REPORT

VIEWING SPEECH PATHOLOGY
AS ASPECT OF APPLIED LINGUISTICS

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ABSTRACT

This article discusses the potential role of linguistics in the management of speech disorders. The article is particularly concerned with the situation in a country such as Kenya which lacks programmes or services for children with speech disorders. The article adopts a cybernetic view of speech as conceptualized in the neurolinguistic model of phonetics. In this connection a disorder is definable as a systematic deviation from the normal speech process and function. In the absence of special language programmes, as evidenced in the national educational reports, this article suggests a linguistic solution to the problem. Such a solution involves strategies whereby the linguist's theoretical knowledge and experience would be applied to develop speech pathology programmes.

1.0. Introduction

This paper is a response to what are perceived to be the limitations of the management of speech disorders within the special education sector of Kenya. The paper discusses the potential contribution of theoretical linguists in the establishment of a speech pathology programme. In this discussion, the term speech is used synonymously with spoken language.

1.1. Speech Pathology

The subject of speech pathology, of course, goes by several names, notably: language pathology, speech therapy, orthophonics, phoniatry, logopaedics, oratology and communicology (see Perkins 1971, Crystal 1980). All these terms refer to a discipline whereby professionals are trained to investigate the manifestations, causes, treatment procedures, and preventative strategies of speech disorders.

The concerned professionals are expected to have competence in at least the following four aspects of language: an in-depth understanding of the normal speech process, speech disorders and their development, assessment procedures used to identify speech disorders, and correctional techniques that have been known to improve or eradicate speech disorders.
1.3. Speech Disorder

Speech is considered defective if it deviates sufficiently from the norm to fail seriously in its role of communication (see Encyclopaedia Britannica 1964, Anderson and Newby 1973, Illiers 1978, Encyclopaedia Americana 1984). This could mean that what one says is partially or completely unintelligible, or, the manner of speech is a source of effort or embarrassment to the speaker or the hearer.

A speech disorder is either developmental or acquired. The latter often occurs after the speech learning process is complete, usually as a result of damage to either a central integrative organ or to the peripheral articulatory musculature. This discussion is more specifically concerned with developmental disorders. Developmental speech disorders are often congenital defects which can be observed during the critical speech formative age of two to four years.

A speech disorder can occur in any of the three principal aspects: formulation, expressive and/or receptive. Disorders have medical or linguistic descriptions but their naming is predominantly psychoanalytic, thanks to the work of Sigmund Freud (see Espir and Rose 1976). Widespread researched disorders are aphasia, dysarthria, apraxia, agnosia and stuttering.

Aphasia refers to the inability to formulate or understand language, resulting from a malfunction of the central nervous system. Aphasic behaviour may be receptive or expressive. The receptive aphasic has no speech and no understanding of speech, despite being intelligent and of adequate hearing ability. The expressive aphasic cannot speak at all although he/she hears and understands speech, has good intelligence and good muscle control.

Dysarthria is a disorder affecting muscular control, resulting in either complete inability to articulate speech sounds or the production of slow, laboured and distorted speech. A dysarthric behaviour consists of abnormalities in the rate, stress, velocities of articulatory movements, articulatory placements and fundamental frequency.

Apraxia is the incapacity to produce purposeful speech, due to the inability to perform specific behaviour at will. The person knows what to say but lacks control over the muscular activities required to articulate a certain word. Apraxia is usually regarded as the converse of agnosia. Agnosia is the inability to interpret sensory stimuli which are conveyed to the brain from the special senses. A person can hear and articulate utterances perfectly but is unable to relate words to their referents.

Stuttering is characterized by spasmodic interruptions of the fluency of speech in the form of hesitations, blockings, prolongations and repetitions of sounds, syllables or whole words. Severe cases of stuttering may be accompanied by excessive muscular tension, facial contortions, and irregularities of breathing leading to erratic speech stress, rhythm, intonation and tempo.

Besides these very severe and admittedly generalized disorders, there is the more specific assortment grouped under voice defects, as exemplified in aphonia, hoarseness, nasality and lisp. These terms refer to the inability to phonate sounds in the lar-
The Koech Report (1999) is momentous for three reasons. It addresses the problem of speech disorder under the heading: communication disorders. It also contains an explicit statement of future challenges, and a Special Education Bill. The latter emphasizes the obligations of the various arms of the Special Education Sector, namely: the Directorate, the Inspectorate, Kenya Institute of Education (K.I.E.), Kenya Institute of Special Education (K.I.S.E), Educational Assessment and Resource Centres (E.A.R.C.s), programmes and departments within the institutions of higher learning.

The compilation of this bill indicates that all is not well with the provision of special educational needs. There are four grave reasons for concern:

- Lack of financial resources leading to a slow implementation process. Hence the majority of children with special learning needs languish at home.
- Inadequate research: the particular situation of children with special educational needs is not known. It is therefore not possible to quantify the number of needy cases who have no access to special education.
- Lack of equipment such as basic technical and training tools, tools for proper diagnostic assessment, leading to inadequate or invalid identity of disorder, and hence, poor management of disorder.
- Lack of proper training for teachers, trainers, therapists and supervisors in the special education programme.

If the situation is grave for special education in general, the prognosis is desperate for special language needs in particular. Up until 1998, the Ministry of Education did not recognize language disorder as a special learning need in its own right. Policy documents regularly cited four disabilities: hearing impairment, visual impairment, physical handicap, and mental handicap. This would mean that children with a speech disorder were slotted in any of the four recognized disabilities, depending on the manifest characteristics.

As a matter of fact, various documents indicate a disproportionately high level of programmes and enrolment for the mentally handicapped, at the lowest approximately 1/3 of the programmes or enrolment but in some cases as high as 3/5 (see appendix A). It is possible that a lot of these cases have language rather than mental impairment.

One could safely say that the situation is desperate for both children and their families. Many families, especially parents, consider a speech disorder in their child as a curse or an unbearable reflection on their social image. Such parents keep the child hidden somewhere in a backroom or backyard, or simply pretend it does not exist. On their part, parents probably behave so irresponsibly due to ignorance and a sense of helplessness.

Ignorance on the subject of speech disorders and the concomitant sense of helplessness are evident in the uncertainty surrounding the Communication Disorders Department. In 1998, K.I.E. recognized the need to deal with speech disorder as a
distinct special educational need. A co-ordinating officer was appointed and a workshop held in 1999, to consider the modalities of setting up a Communication Disorders Department. At present, the Communication Disorders Department exists in name only: no personnel (the co-ordinating officer having been deployed elsewhere), no policy documents, no enrolment, no programmes or services, no curriculum, no data bank.

The situation is summarized in the Koech Report (1999). The report frankly admits that, at the time of the inquiry Kenya did not have special services or programmes for children with communication disorders on account of the complexity of the area. It goes on to recommend that speech therapy, music, counselling sessions and the articulation of sounds, supplement the regular curriculum.

The Koech Report (1999) deserves commendation for the fact that this is the first time a commission of inquiry into the Kenyan educational system has addressed special communication (language) needs. The content could, however, have been more informative, the definition of communication disorder more explicit and the recommendations more focused or more specific. For instance: What form would the therapy take? Who would administer the therapy since Kenya, assuredly, has no speech therapists? Is a communication disorder to be equated with speech sounds?

Training in the articulation of speech sounds is wholesome, depending on the nature of disorder; delayed speech is a case in point. The counselling and music sessions are also in order, where psychological or emotional trauma is indicated. These strategies, however, will not correct or minimize disorder, where other causes are in effect. The suggested strategies therefore sidestep rather than address the problem.

It is easy to understand why so much vagueness surrounds the problem of communication (language) disorders. The personnel (be they administrators, inspectors, assessors or trainers), in the special education sector, have little theoretical or practical understanding of the speech function or, in this case, malfunction. Hence, there is little specific information they could have given the commissioners during the inquiry.

Moreover, the commissioners who are appointed to inquire into the educational system are principally ‘educationists’. These are usually psychologists, economists, philosophers and sociologists versed in educational administration, but rarely scholars in language structure and language function. When such a commission is faced with specialized linguistic problems, it may find itself out of their depth.

This observation does not mean to water down the Koech Commission. In most areas, the commission was both exhaustive and incisive. These merits notwithstanding, the reality cannot be escaped; speech/language disorder is an extremely specialized educational need, requiring specialist linguistic knowledge, understanding and intuition. The report’s frank admission that communication disorders is a complex area presently without services or programmes can be considered a direct challenge to the linguists. Will the linguists rise to the challenge? Would the linguists have anything to offer in the special language education in terms of speech pathology?

3.1. Linguistics and Speech Pathology

Some texts on speech/language pathology include an introductory section on language structure or general phonetics. Conversely, certain texts on general phonetics, language acquisition/learning or psycholinguistics, wind up with a chapter on speech/language disorder (see Luchsinger and Arnold 1965, Villiers 1978, Ball 1988, Laver 1991). These tendencies point to a logical development of thought: from a consideration of what is normal to that which is abnormal or, conversely, viewing the abnormal in the light of the normal. This development should be reflected in linguistic programmes.

With an exception of one or two institutions, the public and private universities in Kenya offer linguistics programmes in English, Kiswahili and/or French, depending on the available language departments (see appendix B, C). The existence of these programmes indicates that Kenyan universities are host to both trained and training linguists.

Going by the curriculum offered in the universities, we could say that a linguist is a scholar who has theoretical and practical understanding, as well as research experience, of the following subjects: (1) the theory of linguistic analysis and description, (2) different aspects of language structure and function, (3) phonetics as it pertains to speech perception and production, (4) the interdisciplinary nature of linguistics, (6) formulation of modules and programmes for linguistic teaching and training.

It is true that linguistic studies in Kenya have a predilection for theoretical descriptions rather than concrete data analysis and application. We can still assume that, with the above theoretical knowledge, a scholar could manage systematic research in order to perform or learn to perform the following tasks: (1) identify a disorder in speech, (2) determine what aspect of speech is defective, (3) hypothesize on a possible cause (either alone or in collaboration with professionals from other disciplines), (4) prescribe potentially effective corrective and support procedures, (5) develop a disorder profile, training modules and exercises that focus on specific units, elements or functions of the language structure, (6) formulate a proposal for the launching of a speech pathology programme, complete with resource facilities.

These assumptions can be interpreted to mean that linguists have the potential experience to initiate a speech pathology programme, affiliated to a linguistics department. The degree of success would depend on two factors: the sense of commitment in the linguists themselves and the affiliate department, as well as co-operation from various institutions and organizations (particularly: the university administration, the Ministry of Education, international organizations and donor agencies) not to mention the Kenyan society at large.
The linguists, with the support of their departments, would need commitment in certain purposeful and essential projects:

- the furtherance, by whatever avenues that are available to them, of their basic linguistic experience to include content and skills relating to speech pathology;
- the organization of conferences involving a broad spectrum of professionals who are interested in language function, in order to collate information and views relating to speech pathology;
- the development of programmes and materials for the assessment, identification, correction/remediation of speech disorders;
- the establishment of a speech pathology resource centre and journal;
- the publication of resource materials;
- the encouragement and orientation of training linguists to specialize in speech pathology.

This may sound like a very ambitious project. In reality it is not. The available literature indicates that speech pathology departments are well established in regions like North America, the United Kingdom and most countries of Europe (see Crystal 1980, Beech et al. 1993). From these regions, materials on assessment, identification, correction/remediation of speech disorders are available in our libraries and on the internet. We could either adopt these materials as models, adapt them to suit the language of instruction, or develop totally different tools. The important thing is to make our linguistic knowledge count for something in solving a concrete societal problem. The solution to the problem, however, has wider implications.

3.2. Implications for a Speech Pathology Programme

The linguists and their departments may not go far without the blessing and support of the relevant university administration. Often, the bureaucratic process is a stumbling block to change in the academic programmes. The process would however, be expedited if the executive administration can be convinced of the academic and societal significance of the programme. The job of the linguist in this matter is to formulate a persuasive and watertight proposal for a speech pathology programme.

Success can be further enhanced by a positive attitude from the Ministry of Education. The Ministry of Education should be ready to sponsor or organize the sponsorship of willing special education personnel and language teachers, for degrees or diplomas in speech pathology. It should also be willing to hire the qualified speech pathologists on consultancy basis, or at least involve them in workshops and projects related to the implementation process.

Various strategies of implementation would be required and these in turn would require substantial financial resources. The Ministry of Education in Kenya might be either unwilling or unable to stretch its educational budget for a sub-section of its population. International organizations, particularly UNICEF and UNESCO, could be persuaded to solicit funding. It is worth noting and appreciating the fact that these organizations, with the collaboration of development agencies such as DANIDA and SIDA, have sponsored major special educational projects all over Africa (see UNESCO Report 1988, Ross 1988). All they demand is efficiency and productivity.

One does not need to belabour the significance of local or international support and co-operation. Such support and co-operation hinges on the performance of the linguist in the area of speech pathology. The performance in turn hinges on the general attitude and orientation towards the subject: can the current orientation of the linguist see speech pathology as an area of applied linguistics?

Let the trained linguists mould speech pathology into a truly applied study of linguistics and it will pay dividends. The implied benefits are not unilateral. There is a growing conviction that theoretical linguistics is bound to benefit from an in-depth analysis of speech disorders (see Ball 1988). This means that promoting the discipline of speech pathology will, in a sense, advance theoretical linguistics.

It is, however, important to proceed with caution. The conception of speech pathology as an area of applied linguistics does not mean to exclude other disciplines. In addressing problems relating to normal speech, theoretical linguistics often seeks answers in other spheres of knowledge. An interdisciplinary approach is all the more important while dealing with abnormal language behaviour. The linguist therefore should not just welcome, but also seek views of other behavioral scientists.

This problem is, therefore, not for the linguist alone. Disciplines concerned with the language function should learn to appreciate the relevance and significance of linguistic knowledge. Note that the Kenya Institute of Education (K.I.E) has, for several years, been trying to initiate a Communication Disorders Department without success. Even in the face of failure, it never occurred to it that success probably lies in involving scholars with specialist linguistic knowledge.

The success of a speech pathology programme would be significant for the society at large, and particularly for families where a member suffers from a speech disorder. With the availability of efficient programmes and services, parents could be prevailed upon to send the affected children to school and not hide them away. Entrepreneurs would take advantage of the qualified personnel to open schools for speech training and therapy. These are much needed services into the millennium.

REFERENCES


**APPENDIX A**

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APPENDIX B

LINGUISTICS AND AFRICAN LANGUAGES
NAIROBI UNIVERSITY CALENDAR 1997-2000

Courses Titles

First Year

Semester I
CLL 101 The Nature and Function of Language
CLL 101 The Language Situation in Africa and Kenya

Semester II
CLL 102 Introduction to Phonetics and Phonology
CLF 102 Introduction to Historical Comparative Linguistics

Second Year

Semester I
CLL 201 Introduction to Morphology
CLF 201 Classification of African Languages

Semester II
CLL 202 Introduction to Syntax
CLF 202 The Structure of African Languages

Third Year

Semester I
Core for 4.3.2.2; 4.3.2.1; 4.3.1.1;
CLL 301 Introduction to Semantics
CLL 301 Introduction to Bantu Language Studies
CLF 303 Introduction to Nilotic Language Studies

Core 4.3.1.1.
CLL 305 Practical Language Issues in Africa

Elective for 4.3.1.1; 4.3.2.2; 4.3.2.1
CLL 303 Introduction to Sociolinguistics
CLL 305 Introduction to Pragmatics
CLL 307 Introduction to Afro-Asiatic Language Studies
CLF 309 Introduction to Sign Language

Semester II
Core for 4.3.2.2; 4.3.2.1; 4.3.1.1;
CLL 302 Traditionalist Linguistics
CLL 302 The Structure of Bantu Languages

Core for 4.3.1.1. but Electives for 4.3.2.2. and 4.3.2.1.
CLL 304 Advanced Historical Comparative Linguistics
CLL 306 Research Methods in Linguistics

Electives for 4.3.2.2; 4.3.2.1 and 4.3.1.1.
CLL 308 Language and Society
CLF 310 The Structure of Afro-Asiatic Languages
CLF 312 Sign Language and Grammar

Fourth Year

Semester I
Electives for 4.3.2.2; 4.3.2.1. and 4.3.1.1.
CLL 401 Introduction to Generative Transformational Theory
CLL 401 The Structure of Nilotic Languages

Core for 4.3.1.1; 4.3.2.1 but Electives for 4.3.2.2.
CLL 403 Advanced Phonology
CLL 405 Introduction to Psycholinguistics
CLF 403 Phonetics and Phonological Characteristics of African Languages

Electives for 4.3.1.1; 4.3.2.2; 4.3.2.1.
CLL 405 A Study of a Kenyan Language
CLL 407 Sign Language Translation Skills

Semester II
Core for 4.3.2.2; 4.3.2.1; 4.3.1.1.
CLL 402 Advanced Linguistic Theory (Syntax)
CLL 402 Research Paper on African Languages

Core for 4.3.1.1; 4.3.2.1. but Electives for 4.3.2.2.
CLL 404 Lexicography
CLL 406 Advanced Study of a Kenyan Language
CLL 402 Morphological and Syntactic Characteristics of African Languages

Electives for 4.3.2.2; 4.3.2.1; 4.3.1.1.
CLL 408 Issues of Language Management and Development in Africa
CLLF 410 Advanced Sign Language Translation Theory and Practice
APPENDIX C

LINGUISTICS AND ENGLISH
NAIROBI UNIVERSITY CALENDAR 1997-2000

Courses Titles

First Year

Semester I
CLL 101 The Nature and Function of Language
CLE 101 The History and Varieties of English

Semester II
CLL 102 Introduction to Phonetics and Phonology
CLE 102 English Usage in Kenya

Second Year

Semester I
CLL 201 Introduction to Morphology
CLE 201 Modern English Phonetics and Phonology

Semester II
CLL 202 Introduction to Syntax
CLE 202 Modern English Morphology

Third Year

Semester I
Core for 4.3.2.2; 4.3.2.1; 4.3.1.1.
CLL 301 Introduction to Semantics
CLE 301 Modern English Syntax

Core for 4.3.1.1. but Elective for 4.3.2.2. and 4.3.2.1.
CLL 303 Introduction to Sociolinguistics
CLE 305 Practical Language issues in Africa
CLE 307 Introduction to Pragmatics
CLF 102 Introduction to Historical Comparative Linguistics

Semester II
Core for 4.3.2.2; 4.3.2.1; 4.3.1.1.
CLL 302 Traditionalist Linguistics (Syntax)
CLE 303 Advanced Phonetics and Phonology of English

Core for 4.3.1.1. but Electives for 4.3.2.2. and 4.3.2.1.
CLL 304 Advanced Historical Comparative Linguistics
CLE 306 Research Methods in Linguistics
CLE 304 Stylistics
CLE 306 Error Analysis

Fourth Year

Semester I
Core for 4.3.2.2; 4.3.2.1; 4.3.1.1.
CLL 401 Introduction to Generative Transformational Theory
CLE 401 Advanced English Structure

Core for 4.3.1.1. and 4.3.2.1. but Elective for 4.3.2.2.
CLL 403 Advanced Phonology
CLL 405 Introduction to Psycholinguistics
CLE 403 English for Specific Purposes
CLE 405 Discourse Analysis

Semester II
Core for 4.3.2.2; 4.3.2.1; 4.3.1.1.
CLL 402 Advanced Linguistics Theory (Syntax)
CLE 402 Research Paper in English

Core for 4.3.1.1 and 4.3.2.1. but Elective for 4.3.2.2.
CLL 404 Lexicography
CLL 406 Advanced Semantics
CLE 404 Translation Theory and Practice
CLE 406 Analysis of English within a Modern/Current Theory