3 and 3.4, there was variation in performance amongst the experimental subjects and control subjects. The experimental subjects presented with relatively preserved narrative structures. This finding supports previous research. According to the research conducted by Ulatowska et al. (1998), (1983) and (1981), mild to moderate aphasics have preserved narrative structures. A fully formed narrative consists of an episode with the following structure: (1) an abstract, (2) a setting involving time, location, background, and identification of participants, (3) complicating action involving events, (4) evaluation, (5) a resolution and (6) a coda (Labov, 1977). Some of these elements are essential for the preservation of the story namely the setting, complicating action and resolution. The abstract and coda are therefore optional elements (Ulatowska et al. 1983). Those experimental subjects who performed poorer on the global structure rating tended to omit the resolution and/or coda from the narrative structure. These subjects mainly gave a detailed description of the setting or the first complicating action. Since the control subjects included these elements it is possible that the breakdown in the experimental subjects' story structure is the result of aphasia. The findings of research conducted by Ulatowska et al. (1983) were slightly different in terms of the type of structure elements omitted from the narratives. According to Ulatowska et al. (1983) the aphasic subjects presented with a reduction of the narrative superstructure by omitting the codas, abstracts and evaluation of the narratives. According to Ulatowska (2001) this is usually related to level of education.

Apart from Experimental Subject 1, all the experimental subjects performed best on the Frightening Experience narrative task. Experimental Subject 6 demonstrated

difficulty in obtaining good global structure across the narrative tasks. The control subjects also performed poorer on the Counting Money and Easter Monday tasks than on the other tasks. The influence of the task requirements and appropriateness of the tasks will be discussed in Section 4.

3.2.2.2 Completeness (fable)

The completeness of the narrative refers to the inclusion of the critical elements of the fable. As can be seen from Table 3.3. and 3.4, variation occurred amongst the experimental subjects and control subjects. Although most of the experimental subjects included most of the essential propositions, Experimental Subjects 4, 6 and 7 performed poorly on this task. These subjects tended to omit essential propositions from their narratives. These subjects obtained the lowest scores on the Aphasia Quotient (AQ). Their poorer performance on the rating of completeness for the fable could therefore be the result of possible short-term memory problems due to the degree of aphasia. This finding contradicts previous research (Nicholas and Brookshire, 1995), which indicated that mild to moderate aphasics included the essential propositions in their narratives. The differences might be due to the type of task namely retelling where the aphasic subjects might omit propositions due to memory problems.

3.2.2.3 Temporal sequence

The use of temporal sequence within the narrative is determined by evaluating the chronology of events (Labov, 1977). As can be seen in Table 3.3 and 3.4 the control subjects did not show marked variation in performance. They also performed better than the experimental subjects across tasks and obtained scores of 100% in more than 80% of the tasks.

The experimental subjects' performance was marked by variation between the subjects and within subjects across tasks. All the subjects obtained scores of two out of three indicating relatively preserved temporal sequence in all the experimental subjects. 50% of the experimental subjects revealed poorer use of temporal sequencing on the Apple Theft task that had sequence pictures as stimuli. As

previously mentioned this finding is probably the result of a lack of exposure to sequence pictures. Although less of the control subjects performed better than the experimental subjects, they also experienced some degree of difficulty with the temporal sequencing of the Apple Theft task. These findings are contrary to that reported by previous research, which also used sequence pictures as stimuli (Ulatowska et al., 1998; Ulatowska et al., 1983; Ulatowska et al., 1981).

All the experimental subjects obtained maximum scores on the fable-retelling task, which supports the findings of Ulatowska et al. (1983). Ulatowska et al. (1983) reported that the aphasic subjects presented with temporal sequencing errors, although not frequently, on all the tasks except the fable retelling task. It is the opinion of the researcher that the provision of the global structure and temporal sequencing in the fable narrative may have resulted in the better performance on this task. Contrary to the Apple Theft narrative the subjects might also be more familiar to story retelling. Statistical analysis showed significant group differences for temporal sequencing on the Frightening Experience task.

3.2.2.4 Reference

One determines the use of reference in a narrative by evaluating the occurrence of reference elements (Ulatowska et al., 1998). As can be seen from Table 3.3 and 3.4 there was not much variation amongst the experimental subjects and control subjects respectively or across tasks. In general, the experimental subjects showed preserved referencing abilities with optimal scores across all tasks. Experimental Subject 6 obtained the lowest score for referencing across the tasks. Experimental subjects 3 and 8 both obtained two out of three on the Frightening Experience task. Apart from the latter the experimental subjects obtained 100% for referencing across tasks. The control subjects presented with optimal scores across all tasks.

In this study the ratio of the specific referent and the pronominal referent was calculated and presented in Table 3.8.

In this study the ratio of the specific referent and the pronominal referent was calculated and presented in Table 3.8.

Table 3.8 Number of Specific Referents, Number of Pronominal Referents and Ratio of Specific Referents to Pronominal Referents

Narrative	Subject 1		Subject 2		Subject 3		Subject 4		Subject 5		Subject 6		Subject 7		Subject 8	
	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR
CM	28	52	30	49	17	32	7	9	13	26	38	76	10	26	16	18
Ratio	1: 1,86		1: 1,63		1: 1,88		1: 1,29		1: 2		1:2		1: 2,6		1: 1,2	
EM	17	18	18	24	15	40	13	14	20	22	16	60	14	14	22	26
Ratio	1: 1,06		1: 1,3		1: 2,67		1: 1,08		1: 1,1		1: 3,75		1: 1		1: 1,8	
AT	13	15	43	75	10	18	7	11	14	17	7	12	9	12	17	21
Ratio	1: 1,15		1: 1,74		1: 1,8		1: 1,57		1:1,21		1: 1,71		1: 1,33		1: 1,24	
F&S	13	18	22	42	29	49	7	14	24	31	10	11	11	18	13	16
Ratio	1: 1,38		1: 1,91		1: 1,69		1: 1,2		1: 1,29		1: 1,1		1: 1,64		1: 1,23	
FE	23	70	140	319	32	55	5	24	21	29	10	30	11	19	30	53
Ratio	1: 3,04		1: 2,28		1: 1,72		1: 4,8		1: 1,38		1: 3		1: 1,73		1: 1,77	
Narrative	Control 1		Control 2		Control 3		Control 4		Control 5		Control 6		Control 7		Control 8	
	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR	SR	PR
CM	13	26	59	117	19	269	16	24	12	19	14	33	14	15	15	21
Ratio	1;2		1; 1,98		1: 1,37		1: 1,50		1: 1,58		1: 2,36		1: 1,07		1: 1,4	
EM	10	13	30	61	10	15	25	35	13	18	9	26	16	30	9	17
Ratio	1: 1,3		1: 2,03		1: 1,50		1: 1,4		1: 1,38		1: 2,89		1: 1,88		1: 1,89	
AT	19	29	20	67	13	23	24	30	12	20	22	31	36	47	17	20
Ratio	1; 1,53		1: 3,35		1: 1,77		1: 1,25		1: 1,67		1: 1,41		1: 1,31		1: 1,18	
F&S	9	14	22	47	18	29	18	22	22	23	22	27	10	17	10	17
Ratio	1: 1,56		1: 2,14		1: 1,61		1: 1,22		1: 1,05		1: 1,23		1: 1,7		1: 1,7	
FE	23	60	29	45	41	74	27	45	44	85	35	79	57	98	9	24
Ratio	1: 2,61		1: 1,55		1: 1,80		1: 1,67		1: 1,93		1: 2,26		1; 1,72		1: 2,6	

Key: SR – Specific Referent, PR – Pronominal referent
 CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S –Farmer and Sons narrative, FE – Frightening Experience narrative.

As can be seen in Table 3.8 both subject groups showed wide variation in the production of referents. In general the experimental and control subjects performed similarly. The analysis of the ratio of specific referents to pronominal referents indicated relatively preserved reference skills in the experimental subjects.

3.2.2.5 Suspense (Narrative)

The element of suspense within each narrative was evaluated. As can be seen from Table 3.3 and 3.4 there was variation between the experimental subjects as well as across tasks. All the subjects demonstrated little use of suspense on the Counting Money and Easter Monday tasks. All the experimental subjects revealed the most suspense on the Frightening Experience task. Experimental Subject 1 revealed the poorest performance across all tasks.

The control subjects' results also showed variation on the Counting Money and Easter Monday tasks. All controls obtained maximum scores on the Apple Theft and Frightening Experience tasks. Statistically significant group differences were found for suspense ratings on the Apple Theft narrative. The control subjects performed better on the ratings for suspense during this task. Good ratings for suspense correlated with good ratings for other narrative features for both the experimental and control subjects. However, poor ratings of suspense did not necessarily correlate with poor ratings for other narrative features, for both the experimental and control subjects. These findings support the research of Ulatowska et al. (1998).

3.2.2.6 Accuracy (Fable)

The accuracy of the fable is determined by evaluating the correctness of the information reproduced in the fable. Although no statistically significant difference was noted between groups for this feature, qualitative analysis revealed that the controls performed better than the subjects on this rating as can be seen in Table 3.3 and Table 3.4. There was variation in the performance by the experimental subjects. Apart from Experimental Subjects 1, 2, 6 and 7, the other experimental subjects obtained optimal scores. Experimental Subjects' 6 and 7 performance correlated with their poor performance on the completeness of the fable. These subjects also presented with poorer scores on the Aphasia Quotient. The results of the accuracy measure correlate with the findings of Bush et al. (1988) who reported that mild to moderate aphasics occasionally communicated inaccurate information on description tasks. The poorer performance by some of the experimental subjects can possibly also be attributed to short term memory problems. Chapman and Ulatowska (1989) noted that the linguistic and cognitive constraints in story retell are greater than in normal narrative discourse. In story retell the subject must relate a sequence of events, which conforms to a previously heard narrative. In addition the individual must retell the story exactly as he heard it.

3.2.2.7 Coherence

The coherence of the narrative evaluates the plausibility, conventionality and conclusiveness of the narrative as well as the continuity of ideas within each narrative (Ulatowska et al., 1998; Halliday and Hasan, 1976). As can be seen in Table 3.3 and 3.4, both the experimental and control subjects performed very well on this task. Experimental Subject 2 and 6 obtained two out of three on two tasks respectively. The rest of the subjects obtained optimal scores across tasks. The control subjects showed no variation and obtained optimal scores across all tasks. Hence most of the experimental subjects' performance matched that of their controls. These results support previous research (Ulatowska et al., 1998; Deser 1993; Glosser and Deser, 1990; Ulatowska et al., 1983 and Ulatowska et al., 1981) which indicated that the aphasic subjects presented with preserved coherence in their discourse production despite syntactic, phonological and lexical errors.

3.2.2.8 Clarity

The clarity of the narrative is determined by evaluating the clarity, or cohesiveness of the language (Ulatowska et al., 1998). The clarity rating provided a measure of the subjective evaluation of the aphasic speaker's language by the listener. The experimental subjects obtained lower scores than that of the control subjects on the clarity ratings. The control subjects obtained uniformly high ratings whereas the performance of the experimental subjects varied greatly between subjects. Statistical analysis revealed significant group differences for the Apple Theft narrative. The control subjects performed better than the experimental subjects on this rating. In spite of the poorer performance of the experimental subjects, they were generally rated as exhibiting an average level of clarity. No experimental subject was rated as completely unclear by any of the three raters. These results support the findings of Ulatowska et al. (1983), which indicate an average performance by mild to moderate aphasics on ratings of clarity.

3.2.2.9 Main Idea

The main idea of the discourse samples was evaluated across two parameters. Firstly this involved evaluating the main idea according to its appropriateness and secondly whether it is concrete or generalised. Grasping of the main idea as a process of selection based on knowledge that the reader possesses regarding information contained in the text which, the reader considers the most essential, as well as knowledge of the underlying structure of a given text (Ulatowska et al. in Brownell and Joannette, 1993). When deriving the main idea, a person is less concerned with the structure of the message than with the person's preferences that reveal individual ways of organising experience. As can be seen from Table 3.3 and 3.4 the controls performed better than the experimental subjects. In general the experimental subjects produced appropriate responses that were concrete in nature. In the majority of cases the experimental subjects produced the main ideas in summary form. Three responses were given in the form of lessons and two as evaluations. The experimental subjects' performance was marked by variation across tasks as well as across subjects. Experimental Subject 6 performed the worst across all tasks since her responses were only partial in nature. Experimental Subject 4 also performed poorly with 3 out of 4 responses being partial in nature. Experimental Subjects 1, 2 and 3 produced two partial responses each. These findings support previous research conducted by Ulatowska et al. (in Brownell and Joannette, 1993). The aphasic subjects in their study presented with nongeneralized main ideas with close adherence to the explicitly stated information in the stimulus fable. Overall the control subjects' performance was also marked with variation. The controls produced less partial responses as well as less inappropriate responses than the experimental subjects. Their responses were less summarised versions of the narratives than the experimental subjects' responses. The control subjects produced more generalised responses in the form of a lesson or evaluation than the experimental subjects.

3.2.2.10 Lesson (Apple Theft and Fable)

The lesson of the story was also evaluated according to its appropriateness and its generalisation. The results obtained for this rating were similar to that of the main idea. As can be seen in Table 3.3 the experimental subjects' responses showed

variation between the subjects as well as within subjects across the two tasks. Five of the eight experimental subjects produced appropriate generalised responses during the Apple Theft task. The experimental subjects did not however perform as well during the Fable task where only three subjects produced appropriate and generalised responses. The experimental subjects therefore performed better on the lesson of the Apple Theft task than the lesson of the Fable task. Four experimental subjects produced inappropriate responses, one concrete in nature while the other inappropriate responses were more generalised. Experimental Subject 4 provided a partial response. The control subjects performed better than the experimental subjects in terms of the absence of partial responses as well as the generalised nature of all the responses. The control subjects generalised the information contained in the stimulus fable to a much broader class of text utilising information derived from world knowledge, experiential knowledge and conventionalised set of values (extratextual responses). This finding has previously been described by Ulatowska et al. (in Brownell and Joannette, 1993). According to Ulatowska et al. (1983), the aphasics' deficit in providing the moral of a story derives more from a cognitive impairment than a purely linguistic impairment. The above researchers justify this claim by the fact that the aphasics who failed to produce the moral or lesson of the story, were still able to retell it. The ability to produce the lesson of a story requires the highest level of comprehension of the information contained in the story. It requires extracting the main idea from the story and evaluating it in terms of one's pragmatic knowledge and value system. Finally the person has to infer its true significance on the basis of these types of information (Ulatowska et al., 1983).

3.2.11 General Trends

In general the experimental subjects performed more poorly than the control subjects on the rating scale for the quality of the narratives. This supports the research findings of Ulatowska et al. (1998). However, statistical significant group differences were only found for the Apple Theft narrative. The control group performed better on the quality rating for this narrative task. The experimental subjects obtained lower ratings for the global structure of the narratives. In most instances they simply provided a description of the setting or the first complicating action. Both groups performed

poorer on the more structured narrative tasks as in the case of story generation tasks using visual stimuli as well as the story retelling task. Both groups performed better in tasks with no prescribed structure or ideas. The different tasks elicited different productions from both subjects groups. From the results it is clear that both the experimental subjects and control subjects performed the best on the Frightening Experience task, which was a personal narrative. The Apple Theft task influenced the experimental subjects' as well as the control subjects' performance due to the nature of the task. As mentioned previously it is the opinion of the researcher that the subjects' performance was influenced by their unfamiliarity with the task. It is likely that these subjects were not exposed to sequence pictures either due to their age or the educational system of the previous political regime in South Africa. Story books containing sequence pictures for example comic strips were only available in South Africa after World War II. Furthermore these books were only available in English for approximately two decades. Hence most of the older Afrikaans speaking Coloured population from a lower socio-economic class would not have been introduced to sequence pictures. There appears to be a correlation between temporal sequencing and the experimental subjects' performance on the clarity ratings. Poor temporal sequencing might be the cause of the breakdown of the clarity of the narrative. Further investigation and analysis is however necessary to confirm the above results. Furthermore the Counting Money and the Easter Monday tasks did not elicit good use of suspense in most subjects. The experimental subjects displayed preserved coherence. They appeared to experience problems in deriving the main idea and lesson from narratives. This finding supports the research by Ulatowska et al. (1998). The experimental subjects' poor performance on the Fable task may have been the result of cognitive influences for example short term memory.

The experimental subjects performed poorer than the control subjects on the ratings of clarity. The variability of the performance across the other ratings makes it difficult to draw correlations between the ratings of clarity and other ratings. From the results it would appear that there is some relationship between the ratings of clarity and the ratings of temporal sequence and global structure of the narratives. The exact nature of the relationship requires further investigation. Wilkinson (1999) proposes that the breakdown in sequencing in aphasic language accounts for the lack of clarity.

3.2 PROVERB INTERPRETATION

The interpretation of proverbs provides the rich information regarding mental processes involved in the interpretation or non-literal language (Chapman et al, 1997). It is also a useful diagnostic measure of discourse (Chapman et al, 1997). See Tables 3.9 and 3.10 for the results of the proverb interpretation tasks.

Table 3.9 Spontaneous Proverb Interpretation Task for Experimental and Control Subjects (Delis et al, 1984)

	S1	S2	S3	S4	S5	S6	S7	S8
Spontaneous proverb 1	0	4	0	0	6	0	6	5
Spontaneous proverb 2	0	0	0	0	0	4	0	3
Spontaneous proverb 3	3	2	1	0	2	4	0	3
Spontaneous proverb 4	0	0	0	0	6	0	0	3
Spontaneous proverb 5	0	1	0	0	1	0	0	2
Total (Expressed in raw score and percentage obtained)	3/30 10%	18/30 26,7%	1/30 3,3%	0/30 0%	15/30 50%	6/30 20%	6/30 20%	16/30 53.3%
	C1	C2	C3	C4	C5	C6	C7	C8
Spontaneous proverb 1	6	0	6	6	6	0	5	5
Spontaneous proverb 2	0	4	6	6	0	4	0	6
Spontaneous proverb 3	4	4	5	5	3	4	1	3
Spontaneous proverb 4	0	4	0	5	3	0	0	6
Spontaneous proverb 5	0	4	0	5	0	0	0	3
Total (Expressed in raw score and percentage obtained)	10/30 33.3%	16/30 53,3%	17/30 56,7%	27/30 90%	12/30 40%	8/30 26,7%	6/30 20%	23/30 76,7%

Key: S – Experimental subject, C – Control subject

Table 3.10 Multiple Choice Proverb Task for Experimental and Control Subjects (Delis et al, 1984)

	S1	S2	S3	S4	S5	S6	S7	S8
Multiple choice proverb 1	Correct	Correct	Correct	Incorrect	Correct	Correct	Correct	Incorrect
Multiple choice proverb 2	Correct	Incorrect	Correct	Correct	Correct	Correct	Correct	Correct
Multiple choice proverb 3	Correct	Correct	Correct	Incorrect	Correct	Correct	Correct	Correct
Multiple choice proverb 4	Correct	Incorrect	Correct	Correct	Correct	Incorrect	Incorrect	Correct
Multiple choice proverb 5	Correct	Correct	Correct	Correct	Correct	Incorrect	Incorrect	Correct
Total (Expressed in raw score and percentage obtained)	5 100%	3 60%	5 100%	3 60%	5 100%	3 60%	4 80%	4 80%
	C1	C2	C3	C4	C5	C6	C7	C8
Multiple choice proverb 1	Correct	Correct	Incorrect	Correct	Correct	Correct	Correct	Correct
Multiple choice proverb 2	Incorrect	Incorrect	Incorrect	Correct	Correct	Correct	Correct	Correct
Multiple choice proverb 3	Correct	Correct	Correct	Correct	Correct	Correct	Correct	Correct
Multiple choice proverb 4	Correct	Correct	Correct	Incorrect	Incorrect	Correct	Correct	Incorrect
Multiple choice proverb 5	Incorrect	Correct	Correct	Correct	Incorrect	Correct	Correct	Correct
Total (Expressed in raw score and percentage obtained)	3 60%	4 80%	3 60%	4 80%	3 60%	5 100%	5 100%	4 80%

Key: S – Experimental subject, C – Control subject

3.3.1 Spontaneous Proverb Interpretation Task

As can be seen in Table 3.9 above, both the experimental and control subjects' performance on this task was variable. The control subjects performed better on this task than the experimental subjects. The experimental subjects all obtained a relatively low score on this task. The experimental subjects produced a marked amount of incorrect responses. In addition to this, their responses showed minimal generalisation beyond the concrete interpretation of the proverb. This finding supports the research by Ulatowska et al. (1998) who also found less generalized responses by the aphasic subjects on the proverb interpretation task. The experimental subjects' performance on this task correlated well with their performance on the provision of the lessons of the Fable and the Apple Theft task. Experimental Subjects 1, 3 and 4 were not able to produce any responses with an abstract component. The rest of the experimental subjects were able to produce a minimal amount of abstract components in their responses. Experimental Subjects 2 and 4 produced only partial abstract responses in comparison with the complete abstract responses provided by Experimental Subjects 5 and 7. The limited amount of correct responses provided by Experimental Subjects 3, 4 and 7 correlates with the low scores they obtained on the WAB Aphasia Quotion (AQ). This is however not the case with Experimental

Subject 3 who obtained a high score on the WAB AQ but performed poorly on this task.

As can be seen in Table 3.9 above, the performance on this task also varied across the control subjects. In general the control subjects provided less incorrect responses. Their responses were also more generalised and abstract in nature. These results support the research conducted by Ulatowska et al. (1998). According to the findings of Ulatowska et al. (1998) the generalisation of the responses showed a significant difference between the aphasics and normal controls on the task of spontaneous interpretation of proverbs. The concrete nature of the experimental subjects' responses correlates with their performance on the provision of the main idea and lesson of the narratives. However, this was not the case with the control subjects. The control subjects also did not obtain optimal scores on the spontaneous proverb interpretation task. These findings support the research conducted by Ulatowska et al. (1999). The latter study examined mild aphasic subjects' performance on various proverb interpretation tasks. The aphasic subjects presented with lower scores on the spontaneous proverb interpretation task since their responses were very concrete in nature. The normal control subjects also exhibited a wide performance range. Ulatowska et al. (1999) provided two possible explanations for this. Firstly, differences in education could play a role in this performance variability since the subjects with more education displayed higher scores for the most demanding tasks. This was however not the case in the current study. No correlation between level of education and performance on this task in both subject groups could be found. This finding is contradictory to that of previous research. According to previous research education level is recognised as being a critical factor in language assessment, particularly in later life (Goulet et al. 1994 in Mackenzie, 2000). These researchers state that well-educated adults advantaged in language tasks, achieve higher scores than their less well-educated peers. Secondly, Ulatowska et al. (1999) proposed that the variability in performance might also be attributed in part to normal individual differences in the ability to respond to such a complex task. Mackenzie (2000) however, highlights the importance of population characteristics in the interpretation of education effects on language tasks. Further research is therefore required before any conclusions can be drawn on the relationship between proverb interpretation and

education level. It is the opinion of the researcher that the speakers of Cape Afrikaans frequently use figurative language during discourse production. It is however not certain how much of this figurative language consists of proverbs due to lack of literature and research in this area. Speakers of Cape Afrikaans appear to use more figurative language than speakers of standard Afrikaans.

The phenomenon of concretism in proverb interpretation cannot be solely attributed to a cognitive impairment as in the case of the abstraction of the main idea and moral or lesson in the narratives. Ulatowska et al. (1999) stated that the nature of the lexicon of some proverbs, causes the proverbs to be interpreted more concretely by both aphasic and normal control subjects, especially when it is pragmatically plausible. All the proverbs used in the current study except proverb number 5, *Bloed is dikker as water* (Blood is thicker than water), lend themselves to concrete interpretations. In their interpretation the experimental subjects provided concrete autobiographical scripts related to their illness. This finding supports the research conducted by Ulatowska et al. (1999).

Ulatowska et al. (1999) examined the cognitive-linguistic processing involved in proverb interpretation by examining the use of situational scenarios by aphasic subjects to determine whether these subjects could produce differences in the strategies in manipulating common knowledge. According to Ulatowska et al. (1999), the interpretation of proverbs, was based to a great extent on culturally coded situational scenarios. Generalised interpretations of proverbs are related to the condensation of high numbers of scenarios (generic level schema). Concrete interpretations are related to specific scenarios (specific level schema). In their interpretations of proverbs, the aphasic subjects gave autobiographical scripts related to their illness and other life events. This could be considered as narrowing of the situational meaning of proverbs. The aphasics therefore rely more on knowledge, which was more accessible and restricted to their life experience. The control subjects' interpretations also contained an element of autobiographical information but was more generalised. The same results were found by Ulatowska et al. (1999).

The analysis of spontaneous proverb interpretation revealed similarities between the generalisation of the lesson of the fable task and the amount of generalisation in the proverb interpretation task. This supports the findings of Ulatowska et al (1999).

3.3.2 Multiple Choice Proverb Task

As can be seen in Table 3.10, performance on this task varied across subjects. In general the experimental subjects obtained scores varying from 60% to 100%. Incorrect choices were concrete in nature. However the experimental subjects produced fewer concrete responses in the multiple choice proverb interpretation task than on the spontaneous proverb interpretation task. These findings support previous research conducted by Ulatowska et al. (1999) who found that the aphasic subjects provided less concrete explanations during the multiple choice proverbs task than during the spontaneous proverb interpretation task.

Performance on this task also varied across the control subjects. The control subjects performed better on this task than on the spontaneous proverb interpretation task. Their performance was above average with scores ranging from 60% to 80%. In general the control subjects performed poorer on this task than the experimental subjects. This finding is contradictory to the findings of Ulatowska et al. (1999), who noted that the aphasic subjects and control subjects in their study exhibited the same pattern in the multiple choice interpretation task. The two groups differed by the number of errors with the experimental subjects producing more errors than the control subjects. The experimental and control subjects performed better on the multiple choice proverb task than on the spontaneous proverb interpretation task. One possible explanation for the better performance by the aphasic subjects on the multiple choice task, is the influence of the complicated lexical content and syntactic structure of the proverb which could influence the aphasic subjects' comprehension as well as problematic retrieval of abstract lexical items in the aphasic subjects. Some of the aphasic subjects mentioned that they knew the meaning of the proverbs during the spontaneous proverb interpretation task but that they did not have the words to explain the meaning. It would appear if the aphasic subjects did not have sufficient access to the language necessary to provide an explanation for the proverbs. When

confronted with the appropriate abstract language these subjects would then be able to make the correct choice in the multiple choice proverb interpretation task.

3.3 ANALYSIS OF EVALUATION

Labov (1977) classified evaluative elements in narratives under four major headings of which intensifiers was one. The analysis of the function of intensifiers provides additional information regarding the well-formedness of the narrative since the absence of intensifying expressions causes narratives to become devoid of interest and therefore not worth telling. This study focussed on the use of intensifying elements used by the experimental and control subjects in their narrative discourse productions. The study considered the differences between the experimental and control subjects in their use of these evaluative devices as well as the devices across narrative tasks. The results are presented in Table 3.11 and 3.12

3.3.1 Quantitative Findings

The means and standard deviations for both groups were derived for the overall use of evaluation across the tasks (intensifiers). An ANOVA was applied to determine statistically significant differences between the groups, the results are presented in Table 3.12. Narrative length was taken into account when applying these statistical procedures. Results from the Kruskal Wallis test determining significant differences between groups on all the narrative tasks are presented in Table 3.13. In addition to these statistical procedures, percentages were derived for the total use of intensifiers and each intensifier element across narratives for both the experimental and control groups.

Table 3.13 Intensifiers across Narratives, Kruskal Wallis Results for the Experimental Subjects

INTENSIFIER	CM		EM		AT		F&S		FE	
	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd
Ritual			3.5	3.66	3.25	3.01	4.88	5.41	10.13	16.87
Expressive phonology	1.5	1.69	1.36	1.69	0.625	0.74	1.86	1.55	4.25	3.37
Lexical item	1.5	2.27	1.25	1.39	0.625	0.92	1.0	1.41	2.25	1.49
Quantifier	0.36	1.06	0.36	0.52	0.0	0.0	0.0	0.0	0.50	0.53
Repetition	0.63	1.19	0.63	1.06	0.13	0.35	0.50	1.07	2.50	1.77
WH-exclamation	0.13	0.35	0.0	0.0	0.50	1.40	0.0	0.0	0.25	0.46
Gesture	0.0	0.0	1.25	2.05	0.50	0.53	0.25	0.46	1.63	1.69
Total	11.0	8.86			5.63	4.17	8.50	8.23	21.5	19.70

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S – Farmer and Sons narrative, FE – Frightening Experience narrative.

NS – not significant

Sd – standard deviation

Table 3.14 Intensifiers across Narratives, Kruskal Wallis Results for the Control Subjects

INTENSIFIER	CM		EM		AT		F&S		FE	
	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd
Ritual			2.75	2.60	4.0	2.93	4.13	3.83	6.86	8.57
Expressive phonology	2.5	3.62	1.36	1.41	2.88	2.30	2.86	2.95	5.43	2.94
Lexical item	1.63	2.2	1.5	1.20	1.63	1.30	1.25	1.38	3.57	1.51
Quantifier	0.13	0.35	0.0	0.0	0.13	0.35	0.0	0.0	1.0	1.53
Repetition	1.5	2.14	0.63	1.41	2.0	3.34	0.63	0.52	4.0	2.52
WH-exclamation	0.25	0.71	0.0	0.0	0.13	0.35	0.0	0.0	0.14	0.38
Gesture	0.5	0.76	0.5	1.07	0.50	1.07	0.75	1.75	2.86	4.18
Total	10.86	10.56	6.75	5.06	11.25	6.09	9.63	5.56	23.86	13.26

Key: CM – Counting Money narrative, EM – Easter Monday narrative, AT – Apple Theft narrative, F&S – Farmer and Sons narrative, FE – Frightening Experience narrative.
 NS – not significant
 Sd – standard deviation

A non-parametrical one way ANOVA, the Kruskal Wallis test, was used to determine whether there were any statistical significant group differences per task (intensifier) per stimuli (narratives). The results revealed a significant trend at $p < 0.10$ level for the expressive phonology and lexical item intensifiers of the Apple Theft narrative. The control subjects used significantly more expressive phonology and lexical item intensifiers than the experimental subjects during this narrative.

In order to determine whether there were any statistically significant group differences per stimulus if a linear combination between the intensifiers was used the consistency of the tasks was evaluated per narrative. Since the subjects' performance on the intensifiers deviated strongly, summing the tasks without reflecting the deviations through weights (linear and non-linear) would be conceptual violation. Thus for each narrative, a Cronbach α reliability test was conducted with the tasks as items. The results of these analyses showed that indeed the tasks were examining the same concept. Therefore the total intensifier performance per narrative was composed as the sum of the tasks per narrative. A non-parametrical one-way ANOVA, the Kruskal Wallis test, was used to determine whether there were any statistically significant group differences per task (intensifier) without differentiating between the narratives. Again the Apple Theft narrative reached a significant level of

significance between the groups at $p = 0.027$. The control subjects performed better than the experimental subjects. No statistically significant group differences per stimulus were found when the responses were corrected for the number of words. A MANOVA was used to analyze the difference of the groups with and without differentiating between the narratives. The multivariate test in which a linear combination between the narratives was used did not show a difference between groups ($p = 0.43$). The univariate tests were all $p > 0.10$. Only the Apple Theft narrative showed a trend towards significance with $p = 0.089$ indicating that the control subjects performed better than the experimental subjects.

The difference between the groups was non-existent. Only when the Apple Theft was used as a stimulus a trend towards statistical significance appeared indicating better performance by the control subjects. The difference between the groups was considerably affected by the difference in the number of words used by both groups. The p -values dropped from high significance $p = 0.02$ to a trend $p = 0.10$. A subsequent test on word count per narrative again revealed a statistically significant difference between the groups with the Apple Theft narrative. At a level of $p = 0.035$ the control subjects performed better than the experimental subjects. The same pattern was shown when the proposition units instead of word count is used: the difference between the groups was significant again only for the Apple Theft task at $p = 0.05$. When the ratio between word count and proposition units is taken, the difference between the groups was significant only for the Counting Money narrative at $p = 0.049$.

3.4.2 Qualitative analysis

As can be seen in Table 3.11 and 3.12 the performance of both the experimental and control subjects varied. The variation occurred both between the two subject groups as well as within the subject groups across tasks. 50% of the experimental subjects produced fewer intensifiers than their matched control subjects across the narrative tasks. Similarly, Ulatowska et al. (1983) found that aphasic subjects used much less evaluation than the normal controls across all the narrative tasks. In this study

Experimental Subjects 2 and 3 however, produced more intensifiers than their controls across tasks and Experimental Subject 5 performed the same as the matched control.

Both groups used various types of intensifiers simultaneously. Both the experimental and control subjects used ritual utterances, repetition and expressive phonology most frequently. These ritual utterances constituted words as well as phrases. On word level the subjects frequently used the words 'ja' (yes) and 'nee' (no) at the beginning and end of sentences. Some subjects used 'ny' instead of 'nee'. This is typical of Cape Afrikaans. Both subject groups made use of adverbs of modality e.g 'mos' (surely), 'miskien' (maybe), 'natuurlik' (certainly), 'dareem' (at least), 'regtig' (really), 'werklik' (really) very frequently.

Example: "*Hulle het mos miskien natuurlik gewonder hoe hulle in die dorp gaan kom*" (They have indeed, maybe, of course wondered how they will go into town.)

These are adverbs of modality since they portray the attitude or perspective of the speaker. Some subjects used these adverbs simultaneously, which according to De Klerk et al. (1994) is characteristic of standard Afrikaans. Both groups used the ritual utterances to mark and evaluate situations. The ritual utterances comprised of words and phrases. Words used as ritual utterances were 'ja' (yes), 'nee' (no), 'ny' (no), 'mos' (indeed), 'nou' (now) and 'toe' (then), and phrases were 'you know', 'because why', 'volgens my' (according to me), 'soos ek dit nou sien' (the way I see it). The ritual utterances were marked with code switching at word and phrase level.

The expressive phonology is superimposed upon other words of the clause. The type of expressive phonology used, was the elongation of a vowel in the word for example "*Dit was teeerrible*" (It was teeerible). This usually occurred together with a change in intonation or loudness. The type found in the data correlates with the findings of Labov (1977).

Both groups made use of repetition in their discourse. Much use of repetitions supports the research conducted by McCormick (in Mesthrie, 1995) who also found

Ulatowska et al. (in press) have also reported the use of repetition as an ethnic discourse feature of the African-American vernacular which is preserved in mild to moderate aphasics. Both the subject groups produced the most intensifiers during the Frightening Experience task. This correlates with the subjects' performance across the other measures as mentioned above as well as with the findings of the research by Ulatowska et al. (1983). Further comparative research across ethnic groups is required before one can define repetition as a discourse ethnic marker of the Cape Afrikaans dialect with certainty. The use and function of repetition will be discussed in detail in Section 4.

The lexical items used were descriptive in nature and comprised of adjectives and adverbs. The words expressed an intensified degree of state or action. Superlative forms of the words were often used for example “...*die mooiste, lekkerste appels...*” (the most beautiful, tastiest apples). Other examples of lexical items are “*so verlief*” (so in love), “*doer vêr*” (far away), “*hy is gruwelik*” (he is horrible).

Both quantifiers and WH-exclamations did not occur as frequently as the other types of intensifying elements. An examples of a quantifier is “*eet al die appels*” (eat all the apples). The WH-exclamations were mainly in the form of rhetorical questions for example “*Wat gaan hier aan ?*” (What is going on here?).

Both subject groups made use of gestures. Gestures accompanied a deictic ‘*daai*’ (that) or ‘*die*’ (this) as well as words such as adjectives and adverbs.

Both subject groups used in the latter study produced the most evaluative utterances in the personal experience task. The influence of the nature of the task will be discussed in Section 4.

3.5 DIALECTAL FEATURES OF CAPE AFRIKAANS

3.5.1 Convergence

Cape Afrikaans displays a high proportion of convergence due to two reasons. Firstly because of the nature of the social context in which Afrikaans and English have been in contact on the Cape Flats and secondly the fact that many Afrikaans speaking parents are mainly speaking second language English to their children (McCormick in Mesthrie, 1995).

3.5.1.1 Lexical convergence

The lexicon of Cape Afrikaans shows extensive evidence of the intensive contact between Afrikaans and English. English loan words form a high proportion of non-standard Afrikaans speakers' vocabulary. Table 3.15 provides an outline of the lexical convergence in both subject groups.

Table 3.15 Loan words used by Experimental and Control Subjects

Loan words	S1	S2	S3	S4	S5	S6	S7	S8
Nouns	Fence Curve Sixty Sixty nine Pavement	story breakfast bus six pense something pavement motortyre overall	jam pot cue couch pals		fence neighbours		Cue	fence picture pajamas yard
Adverbs			ripe					close
Conjunctions	Because why ' Cause						because	but because because wy
Verbs		disturb	spying visit			gepanick opgesafe		
Ritual utterances	Because why	whatever	anyway		you know			you know okay
Total	8	10	7	0	4	2	2	9
Loan words	C1	C2	C3	C4	C5	C6	C7	C8
Nouns	Breakfast	marriage sports Moullie Point Sea Point beach front couple spooky	fence blood twenty nine thousand odd rant Christmasgeld		lawyer professional help fence		predicament hotel taxi strike one way Mrs.A	fence
Adverbs			cold			terrible	tragic terrible	
Conjunctions								because but
Verbs		opgecouple						
Ritual utterances		Whatever actually			even	you know		you know
Total	1	9	4	0	4	1	8	4

Key: S – Experimental Subject, C – Control Subject

As can be seen in Table 3.15 the lexicon used by both the experimental and control subjects draws on English. Overall the experimental subjects used loan words more often than the control subjects. A possible explanation for this finding is the word finding difficulties experienced by the experimental subjects in their first language, Afrikaans. The inability to access a word in their first language could result in the use of increased English words. Hence the higher incidence of loan words from English in the experimental subjects cannot fully be ascribed to normal code switching as it occurs in control subjects.

The search for a pattern in the different types of the subjects' exposure to English and the degree and nature of convergence was problematic. Both Experimental Subject 2 and Control Subject 2 produced the most loan words. Both of these subjects were only exposed to English during formal instruction of the subject at school. These subjects' secondary exposure to English was in their work environments. Contrary to this, Experimental Subjects 5 and 7 who both had a parent, who spoke English to them at home, produced fewer loan words than the other experimental subjects. The same was found with Control Subject 1 who had the same type of exposure to English. Experimental Subject 3 who was exposed to English as second language spoken by parents as a second language, also produced a higher frequency of loan words. Experimental Subject 4, who had the same primary exposure to English as Experimental Subject 3, produced no loan words at all. This might be ascribed to the fact that Experimental Subject 4 presented with a more severe degree of aphasia. One could argue that the lack of loan words could be the result of a breakdown in the subject's second language due to aphasia. Further research is however necessary to confirm this speculation.

The control subjects presented with different patterns except for Control Subject 4 who also did not use any loan words. The control subjects showed greater variation in the use of loan words and exposure to English. It was difficult to establish a pattern in the subjects' performance due to the high degree of variation. Control Subjects 1 and 6 both only used loan words once across the tasks. These control subjects however had different patterns of primary and secondary exposure to English. Control Subject 1's parents spoke English as a second language at home whereas Control Subject 6 was only exposed to English at school in the form of formal instruction of the language. The loan words the subjects used were in the form of ritual utterances as mentioned in 3.4. Control Subject 5 had the same type of exposure as Control Subject 6 but used more loan words than Control Subject 6. Control Subject 3 had the same type of exposure than Control Subject 1 but produced significantly more loan words than Control Subject 1.

From the above discussion it is clear that the presence of convergence is part of the Cape Afrikaans dialect since it occurred with both subject groups. Convergence

between English and Afrikaans therefore appears to survive mild to moderate aphasia. In addition the use of convergence furthermore enables the person with aphasia to compensate for a breakdown in one language by substituting the missing lexical items in Afrikaans with the corresponding lexical items in English. By doing this, the person with aphasia still presents with an acceptable use of the dialect spoken in his/her community. For this reason it is very important that the speech therapist is aware of this compensation strategy available to the Afrikaans speaking Coloured person with aphasia as well as the fact that convergence is an integral component of the Cape Afrikaans dialect. Knowledge of this will be important in the treatment of the aphasia. The system of convergence is very complex. Further research is needed to investigate the relationship between convergence and aphasia in speakers of Cape Afrikaans.

Loan words that were borrowed were mainly open class words. Nouns constituted the largest class of the loanwords, followed by verbs, adjectives and conjunctions. Nouns retained the English number marking. This supports previous research conducted by McCormick (1989). The only Afrikaans word classes that appear to have remained intact and uneroded by English are determiners and the personal pronoun system. These findings support previous research by Ponelis (1993) and McCormick (in Mesthrie, 1995) the verbs adopt the Afrikaans morphology e.g. 'gesave' (afrikaans prefix indicating the past tense form of the verb + english stem of the verb to save). From the results in Table 3.14 it is clear that the experimental subjects have some preserved grammatical or microstructural knowledge, which enables them to apply the morphological rules of their vernacular. This finding has important implications for both assessment and intervention since the presence and use of these inflections are important indicators of preserved pragmatic competence, which will be discussed in Section 4.

As in the findings of McCormick (1989), both subject groups of this study showed the extension of function of the demonstrative pronoun 'daardie' (that). Both the subjects and controls used the contracted form 'daai' of the demonstrative adjective 'daardie' (that).

Example: “*Daai is moelikheid*” (That is trouble)

The use of *daai* is also an example of the change of the standard Afrikaans (SA) word form. Both the experimental and control subjects presented with change in the SA word form. Experimental Subjects 1, 3 and 4 as well as Control Subjects 1 and 3 did not use these changed word forms. In general the experimental subjects used less of these changed word forms.

Both the experimental and control subjects presented with loan words used as ritual utterances as discussed in 3.4. These ritual utterances were used as intensifiers, adding a personal perspective to the narrative as well as justifying what was being said. These ritual utterances were also used as rhetorical devices when linking two statements.

3.5.1.2 Syntactic convergence

As mentioned above in 3.5.1, the language contact situation on the Cape Flats was conducive to intensive linguistic exchange which also involves incidence of loanwords from closed classes (McCormick in Mesthrie, 1995). Bynon (1977 in Mesthrie, 1995) interprets such prolific borrowing as indicative of a particular type of language contact. According to McCormick (in Mesthrie, 1995) the borrowing from closed classes will only be possible in situations of intense linguistic exchange since it presupposes the cross-linguistic equation of syntactic patterns, whereas mere lexical borrowing from open classes would require only minimum linguistic exchange of bilingual speakers in the transmission process. The syntactic convergence that was noted in the data provides evidence of some cross-linguistic equation of syntactic patterns. The performance of the experimental and control subjects showed marked variation. The dialectal features found in the data are listed below.

- **Irregular past tense forms**

Both the experimental and control subjects presented with optional irregular past tense forms for the verbs ‘to have’, namely ‘*gehet*’. Kotze (1983) classified this as an

instance of the regularising of the verb form, which typically occurs in non-standard Afrikaans (SA).

Example: *Ek het darem gelukkige jong dae gehad.* (Cape Afrikaans)(CA)

(At least I had happy young days.)

Ek het darem gelukkige jong dae gehad. (SA)

(At least I had happy young days)

Both the experimental and control subjects used this form.

Another example of the regularising or generalising of the irregular past tense occurs with the past tense form of the verb: 'om te wees' (to be). The past tense form of the verb 'om te wees' is 'was' in SA. Speakers of Cape Afrikaans often make use of the auxiliary 'het' in stead of 'was'. Both the experimental and control subjects made use of this verb form.

Example: *Ons het nie gewees soos vandag se kinders nie.* (CA)

(We were not like today's children)

Ons was nie gewees soos vandag se kinders nie. (SA)

(We were not like today's children)

• Subject – Verb – Object patterns

Afrikaans is classified as a Subject – Verb – Object (SVO) language by some analysts and as SOV by others. The lack of agreement is due to the fact that Afrikaans has both patterns. Clauses can both have XV⁷ and VX patterns (Ponelis, 1993). One of the most striking features of Cape Afrikaans distinguishing it from standard Afrikaans is its optional verb placement rules. In the structures which would be auxiliary X V in standard Afrikaans, there is a tendency in Cape Afrikaans towards auxiliary V X (+E)⁸. In standard Afrikaans, when the verb consists of a modal or a tense aspect auxiliary verb, these verb components are split up in certain contexts and other elements placed between them (McCormick in Mesthrie, 1995). In such contexts, the first auxiliary is in the second or third position depending on the presence of a

⁷ X indicates a sentence element

⁸ +E indicate where the structure matches a standard or non-standard English equivalent

conjunction. In Cape Afrikaans there is a concentration of verb components in the second position. This is illustrated in the example below:

Example: *Ek wil gaan na haar toe.* (CA)

(I want to go to her)

Ek wil na haar toe gaan. (SA)

(I want to go to her)

The change from SVO to SOV in Cape Afrikaans, is often triggered by a specific type of main clause verb namely intransitive verbs used to reflect the perspective of the speaker e.g. *ek weet* (I know), *ek sien* (I see) and *ek dink* (I think).

Example: *Ek sien daar twee bejaarde mense sit.* (CA)

(I see two elderly people sit there)

Ek sien twee bejaarde mense sit daar. (SA)

(I see two elderly people sit there)

The shift from SVO to SOV further appears to be triggered by the use of a copula is the verb in the subordinate clause. According to Oosthuizen (2000) this is typical of CA. In standard Afrikaans the verb shifts to a post object position (SVO) after a subordinating conjunction. In Cape Afrikaans the verb stays in the same position relative to the object as in the main clause (SVO).

Example: *... dat hulle is te laat vir die winkel.* (CA)

(... that they are too late for the shop)

... dat hulle te laat vir die winkel is. (SA)

(... that they are too late for the shop)

... dat die rykdom was eintlik die duiwe. (CA)

(... that the wealth was actually the grapes)

... dat die rykdom eintlik die duiwe was. (SA)

(... that the wealth was actually the grapes)

The above feature was only noticed in the language of the control subjects, except Control Subject 1 who used the standard Afrikaans form, since the experimental subjects did not exhibit the embedding of subordinate clauses. According to Bastiaanse et al. (1996) this is a typical preventative adaptation feature used by aphasic individuals as discussed in 3.3.

- **Topicalisation of clauses**

The shift from SVO to SOV also occurs due to the topicalisation of clauses. Both subject groups presented with this feature. According to authors like Kolk et al. (1990) topicalisation is a well documented strategy used by aphasic individuals in order to avoid a change in word order (preventative adaptation) as well as to place important information first in case they cannot complete the sentence. Labov (1977) stated that topicalisation can also be used as an evaluative element in narratives.

Example: *Hoeveel koerante daar is, weet 'n mens nie.* (topicalisation)

(How many papers there are, one does not know)

'n Mens weet nie hoeveel koerante daar is nie.

(One does not know how many papers there are)

Wat in die appels is, weet 'n mens nie. (topicalisation)

(What is in the apple knows one not)

'n Mens weet nie wat in die appels is nie.

(One does not know what is in the apple)

- **Auxiliaries**

No borrowed auxiliaries were used by either of the subject groups. The borrowed English verbs took Afrikaans morphemes paired with Afrikaans auxiliaries.

Example: *Hulle het gesafe.*

{They (auxiliary) safe (past tense)}.

This finding supports the research by McCormick (1989).

Both experimental and control subjects made use of auxiliary doubling.

Example: ‘...*maar ek het nog altyd gebid het.*’

(... but I auxiliary still always prayed auxiliary)

- **Past tense forms of certain irregular Afrikaans verbs**

Both experimental and control subjects regularised the past tense forms of certain irregular Afrikaans verbs e.g. ‘*probeer*’ (try), ‘*agtervolg*’ (follow) ‘*behandel*’ (treat). In Cape Afrikaans the prefix morpheme indicating the past tense namely *ge-* is connected to the verb and e.g. *geprobeer* (tried), *geagtervolg* (followed), *gebehandel* (treated).

Example: *Hy het geprobeer* (CA)

(He tried)

Hy het probeer (SA)

(He tried)

Sy het my goed gebehandel (CA)

(She treated me well)

Sy het my goed behandel (SA)

(She treated me well)

- **Prepositions**

Both the experimental and control subjects made use of double prepositions. Standard Afrikaans only uses one preposition whereas Cape Afrikaans is marked with the use of double prepositions for example: “*’n skat in die wingerd in.*” (A treasure in the vineyard in)

It is interesting to note that the doubling only occurs when the final preposition is in the sentence final position as in the example above. When the prepositional phrase does not occur in the sentence final position so that the second preposition is the last element in the sentence, doubling does not occur for example: “...*daar in die wingerd is ’n skat.*” (There in the vineyard a treasure). The doubling of prepositions occurred with the preposition ‘*in*’ (in) and ‘*uit*’ (out).

- **Double conjunction**

Both the experimental and control subjects made use of the double conjunction. Double conjunction is used as a rhetorical device by linking two statements - the second of which explains the first – with the conjunction spoken in a rising intonation adding an expressive phonology intensifier to the expression. Double conjunction, as explained here, were used by experimental and control subjects, as an intensifier for example: “*Hy moet maar die been afsit because why die been het al klaar genip.*” (He must then amputate the leg because why the leg has already died.)

- **Possessive pronouns**

Both the experimental and control subjects did not make use of possessive pronouns used in standard Afrikaans. Cape Afrikaans used the contracted form used in English. The ‘*se*’ is used to signal the possessive form, ‘s, of the object in the example above.

For example: *Dit was ons se huis (CA)*

It was our home (English)

Dit was ons huis (SA)

It was our home (English)

- **Conversational Historical Present Tense (CHP)**

Both subject groups used the historical present tense during the narratives. Standard Afrikaans uses mainly the past tense. The use of the conjunction ‘*toe*’ (then) triggers the use of historical present tense (Carstens, 1984). According to Romaine (1997) the alternation between conversational historical present tense and the past tense is a stylistic device used as a theatrical component to narrative.

- **Direct speech**

Both subject groups made use of direct speech during narrative production. The use of direct speech by the experimental subjects can however also serve as a compensation strategy used to avoid complex syntactic structures. By using direct speech the speaker does not have to embed one sentence into another. The use of direct speech in aphasia has been reported (Chapey, 1994; Berko Gleason et al., 1980). According

to McCormick (1989) the use of direct speech is a typical feature of the Cape Afrikaans dialect. Individuals use this strategy to highlight salient facts or use it to mark code switching. This feature of the dialect therefore overshadows the breakdown in syntax in language use of the Afrikaans speaking Coloured aphasic. As discussed in section 3.5.1 this finding has important implications for the assessment and intervention of aphasia in the Afrikaans speaking Coloured population. The use of direct speech was used the most in the Frightening Experience narrative.

- **Code-switching**

Both subject groups presented with code-switching in their narratives. Code-switching is defined as the juxtaposition or alternation of material from two (or more) languages or dialects (McCormick, in Mesthrie, 1995). The type of code switching which occurred in the data was conversational code-switching. This type of code-switching is largely unconscious although there are times when the code-switching is used to perform certain stylistic and pragmatic functions. Firstly Afrikaans speaking Coloured individuals also use code switching to indicate a change in focus during a conversation with a clearly discernible rhetorical function. It is repeating the meaning of the previous word and is therefore used for the purpose of emphasis as seen in 3.4 where the subjects used repetition as an intensifying element. In this case it is not used to fill a lexical gap. An example of the latter is the use of direct quoting by both subject groups. The quotation is foregrounded by the language switch. Secondly it is possible that the speakers use it when they can not recall a word in one language or do not know a word in one language but can recall it in the other. Lexical access problems are therefore a common feature of Cape Afrikaans since the use of loan words also occurs in normal individuals. This phenomenon makes it difficult to determine the role the preventative adaptation plays in the incidence of word finding difficulties in Afrikaans speaking Coloured aphasics.

3.6 ANALYSIS OF ADAPTIVE AND COMPENSATORY LANGUAGE FEATURES

Aphasic subjects present with a reduced capacity to keep sentence elements in computational simultaneity (Kolk et al., 1990). This leads to use of various language features by aphasic individuals which deviates from normal language use at a microlinguistic level. According to Kolk et al. (in Menn and Obler, 1990) the language features typically found in aphasic individuals' language use are the result of certain adaptations made by the aphasic speaker. Kolk et al. (in Menn and Obler, 1990) identified two types of adaptations. The first is corrective adaptation where the speaker tries to correct deviated language use. Symptoms of the latter are dysfluency and effortfulness. The second type of adaptation is that of preventative adaptation. By intentional selection of simple sentence forms the speaker can prevent premature disintegration because fewer elements have to be kept in computational simultaneity.

Preventative adaptation gives rise to two types of symptoms. First a reduction in the variety of grammatical forms by restriction to the use of only simple sentences or elliptical sentence forms and secondly the use of telegraphic style characterised by the omission of sentence form elements (Kolk et al. in Menn and Obler, 1990).

The qualitative aspects of adaptation and compensatory features were noted for each discourse and are presented in Table 3.16. General trends found between the different narratives and across subjects will be discussed below.

Table 3.16 Qualitative Analysis of Adaptation features produced by Experimental and Control subjects

	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8
Feature								
Deletion of sentence elements	0	1	2	1	3	0	0	2
Repetition without ⁹narrative intent	20	14	2	12	14	10	8	10
False start	4	3	2	8	2	1	4	3
Phonemic paraphasia	1	1	2	0	0	0	0	0
Semantic paraphasia	1	0	0	0	1	0	0	0
Word finding Problem	2	0	1	0	0	0	2	4
Poor topic control	1	0	0	0	0	7	0	0
Fillers	8	6	1	1	8	1	1	8
Incomplete word/sentences	0	3	0	0	0	1	1	2
Total	37	28	10	22	28	20	16	29
	C1	C 2	C 3	C 4	C 5	C 6	C 7	C 8
Feature								
Deletion of sentence elements	0	0	0	0	0	0	0	0
Repetition without narrative intent	11	10	7	2	6	4	5	7
False start	4	9	3	3	7	0	7	1
Phonemic paraphasia	0	0	0	0	0	0	0	0
Semantic paraphasia	0	0	0	0	0	0	0	0
Word finding Problem	0	0	0	0	0	0	0	2
Poor topic control	0	0	0	0	0	0	0	0
Fillers	5	4	10	2	3	4	4	1
Incomplete word/sentences	0	1	0	0	1	0	0	2
Total	20	24	20	7	17	8	16	13

Key: S – Experimental Subject, C – Control Subject

As can be seen in Table 3.16, all subjects produced adaptation features. Only the features used by the subjects in the narrative tasks were listed and analysed in Table 3.16. There was a marked difference between the amount of language errors produced by the two subject groups. Both the experimental and control subjects' performance varied across subjects. The experimental subjects produced more of these adaptations

⁹ Repetition used as an intensifier element as discussed in Table 2.11

than their matched controls. Although all the experimental subjects presented with adaptation features, not all of them presented with the same features.

Various preventative adaptation features marked the experimental subjects' language use namely: reduced syntactic complexity, the omission of grammatical morphemes and syntactic structures and use of repetition. The subjects also displayed the use of corrective adaptation for example phonemic realisation (phonemic paraphasias¹⁰) and in semantic specification (semantic paraphasias), false starts and fillers. This finding supports the research conducted by Glosser and Deser (1990) who found that fluent aphasics were impaired on measures of the microlinguistic aspects of discourse production. Fluent aphasics presented with disturbances in phonological, lexical-semantic, and syntactic aspects of language production (Glosser and Deser, 1990). Bastiaanse, Edwards and Kiss (1996) reported a reduction in grammatical complexity in fluent aphasics' language specifically a lack of the use of subordination as well as verb variety.

The total amount of features used by the control subjects varied across the subjects. The control subjects showed more variation in the occurrence of the errors across subjects. Control Subjects 1, 2 and 3 produced more errors than the other subjects who produced relatively the same amount of errors. All the subjects produced more repetitions than any other type of adaptations. These repetitions differed from those mentioned in 3.4, in that these repetitions were used without intent to create emphasis.

Example of repetition without intent to emphasise:

" ...en toe't ek net uh uit die TV-kamer gekom en na die kamer gekom en na die kamer gestap."

(... and then I just uh came out of the TV room and came to the TV room en walked to the TV room.)

¹⁰ Paraphasias consists of an incorrect and/or unintended word or sound for a correct one (Chapey, 1994)

Example of repetition with intent to emphasize:

“Ek het gedink dit was so close gewees you know. Ek was nog nooit so close gewees nie you know. Weet u dit het my seker ‘n jaar, ‘n jaar gevat voor daai afgegaan het van my. Hulle moes vir my ‘n sekuriteitwag gekry het vir die jaar.”

(I thought it was so close you know. I have never been so close you know. Do you know it probably took me a year, a year before that went away. They had to get me a security guard for the year.)

The Cape Afrikaans Coloured cultural group of interest in this study, represents an example of a high involvement culture. This implies the value of fluency, listener participation, a full verbal channel in narrative production. According to Ulatowska et al. (2000) aphasia does not destroy the most fundamental thematic functions potentially filled by repetition in the case of milder degrees of severity. This finding of preservation in Afrikaans speaking individuals with aphasia is even more significant since these individuals were drawn from an ethnic group which appears to already make extensive use of repetition as a discourse tool. Ulatowska et al. (2000) stated that the latter finding allows for better differentiation between ethnic repetitions and repetitions which resulted from the language deficits of aphasia.

The findings of this study support previous research (Ulatowska et al., in press and Ulatowska, 1998). The control subjects presented with the same errors namely false starts, repetitions and fillers. The control subjects also used repetitions more than other errors. The control subjects’ performance therefore confirmed the incidence of false starts, repetitions and fillers in the language of normal speakers. This finding has important implications for intervention, which will be discussed in more detail in Section 4.

This section presented the results and specific discussion regarding the findings in this study. A more generalised discussion of global issues regarding the findings will be presented in the following section.

4 GENERAL DISCUSSION

This section provides a general discussion of the results of the study, as outlined in Section 3. The discussion includes the overlap found between the different discourse features used by both subject groups, pragmatic competence, critical evaluation of the clinical usefulness of the Discourse Battery (Ulatowska et al., 1998) as well as language status.

4.1 OVERLAP BETWEEN DIALECTAL AND DISCOURSE ETHNIC MARKERS AND ADAPTATION FEATURES

A significant finding of this study was the overlap found between the dialectal and ethnic discourse features and the adaptation features. There was much overlap between the dialectal and discourse ethnic markers pertaining to Cape Afrikaans discussed in 3.4 and 3.5 and the adaptation features discussed earlier in 3.6.

The Cape Afrikaans dialect is marked with code-switching between English and Afrikaans, frequent use of repetition, topicalization, the use of direct speech in discourse instead of embedding sentences, as well as the use of fillers in the form of ritual utterances. Furthermore the dialect has certain grammatical forms that differ from those used in standard Afrikaans for example the reduplication of auxiliaries and prepositions. The findings of the study indicated that both the aphasic and control subjects presented with the features mentioned above. One could therefore argue that these characteristics of Cape Afrikaans are still preserved after it 'survived' the aphasia. Furthermore the use of repetition, topicalization, fillers such as ritual utterances, the use of direct speech as well as code-switching are also features that are typical adaptation and compensation features found in aphasic language. Hence there is an overlap between the dialectal and discourse ethnic markers and adaptation features used to compensate for breakdown in language. The dialect and discourse ethnic markers overshadow the breakdown in language due to aphasia since these markers share common features with the adaptation features. One could therefore

argue that the characteristics of the Cape Afrikaans dialect has the potential to decrease the degree of handicap caused by mild to moderate aphasia. This finding has important implications for the assessment and treatment of Afrikaans speaking persons with aphasia. As mentioned by various authors (Menn and Obler, 1990; Edwards and Bastiaanse (1998), and Bastiaanse and Jonkers (1998), it is very important to have in depth knowledge of the various ethnic and grammatical features of a specific language in order to assess and diagnose language competence in that language. Each language has different underlying grammatical processes which will determine what is considered deviant and what is within the normal range. Future research using larger sample sizes is therefore needed to investigate and document the features of Cape Afrikaans in persons with aphasia.

The notion of adaptation is a core feature of pragmatic competence. Several researchers have reported the preserved pragmatic competence of individuals with aphasia. (Goldstein (1948 in Penn, 1999) stated that the aphasic patient tries to achieve a condition which enables him to react optimally to tasks arising from the environment. According to the adaptation theory of Kolk and Heeschen (1990), aphasic individuals employ various forms of preventative adaptations as well as corrective adaptations in order to cope with the linguistic demands imposed on them by the environment.

Their repair of lexical use in one language further exhibited the experimental subjects' pragmatic competence after the occurrence of conversational code switching in the case where the examiner was a speaker of standard Afrikaans. The subjects provided the standard Afrikaans of the words or utterances immediately following the production of the Cape Afrikaans version for the word. The acknowledgement of the listener's social context is indicative of preserved pragmatic knowledge, which enables them to recognize and appreciate different social contexts and adjust accordingly.

4.2 CLINICAL USE OF DISCOURSE BATTERY

In this study the Ulatowska test battery (1998) proved to be clinically useful. The administration of the test is fairly quick which makes it ideal for the assessment of aphasic patients' narrative discourse production. In contrast to the standard assessment instrument used in this study namely, the WAB (Kertez, 1982), the Ulatowska Discourse Test Battery (1998) provided information regarding social, linguistic and cognitive dimensions of the subjects' communication. As mentioned earlier in Section 1, these aspects of communication cannot be separated since these dimensions influence one another due to their interdependency. The inclusion of the provision of the main idea and lesson in some of the narratives provided useful information regarding the subjects' divergent cognition and language. The results obtained indicated similarities in the divergent naming task of the WAB (1982) and the divergent language tasks of the test battery namely, the provision of the main idea and lesson of the narratives as well as the proverb interpretation tasks. The aphasic subjects showed a marked decrease in performance across the above tasks. It is however difficult to determine the exact cause of the breakdown due to the interrelationship between language and cognition as discussed in 3.3

The respective ratings for the quality of the narratives in the Discourse Test Battery (Ulatowska et al., 1998) provided very useful information regarding the areas of breakdown during narrative discourse production. Contrary to this the global rating of spontaneous speech production measured on the WAB (Kertez, 1982) only distinguishes between the information content and fluency but gave no indication of the underlying factors/areas contributing to the breakdown in spontaneous speech. Scores obtained by the experimental and control subjects on the picture description task of the WAB (Kertez, 1982) did not provide an accurate reflection of the subjects' performance on the narrative tasks of the Discourse Battery (Ulatowska et al., 1998). Analysis of the information content measured by the amount of propositions revealed that both subject groups provided more information on the other tasks. The picture description also did not elicit as many ethnic and dialectal features typical of Cape Afrikaans.

The Discourse Test Battery (Ulatowska et al., 1998) provides the clinician with the opportunity to examine the subjects' microlinguistic as well as macrolinguistic language performance. Apart from the global ratings of the subjects' spontaneous speech obtained from the WAB (Kertesz, 1982) this test merely provided the researcher with a microlinguistic analysis of their language competence. As mentioned previously, it is imperative to assess both microlinguistic and macrolinguistic language functions. The macrolinguistic processes play a very important role in communicative competence. It is therefore imperative to address this in functional intervention, which focuses on communicative competence. The aphasics used for this study displayed remarkably intact skills for appreciating and conveying meanings at the suprasentential level of discourse. The findings revealed that the Discourse Test Battery (Ulatowska et al., 1998) is therefore an appropriate assessment instrument to assess macrolinguistic skills.

The test battery included various topics familiar to the subjects. The topics included typical issues of the Cape Flats' current social situation. The majority of the study population suffers from financial difficulties (Counting Money narrative), social problems (Easter Monday narrative) and juvenile delinquency (Apple Theft narrative). This population is further familiar with farm labouring on wine farms since the wine and grape production industry is based in the Western Cape (Father and Sons Fable). Finally, this population is very familiar with frightening experiences due to the high crime rate in the Western Cape as well as the high incidence of heart disease in the Coloured population. The topics' familiarity can be considered as conceptual or prior knowledge possessed in that area. Chin, Williams and Della Volpe (1995) propose that prior knowledge may take the form of cognitive schema or schemata: organized structures which influences perception, learning and performance. Greater familiarity increases the schema available for that topic area. The research conducted by Chin, Williams and Della Volpe (1995) proved topic familiarity as a critical variable in both aphasic and normal subjects' performance on story retell tasks. The subjects used in the study exhibited greater ability to recall the main events of the narrative.

4.3 LANGUAGE STATUS

The results obtained using an adapted version of the Paradis Bilingual Questionnaire (1987) indicated marked variation in the subjects' patterns of exposure to English and Afrikaans in both subject groups. The wide range in variation made it extremely difficult to determine a correlation between the use of ethnic markers and dialectal features and the nature of primary and secondary exposure to English. All subjects produced features of the Cape Afrikaans dialect. McCormick (in Mesthrie, 1995) refers to Cape Afrikaans as a vernacular. The components of the vernacular according to McCormick (1989) are outlined in figure 1 below.

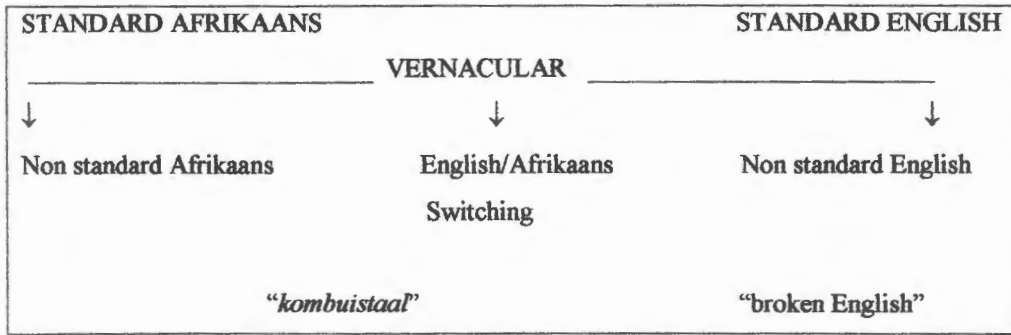


Figure 1 Components of the Cape Vernacular (McCormick in Mesthrie, 1995)

According to McCormick (in Mesthrie, 1995), Coloured parents increasingly try to speak English to their children even when they continue to use the vernacular with each other and in conversation with older relatives. This is the result of the view by the Cape Coloured population that English is a prestige language and the language of education (McCormick in Mesthrie, 1995) and social and economic advancement. The parents do however speak mainly second language (L2) English to their children. It is therefore not surprising that Cape Afrikaans is marked with a vast amount of English words and grammar influences as discussed in 3.4. The degree of convergence in each subject's language depends upon the type of language input the individual received at various stages of his/her life. The older subjects (experimental and control) produced more elements of convergence than the younger subjects. This is not significant due to the small sample size and will have to be investigated further to determine the relationship between these factors. However, it does however appear as if an individual's degree of convergence/bilingualism can be placed on a

continuum, with Cape Afrikaans at the one end of the continuum, non-standard English on the other end and codeswitching between the languages in the middle. An individual's primary and secondary exposure to English and - the duration of exposure will determine the position on the continuum.

From the above it is clear that knowledge of the patient's language history is very important in determining his/her position on the continuum. It would however have been more useful if one (the clinician/researcher) had knowledge of the subjects' parents' language history. This is not included in the Paradis Questionnaire (1987). By merely stating whether the subject was exposed to English or Afrikaans does not provide any information regarding the nature of the English or Afrikaans. Due to the influence English and Afrikaans have on each other it would be of greater clinical use in the assessment of Cape Coloured adult individuals in both languages in order to determine their position on the continuum.

This section presented the general discussion of the findings of this study.

5 CONCLUSION

5.1 GENERAL CONCLUSIONS

The study set out to characterise the discourse production of South African Afrikaans speaking Coloured persons with mild to moderate aphasia and matched controls across various narrative tasks. The characteristics, which were investigated, included the length of the narratives, amount of information content of the narratives measured in terms of propositional units, quality of the narrative discourse, the interpretation of proverbs and the use of evaluation throughout the narratives. The study further aimed to examine the discourse ethnic markers, the features of the Cape Afrikaans dialect as well as the adaptation features used in the narratives of the normal and aphasic subjects. In addition the study investigated whether or not the Discourse Test Battery (Ulatowska et al.,1998) differentiated between the experimental and control subjects. It was further determined which narrative task best differentiated the two groups and would therefore be the most useful in the assessment of communicative competence of Afrikaans speaking Coloured adults.

The narrative tasks consisting of 'Composite Pictures', Apple Theft sequence pictures and 'Frightening Experience' required the use of narrative imagination and plotment as well as the joining of sentences (Ulatowska et al., 1998). In addition the inclusion of the Fable Retell task required working memory skills as well as attention. The subjects were also required to provide the summary, gist and lesson in some narrative tasks which examined their ability to use more abstract lexicon as well as generalization skills. In addition to the generalization of responses, the cognitive and metaphoric language aspects of discourse production were also examined with the inclusion of the proverb interpretation tasks.

Despite variance within each group, the findings of this study indicated differences between the experimental and control groups in terms of narrative length, amount of information/propositional units, quality of narratives, proverb interpretation as well as

the use of evaluation. In general the control group performed better than the experimental group. However these differences were not always significant.

The results of the study proved the assessment of the quality analysis and the analysis of intensifiers to be the best for the purpose of differentiating between the experimental and control groups. In general the control group produced narratives of better overall quality than the experimental group. The results indicated that the Apple Theft narrative was the most sensitive stimulus to group differences. However the control subjects also experienced difficulties with this narrative task. The reason for this is possibly the population group's unfamiliarity with the task. Other individual features which differed significantly between the groups were the global structure of the Easter Morning as well as the Apple Theft tasks, the suspense for the Apple Theft and the clarity ratings for the Apple Theft and Frightening Experience task. Group differences were also observed for the temporal sequencing aspect of the Frightening Experience task. In general the experimental subjects displayed preserved suspense, coherence and reference abilities. These findings support the research by Ulatowska et al. (1983), Ulatowska et al. (1992) as well as Ulatowska et al. (1998).

The results of this study indicated that both groups made use of all the intensifier categories. In general the control group used more intensifiers than the experimental group. Both subject groups used ritual utterances, expressive phonology as well as lexical items more than the other intensifier categories. As in the case of the quality ratings the Apple Theft task showed significant group differences for the expressive phonology and lexical item intensifier categories. As previously mentioned this finding might be the result of the subjects' unfamiliarity with the task. The findings further indicated that the use of the evaluation of intensifiers for the purpose of differentiating between aphasia and normal language is not sensitive enough due to the lack of significant differences found between the groups. The reason for the lack of significant differences between the two groups might be the influence of the type of tasks as well as the overlap between the dialectal and discourse ethnic features and adaptation features as discussed in Section 3. The application of these features to the aphasic patient's narrative will therefore be beneficial since could serve as a compensatory strategy during spontaneous speech.

In addition, knowledge of these features enables the clinician to make a differential diagnosis between cultural and aphasic language features. The correct diagnosis of an impairment, disability and handicap is imperative to the credibility of the profession as well as ethical practice. The Discourse Test Battery (Ulatowska et al., 1998) proved to be culturally appropriate since it elicited the use of natural language in the Cape Afrikaans dialect.

The inclusion of the request for the main idea and lesson (fable) provided the researcher with useful information regarding the subjects' abilities to employ abstract language as well as to generalize responses beyond the immediate concrete surroundings. The control group performed better than the experimental groups in terms of the degree of generalization in their responses. As mentioned previously the inclusion of the main idea as well as proverb interpretation address the cognitive dimension of communication. This is not assessed with standardized aphasic instruments, i.e. WAB (Kertesz, 1982). Problems in this area are often disguised and could present as normal. However, the purpose of language intervention, including the assessment of language performance, is to bring about change in the communicative system (linguistic, social and cognitive) of individuals that are relevant to their needs for formal and informal learning as well as gainful occupation. These findings makes it imperative to assess and treat discourse performance in mild to moderate aphasics since this population is most likely to return to their professions as well as perform their premorbid social roles.

The uniqueness of the study lies in the population investigated in the study. To the best of the researcher's knowledge no previous research has been conducted to investigate the narrative discourse performance of Afrikaans speaking Coloured individuals with aphasia, from a macrolinguistic framework of analysis. Previous research on Cape Afrikaans has included sociolinguistic studies that only focussed on the microlinguistic characteristics of normal Afrikaans speaking Coloured individuals. The study also differed from the research conducted by Ulatowska et al. (1998) using the same test battery on African-American individuals with and without aphasia. The

current study examined all subcomponents of intensifying elements whereas Ulatowska et al. (1998) only included the use of repetition.

A limitation of this study may include the use of an interlocutor who was not from the same ethnic background. This may have influenced the type and amount of ethnic markers used in the narratives. It was found that subjects tend to produce the standard Afrikaans form to the word following instances of lexical convergence or code switching as a result of the researcher being a Caucasian interlocutor. Further research is however necessary to investigate this finding.

5.2 THEORETICAL AND CLINICAL IMPLICATIONS

The findings of the study have various theoretical, clinical and research implications. The study was exploratory in nature and added knowledge regarding the narrative discourse characteristics of Afrikaans speaking Coloured persons with and without mild to moderate aphasia. Furthermore additional information was obtained regarding the discourse ethnic markers and dialectal features of the Cape Afrikaans dialect. The study indicated that various language features are preserved in the Afrikaans speaking person with mild to moderate aphasia. In addition the findings indicated that the Cape Afrikaans dialect provides the speakers of this dialect with aphasia with various compensation strategies that is part of the dialect.

New information regarding proverb interpretation by Afrikaans speaking Coloured persons with and without aphasia was obtained. To the best of the researcher's knowledge this study was the first to investigate the use of proverbs and the interpretation of proverbs within the Coloured Afrikaans speaking population.

The study proved the value of discourse to the assessment of aphasia. This finding supports the notion of the inclusion of a discourse analysis in the assessment battery for adult language use. It provides valuable information regarding the individual's narrative discourse competence. Assessment of narrative discourse evaluates all three prerequisite components of communication namely social, cognitive and linguistic

knowledge as well as the interaction between these components. This provides the therapist with useful information regarding the degree of handicap for each client. Assessment at single word and sentence level does not elicit these aspects of language use and communicative competence. Assessment instruments should be placed on a continuum of linguistic measures. All types of assessment tools can be placed on this continuum with the tests for discourse competence on the one end and the psychometric tests on the other end. The continuum will therefore provide room for tests of both a descriptive and psychometric nature as well as those that fall between these two extremes. Since the tests of narrative discourse provide a good reflection of an aspect of a person's communicative competence it is very useful as an initial assessment tool. The clinician can then decide which tests are needed to assess the form of language use that gives rise to the level of communicative efficiency. This top-down approach to assessment enables the clinician to prioritise assessment procedures. Furthermore it provides the opportunity to assess the impairment, disorder and handicap.

Important clinical implications stemmed from this research. The study indicated the clinical usefulness of the Discourse Battery (Ulatowska et al., 1998) for the assessment of narrative discourse in Afrikaans speaking Coloured persons with mild to moderate aphasia. The study proved to be efficient and effective. This discourse battery elicits both microlinguistic and macrolinguistic skills and therefore covers the areas not assessed by standardized assessment instruments. The study indicated that assessment of narrative discourse must be conducted across multiple tasks since task differences influence the subjects' narrative performance. The results of the study further indicated that both subject groups experienced difficulty with the Apple Theft narrative task. As discussed previously the subjects might have been unfamiliar with a sequence picture task. Further research is needed to investigate the influence of task characteristics on the speakers of Cape Afrikaans with and without aphasia. The Personal Experience on the other hand did elicit the use of the most intensifiers and dialectal and discourse ethnic markers. Narrative discourse must therefore be assessed on a variety of tasks which require different combinations of linguistic and cognitive skills. It is important to ensure that the stimuli used in the tasks are culturally appropriate. In the study it was found that the nature of the stimuli can influence

results and not necessarily always only the type of task. The aphasic individuals produced narratives of higher quality during the tasks that provided them with some structure to build a narrative as in a story retelling task. The story generation task of a personal experience however proved to be the best task for the elicitation of richer language containing more intensifying elements and ethnic markers. The study also revealed the clinical usefulness of the assessment of intensifier elements in discourse. These intensifying elements were found to be used as ethnic discourse markers as well as adaptation strategies by the subjects. The overlap between the dialectal and discourse ethnic markers as well as the adaptation and compensation strategies typical of aphasic language has very important clinical implications for the assessment and treatment of speakers of Cape Afrikaans with aphasia. The overlap in the above features indicates that the dialectal and discourse ethnic markers and adaptation strategies should not be corrected in therapy but rather be used as a strength and foundation for new skills.

5.3 FUTURE RESEARCH

The study undertaken was exploratory in nature since it was the first to investigate and document the discourse characteristics of Afrikaans speaking Coloured persons with and without aphasia. Hopefully the findings of the study will encourage future research in this area. During the course of the study various areas for future research have been identified and will be discussed below.

Only a small sample size was used for this study since the study was exploratory in nature. A larger subject sample is however necessary to confirm the findings of this research project as well as to enable generalisation of the findings to the Afrikaans speaking Coloured population. More research is needed on the ethnic markers and dialectal features of the Cape Afrikaans dialect of healthy and aphasic individuals. In addition research is required investigating the variation in discourse behaviour in the normal speakers of Cape Afrikaans in order to establish a data base of language norms for Cape Afrikaans. For the purpose of this study the discourse behaviour of only mild to moderate aphasia was investigated. The performance of more severe aphasics on the narrative discourse tasks needs to be investigated for the purpose of determining

the status of their communicative competence. Research on the discourse performance of other ethnic and neurogenic populations using the Discourse Battery (Ulatowska et al., 1998) is needed due to South Africa's multilingual population.

The study has indicated that the use of intensifiers plays a very important role in the narrative discourse of Afrikaans speaking Coloured aphasics and normal individuals. Future research also needs to investigate the use of the other categories of evaluative elements, namely: comparators, correlatives and explicatives (Labov, 1977). The study was the first to investigate the use of proverbs in the Afrikaans speaking Coloured community. Research is needed to investigate the use of proverbs used in the Cape Afrikaans dialect.

The data collection process of the study indicated that the ethnic status of the interlocutor, who was Caucasian, influenced the subjects' use of the Cape Afrikaans dialect. Research should therefore address the influence of the ethnic status of the interlocutor on the production of dialectal and ethnic discourse markers in order to determine if racial and cultural differences have an effect on the type and amount of these features.

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List of Appendices

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APPENDIX 1

Translated version of the Bilingual Aphasia Questionnaire – Paradis (1987)

Tweetaligheidsgeskiedenis

1. Wat is u geboortedatum?
2. Waar is u gebore?
3. Watter taal het u as kind die meeste by die huis gepraat?
4. Het u as kind enige ander tale by die huis gepraat?
Indien 'nee' gaan na vraag 6
5. Watter ander tale het u as kind by die huis gepraat?
6. Wat was u vader se eerste taal?
7. Het hy enige ander tale gepraat?
Indien 'nee' gaan na vraag 11
8. Watter ander tale het u vader gepraat?
9. Het u vader enige ander tale tuis gepraat?
10. Watter taal het u vader die meeste met u gepraat?
11. Wat was u moeder se eerste taal?
12. Het sy enige ander tale gepraat?
Indien 'nee' gaan na vraag 15
13. Watter ander tale het u moeder met u gepraat?
14. Het u moeder enige ander tale tuis gepraat?
15. Het enige iemand anders na u omgesien toe u klein was?
Indien 'nee' gaan na vraag 21
16. Wat was die persoon se eerste taal?
17. Het die persoon enige ander tale gepraat?
18. Watter tale het die persoon die meeste gepraat?
19. Het die persoon enige ander tale tuis gepraat?
Indien 'nee' gaan na vraag 21
20. Wat was die tale ?
21. Watter tale het u as kind die meeste met u vriende gepraat ?
22. Hoeveel jare was u op skool ?

23. In watter taal het u onderrig ontvang ?
24. Watter taal het die meeste van die leerlinge by die skool gepraat ?
25. Het u taal van onderrig verander tydens u skoolopleiding ?
Indien 'nee' gaan na vraag 29
26. Wat was hierdie taal ?
27. Na hoeveel jaar van onderrig het u onderrigstaal verander ?
28. Watter taal het die meeste van die leerlinge by die skool gepraat ?
29. Het u enige opleiding na skool ondergaan ?
30. Wat was die taal van onderrig tydens die opleiding ?
31. Watter beroep het u beoefen na voltooiing van u opleiding ?
32. Watter tale kon u praat voor die beroerte ?
33. Het u vermoë om die begenoemde tale te praat verander na die beroerte ?

History of Bilingualism (English translation)

1. What is your date of birth ?
2. Where were you born ?
3. Which language did you speak the most as a child ?
4. Did you speak any other languages at home as a child ?
Move to question 6 if the answer to the above is 'no'
5. Which other languages did you speak at home as a child ?
6. What was your father's first language ?
7. Did he speak any other languages ?
Move to question 12 if the answer to the above is 'no'
8. Which other languages did your father speak ?
9. Did your father speak any other languages at home ?
10. Which other languages did your father speak the most with you ?
11. What was your mother's first language ?
12. Did she speak any other languages ?
Move to question 15 if the answer to the above is 'no'
13. Which other languages did your mother speak ?
14. Did your mother speak any other languages at home ?
15. Did any one else look after you when you were a child ?
Move to question 21 if the answer to the above is 'no'

16. What was this person's first language ?
17. Did this person speak any other languages ?
18. Which other languages did this person speak ?
19. Did this person speak any other languages at home ?
Move to question 21 if the answer to the above is 'no'
20. What where these languages ?
21. Which language did you speak most often to your friends ?
22. How many years were you at school ?
23. What was your language medium of school education ?
24. What was the language spoken by most children at school ?
25. Did your language medium of education change while you were at school?
Move to question 29 if the answer to the above is 'no'
26. What was the new medium of education ?
27. After how many years of education did your language medium change ?
28. What was the language spoken by most children at school ?
29. What training have you had after school ?
30. What was the medium of education during this training ?
31. What is your occupation ?
32. What languages could you speak before the stroke ?
33. Has your ability to speak the above mentioned languages changed since the stroke ?

Appendix 2

Consent letter for experimental subjects

Dept. Spraakheelkunde
Universiteit van Kaapstad

Geagte _____

INSAKE DEELNAME AAN NAVORSINGSPROJEK

Ter voltooiing van my meestersgraad in Spraakheelkunde doen ek 'n navorsingsprojek. Die projek poog om die gebruik van 'n nuwe toetsbattery vir afasie vir die Afrikaanssprekende Kleurling populasie te ondersoek asook om die kenmerke van die populasie se taalgebruik te bestudeer.

Die studie behels die analise van verskeie taalfunksies van individue wat beroertes onderlede gehad het. Verskeie prente sal as stimulusmateriaal gebruik word. Data sal versamel word deur middel van video opnames van die individue se gesprekke met die toetsafnemer. Die opnames sal ongeveer een uur duur. Geen identifiserende inligting sal bekend gemaak word tydens asook na voltooiing van die studie nie. Indien u sou verkies om nie aan die navorsingsprojek deel te neem nie sal dit geensins die geleentheid om terapie te ontvang affekteer nie. Deelname aan die projek is vrywilliglik.

U deelname aan die projek word waardeer.

Indien u enige vrae het kan u my kontak by telefoon 083 741 3002.

Die uwe,

A. Venter (Spraakterapeut)

D. Ogilvy (Kliniese toesighouer: Spraakheelkunde)

Ek (naam van deelnemer), Verleen hiermee toestemming vir deelname aan die navorsingsprojek deur Analou Venter.

Geteken opdag van

Handtekening:

Consent letter for experimental subjects

Dept of Speech Pathology
University of Cape Town

Dear _____

RE: PARTICIPATION IN RESEARCH PROJECT

In order to complete my masters degree in Speech Pathology I am conducting a research study. This study will aim to test a new test battery for aphasia in the Afrikaans speaking Coloured population. In addition the study will aim to investigate the language features of Cape Afrikaans.

The study entails the analysis of various language functions of persons who had a stroke. Several pictures will be used as stimulus material. The individuals who participate in the study will be asked to tell several stories which will be video recorded for further analysis. The recordings will take approximately one hour. The data as well as all other identifying information gathered during the study will be strictly confidential. Your opportunity to receive therapy will not be influenced if you wish not to participate in the study.

Your participation in this project is appreciated.

Please contact me if you require any further information (tel: 083 741 3002)

Yours sincerely,

A. Venter (Speech Therapist)

D. Ogilvy (Clinical Supervisor)

I (name) agree to participate in the research project
conducted by A. Venter

Signed on day of

Signature

Appendix 3

Consent letter for control subjects

Dept. Spraakheelkunde
Universiteit van Kaapstad

Geagte _____

INSAKE DEELNAME AAN NAVORSINGSPROJEK

Ter voltooiing van my meestersgraad in Spraakheelkunde doen ek 'n navorsingsprojek. Die projek poog om die gebruik van 'n nuwe toetsbattery vir neurogene kommunikasie-afwykings onder die Afrikaanssprekende Kleurling populاسie te ondersoek asook om die kenmerke van die populاسie se taalgebruik te bestudeer.

Die studie behels die analise van verskeie taalfunksies van individue wat beroertes onderlede gehad het. Verskeie prente sal as stimulusmateriaal gebruik word. Data sal verslam word deur middel van video opnames van die individue se gesprekke met die toetsafnemer. Die opnames sal ongeveer een uur duur. Geen identifiserende inligting sal bekend gemaak word tydens asook na voltooiing van die studie nie. Deelname aan die projek is vrywilliglik.

U deelname aan die projek word waardeer.

Indien u enige vrae het kan u my kontak by telefoon 083 741 3002.

Die uwe,

A. Venter (Spraakterapeut)

D. Ogilvy (Kliniese toesighouer: Spraakheelkunde)

Ek (naam van deelnemer), Verleen hiermee toestemming vir deelname aan die navorsingsprojek deur Analou Venter.

Geteken opdag van

Handtekening:

Consent letter for control subjects

Dept of Speech Pathology
University of Cape Town

Dear _____

RE: PARTICIPATION IN RESEARCH PROJECT

In order to complete my masters degree in Speech Pathology I am conducting a research study. This study will aim to test a new test battery for aphasia in the Afrikaans speaking Coloured population. In addition the study will aim to investigate the language features of Cape Afrikaans.

The study entails the analysis of various language functions of persons who had a stroke. Several pictures will be used as stimulus material. The individuals who participate in the study will be asked to tell several stories which will be video recorded for further analysis. The recordings will take approximately one hour. The data as well as all other identifying information gathered during the study will be strictly confidential. Your opportunity to receive therapy will not be influenced if you wish not to participate in the study.

Your participation in this project is appreciated.

Please contact me if you require any further information (tel: 083 741 3002)

Yours sincerely,

A. Venter (Speech Therapist)

D. Ogilvy (Clinical Supervisor)

I (name) agree to participate in the research project
conducted by A. Venter

Signed on day of

Signature

APPENDIX 4

Translated version of Father and Sons Fable

'n Boer en sy seuns het in 'n wingerd gewerk en baie ryk geword. Hy wou graag hê sy seuns moes net soos hy wees. Toe hy op sy sterfbed lê, sê hy vir sy seuns daar lê 'n groot skat in die wingerd versteek. Toe die boer sterf, gaan die seuns na die wingerd en dolwe dit van hoek tot kant om, maar hulle kry die skat nêrens nie. Maar toe die oestyd aanbreek, dra die wingerd die mooiste druiwe ooit. Toe verstaan die seuns die ware betekenis van die skat.

A farmer in a vineyard and became very rich. He wanted his sons to be like him. When he was laying on his deathbed he told his sons that there was a treasure hidden in the vineyard. When the farmer died the sons digged every inch of the vineyard up but they could not find the treasure. When harvest time approached the vineyard beared the best grapes ever. When the sons saw this they understood what the real meaning of the treasure.

APPENDIX 5

List of proverbs for the spontaneous proverb task

1. Elke huis het sy kruis. (No house has but its cross)
2. Wat jy saai sal jy maai. (You will reap what you sow)
3. Wanneer die kat weg is, is die muis baas. (When the cat is away the mouse will play)
3. Die koeël is deur die kerk. (It is over and sone with)
4. Bloed is dikker as water. (Blood is thicker than water)

APPENDIX 6

List of proverbs for Multiple Choice Proverb Interpretation Task

1. Elke huis het sy kruis: (No house has but its cross)
 - a. By elke huis sal daar 'n kruis gevind word. (You will find a cross at every house)
 - b. Kruise word in algemene plekke gevind. (Crosses are found in common places)
 - c. Elke persoon het sy eie probleme. (Every person has his own problems)
 - d. Boontjie kry sy loontjie. (Get what you deserve – interpretation of Afrikaans proverb)

2. Wat jy saai sal jy maai. (You will reap what you sow)
 - a. Woorde werk maar voorbeelde trek. (Deeds are better than words – interpretation of Afrikaans proverb)
 - b. Jy saai baie blomme. (You sow lots of flower seed)
 - c. As jy iets goed plant sal dit groei. (If you plant something well, it will grow)
 - d. Jy sal kry waarvoor jy werk. (You will receive what you work for)

3. Wanneer die kat weg is, is die muis baas. (If the cat is away the mouse will play)
 - a. Wanneer die kat loop, kan die muis homself geniet. (When the cat is gone the mouse can enjoy himself)
 - b. Katte en muise bly op 'n plaas. (Cats and mice live on a farm)
 - c. Hoe later hoe kwater. (The longer it lasts, the worst it becomes)
 - d. Wanneer die baas weg is, sal almal doen met wat hulle wil. (When the boss is away every one will do as they like)

4. Die koeël is deur die kerk. (It is over and done with)
 - a. Daar is 'n koeël deur die kerk geskiet. (A bullet was fired through the church)
 - b. Gewere word nie in die kerk toegelaat nie. (Guns are not allowed in the church)
 - c. Dit is te laat om reg te maak. (It is too late to fix)
 - d. Gedane sake het geen keer nie. (You cannot do anything about it when it is over – interpretation of Afrikaans proverb)

5. Bloed is dikker as water. (Blood is thicker than water)
- a. Jy kan meer staat maak op jou familie as op jou vriende. (You can rely more on your family than your friends)
 - b. Hy het altyd 'n eiertjie om te lê. (He is always chipping in)
 - c. Bloed word met water afgewas. (Blood is rinsed off with water)
 - d. Bloed is minder vloeibaar as water. (Blood is less fluid than water)

APPENDIX 7

Frightening Experience narrative of Experimental Subject 1

Ja toe ek gegaan het vir my eerste operasie, dis in sixty, sixty-nine. Toe het ek ge... toe het ek binne 'n motorongeluk gewees. En toe het ek amper 'n jaar gelê in die hospitaal. En uh ... Maar die eerste operasie was ek baie bang gewees want ek het gedink ek gaan nou nooit weer uit die hospitaal uit kom nie. Ek was baie ... Hulle het my daar kom optel. Hulle sê ek het met my kop van die curve af gelê en uh as ek geval het met my kop op die curve dan het ek dood gewees. En ek het so baie operasies gehad because why ek het later maar vir die dokter gesê hy moet maar die been afsit, die been afsit. Sê die dokter "nee man". Of hulle nie maar die been kan las nie of hy nou maar vergruis is, hom maar probeer aansit. Toe sit hulle hom nou maar aan. Toe sit hulle hom skeef aan. Toe moet hulle vir hom weer breek want die been groei skeef aan die been homself. Hy groei uit by my vel uit. Toe weer breek en weer terug sit laat hy kan reg groei. In die tyd wat hulle my daar ge... toe reg groei. Toe vergeet hulle die boonste deel van my boud is ook nog gebreek en toe het die been al klaar gegroei. En toe sê hulle hulle kan nie nou meer jou help nie because why die been het al klaar genip cause hy moet nou hy nou hy nog hy't nou amper aangegroei amper. Hy's nou amper reg. Dis nou dit.

Yes, then I underwent my first operation, it is sixty, sixty-nine. Then I had... Then I was in a motorcar accident. And then I was in hospital for almost a year. And uh ... But during the first operation I was very scared because I thought I was never going to leave the hospital. I was very ... They picked me up there. They said I was lying with my head away from the curve and uh if I fell with my head on the curve I could have been dead. And I have had so many operations because why I later told the doctor that must amputate the leg, amputate the leg. The doctor said "no man". If they could not just mend the leg if he was crushed, but tried to put it back together. Then they put it back on. Then they put it on skew. Then they had to break it again because the bone was growing on skew to the bone. During this time that they me there ... then grew on

correctly. Then the forgot that the top part of my haunch is also still broken and then the bone had already grown. And then they said they could not help me anymore because why the bone had already died cause he must now he now he still he had now almost grew on correctly. He is almost right.

APPENDIX 8

Frightening Experience narrative of Control Subject 1

Ja ek het uh vyf jaar gelede. Dit was nou net vyf jaar gelede toe was ek deur Sarke Centre gestuur bank toe om die uh geld te gaan haal van die Strake, die bonusse en die Christmasgeld en uh dit het getotal na Thirty thousand rands toe. Twenty nine thousand odd rand. En uh weinig het ek geweet daar's manne wat vir my dophou daar in die bank. Toe't ek nou uitgekome met die sak geld. Wat ek nou ry uh met die kar en die geld het hulle my agtervolg. Eh uh ons uh tot by die robots. Ek stop nou en ek sien hier's 'n pr... pragtige BMW agter my, groen kar. En uh ek kry sommer suspisie dat ek wonder of hierdie man is darem nou is is is nou 'n hele tyd wat hulle agter my aanhang. En uh ek ry toe weg en ek ek kom toe by nog 'n lig. Die lig gaan nou geel en dit smaak my ek ek gaan nou weer stop. Maar ek ek gaan ou ietsie probeer hier. En toe maak of ek gaan stop, ek sit my my voet op my brake sodat my brakeligte kan brand agter brand. Maar ongelukkig is ek daai dag. Hulle jaag my toe in. Maar voordat hulle my injaag skiet hulle vier keer maar hulle skiet mis. Maar hulle vang my en beroof my met die geld, Thirty thousand rands. En ek was baie bang spesiaal toe ek die skote hoor. En ek let toe op dat een van die manne was een van die manne wat vir my in die bank gesien het. Hy het heeltyd daar gestaan so hulle het my seker dopgehou van seker vir 'n lang tyd. Weet ek kom geld haal op 'n sekere tyd van die maand. En uh ek was baie bang uh, my mond het heeltemal, my keel het heeltemal droog, gesmaak soos koper. Daai dag was ek die heel bangste in my lewe.

Ja I have five years ago ... I has just been five year since I was sent to the bank by the Starke Centre uh to fetch the Starke's money, the bonusses and the Christmas money and uh it totaled to thirty thousand rand. Twenty nine thousand odd rand. And uh little did I know that there were men who were watching me there in the bank. Then I came out of the bank with the bag of money. While I was driving the car with the money they followed me. And uh we uh at the traffic lights. Then I stop and I see here is a beau... beautiful BMW behind me, green car. And uh I get suspicious that I wonder if

this man has after all been has has has been a long time now that they have been following me. And uh I took off and I I get to another traffic light. The light turns yellow and I gather I I am going to stop again. But I I am going to to try something here. And then I pretended that I was going to stop, I put my foot on my brake so that my brake lights are shining at the back shining. But I was unlucky that day. They caught up with me. But before they could catch up with me they shot at me four times, but they missed. But they got me and robbed me of the money, thirty thousand rands. And I was very afraid specially when I heard the shots. And I then noticed that one of the men was one of the men that saw me in the bank. He stood there the whole time so they were probably watching me for a long time. Knew I was fetching the money at a certain time of the month. And uh I was very afraid uh my mouth completely, my throat completely, tasted like copper. That day I was the most frightened I have ever been in my life.