In South Africa, speech-language therapy (SLT) is a relatively young profession, which has thus followed the precedents and trends set in other countries, especially the United Kingdom and America. Many of the position and practice statements issued by our American counterparts serve as guidelines for our work here. On the basis of this, the Scope of Practice Statement (ASHA, 1989) will be used, at this point, to clarify the position of the profession in South Africa. Thus, our role is to "... identify, assess, and provide treatment for individuals with communication disorders..., manage and supervise programmes and services related to human communication and its disorders..., counsel individuals with disorders of communication, their families, caregivers and other service providers." (ASHA, 1989:47). The scope of practice of the speech-language pathologist (SLP) is further clarified by consideration of the definition chosen for communication. Our role has expanded from working with articulation problems (correcting speech, including signatiasms, rhotacisms, thetasisms and so forth!) to being involved with syntax, then semantics and later pragmatics, in response to the theoretical developments in the definition of communication. The definition and model provided by Carrow-Woolfolk & Lynch (1982) is one such example of a multidimensional and integrative perspective, stressing four dimensions:
cognitive, linguistic knowledge, language performance and communicative environment. Their model of language is represented diagrammatically as follows:

![Diagram of Carrow-Kocholk & Lynch's (1982) integrative model of language]

Figure 1: Carrow-Kocholk & Lynch's (1982:102) integrative model of language

It is obvious from consideration of this model that many other professionals and disciplines have input into the field of SLT. A vital relationship is that between SLT and linguistics, which clearly relates to the purpose of this conference. The relationship is a two-way process, as noted by Ball & Kent, (1987:2) when discussing the relationship between SLT and clinical linguistics in the editorial of the first issue of the journal, Clinical Linguistics & Phonetics. This orientation was, for obvious reasons, directed primarily to communication disorders, but there is much, especially in the South African
context to be gained from the acknowledgement of a two-way relationship directed to normal communication.

evaluation of the current situation
Having outlined the vast areas with which SLT is involved, it is necessary to evaluate the current situation in South Africa with regard to services offered. This evaluation will be limited to the Natal region, as it is this area with which the writer is familiar. There are SLP's in the hospitals in the greater Durban area and Pietermaritzburg (currently nine, spread among speech-language therapy and audiology posts at five hospitals); a relatively large number employed at special education schools; some SLP's serving the mainstream school population, and some in private practice. A recent recommended ratio in the United Kingdom for the number of qualified SLP's per 100,000 population is 26 (Enderby & Davies, 1999). In 1991, there were approximately 89 SLP's in Natal, highlighting the inadequacy of the situation. For example, in the Valley of a Thousand Hills, one small, discrete section of Natal, is a community of about 80,000 people, mostly Zulu-speaking, scattered over an area of approximately 250 square kilometers (Friedman, 1991), who until 1992 were without any SLT service besides that provided at hospitals in Durban, more than 35 kilometers away. Only recently have relevant communication-related issues begun to be addressed via 12 SLT students doing community research and projects there. Further, as can be seen by the distribution of place of employment of SLP's as given
above, there is an unequal spread of professionals in terms of both facilities and resources. This would seem to parallel the conditions noted by Wells (1976) where, for doctors in South Africa, a developing rather than a developed country, (Beckett, 1976) there were overwhelming needs and limited resources, resembling third world conditions. These facilities are predominantly available to the minority white population group (Beckett, 1976), yet, it can be anticipated that in South Africa, as in America, there is going to be an ever increasing demand on SLP's generally, and on them to work with people of different language and cultural groups (Terrell & Hale, 1992). Likewise in Australia, McAllister (1985) stressed the increasing demands for SLT in more varied contexts. In America this is a "minority" concern, whereas in South Africa, it is a "majority" concern (Asha, 1991), and is further complicated by the iniquities of, and ongoing changes to, the education systems in South Africa. Thus, of the 89 Natal SLP's mentioned above, all are English or Afrikaans speakers. There is not a single Zulu-speaking speech therapist to work with the large Zulu-speaking population. At this stage it would seem that the Speech & Hearing Therapy Department at the University of Durban-Westville is the only department of the five in South Africa to have an affirmative action policy with regard to training prospective African language SLP's. It is then, primarily with the Zulu-speaking population in Natal that this paper is concerned.
Cultural and linguistic factors such as those touched on above are of utmost concern to the SLP who uses language as the tool to help people with language problems. Our American counterparts have justly stated that for a language profession such as ours to work in English with clients who speak little or no English would be not only be regarded as being inappropriate according to the policy of the American Speech-Language Hearing Association, but could also result in the erroneous diagnosis of communicative impairment and the provision of unnecessary management. Although many SLP’s may be aware of and sensitive to linguistic and cultural differences, Terrell & Hale (1992:5) stress that “sensitivity to these differences alone may not be sufficient...”. It would seem then that we are currently ill equipped to serve the Zulu-speaking population of Natal.

Thus, in Natal there are many broad issues which must be addressed for us to be able to grasp the extent of the problems facing the SLP’s and clients. Multilingualism, proficiency in a second language, disadvantage, lack of affordable access to services and facilities and poverty are but a few of these. It is evident from this that an increase in the numbers of personnel or facilities available would not be sufficient to “solve” the problems. Whatever the case, such solutions are unlikely in the present financial climate in South Africa. The next step then is to evaluate, redefine and seek alternative methods.
Firstly, it is necessary to address the way communication is viewed. At present, most communicative intervention, and much "medical" intervention is curative in nature. It has been suggested by many, such as Friedman, 1991, Toms, 1991, and ASHA, 1991, that intervention should rather be promotive of health. Thus, "Health is not just the absence of disease; but rather a positive intervention in a community, with their participation and involvement so as to creatively tackle the community problems that cause ill health" (Toms, 1991). With regard to SLT, the American Speech-Language Hearing Association in 1988 issued a position statement on the prevention of communicative disorders, and this prevention is seen as one of the main responsibilities of the SLT profession. Again the need for a broad perspective is seen, where prevention of disease causing or related to disordered communication becomes a professional concern. Thus, the SLP would need to understand certain specific prevention strategies and accept responsibility for carrying out research in the area of prevention. Further, "alternative professional roles and strategies must be developed, and the information and skills to adopt and practice them must be acquired" (ASHA, 1991:17). Prevention, however, should not be simplistically viewed, but rather in terms of three levels. Primary prevention encompasses avoidance of communicative disorder; secondary, the early detection; and tertiary reflects more accurately our current position, that
is, the lessening of disability. The vital role of research is evident once again if we are to be involved in a worthwhile way in "promoting the development and maintenance of optimal communication behavior" (ASHA, 1991:18).

Communication, including speech, language, voice, fluency and hearing, is then an aspect of health, and should be seen within the framework of a changing approach to addressing health issues, both internationally and locally. The Alma-Ata (International Conference on Primary Health Care, 1978) declaration of health for all as a fundamental human right should be our broad perspective. At present, determining who is eligible for SLT services involves determining a significant (which is not easily definable) communicative disorder, and is complicated by government regulations (ASHA, 1989b). A future health service for South Africa would be based on the primary health care approach and would involve equal rights to health, accessible and affordable health, the participation of the community in health services and innovative strategies to achieve this (Padayachee & Wilson, 1991). "Health care (its knowledge, practice, and institutions), does not operate in a vacuum in society. Its form and nature is determined by the society within which it exists, and conversely, it contributes towards reproducing the particular relations of that society" (Solanki, 1991). If this is applied to SLT, in a post apartheid, democratic South Africa, SLT should be comprised of skills training, formal and informal education, relevant research, the
collection and dissemination of information, and the creation of community health projects based on community need.

Having now, within the South African, and specifically with regard to the Natal Zulu speaking community, reevaluated both issues of definition and aim, let us now address more directly the issue of "how". Perhaps you had begun to wonder where the SLT/linguistic relationship had gone. It was necessary to first establish a shared framework, before addressing the "how" issue, and returning to the questions put before us at this conference, that is, what does linguistics offer the language professions; and what do the language professions offer linguistics.

In terms of the reformulated aims for the SLT profession, many problems such as insufficient people obtaining access to health care, major linguistic and cultural gaps, the role of economic factors, second language English speaking, exist and provide challenges.

Training

One of the first issues to be addressed in this regard is student training. If students are to be able to cope in multicultural (Deal,1990;76; Smith,1988) and multilingual contexts, they will need additional or alternative knowledge and skills. Knowledge in areas such as anthropology and sociology would be of use. Possibly, training should be more integrative and take
place in a number of different settings (Chezik, Pratt, Stewart, & Deal, 1989). Our present models of service delivery, and the use of translators, interpreters, and aides (McAlister, 1985) must be considered. Educational philosophies require scrutiny, and here, Aitchison (1991) notes that education is never neutral, that it should be relevant, especially with regard to current issues, and that it should foster a problem-solving approach rather than a recipe search. As the current system of school education for the average Black scholar does not seem to equip many to gain entry to a course such as ours, or to cope academically in such a course, the route of affirmative action should be investigated as an option. This would increase the number of Zulu-speaking SLP's working with the community, and they could serve as role models for further SLP's.

**Strategies**

At present, the search and implementation of alternate strategies to achieve more adequate health care (Aitchison, 1991) is gathering momentum. A traditional model which most people are familiar with is the pull-out, one-to-one method of intervention. Other methods have been suggested, such as collaborative/consultative service delivery in the classroom (Ferguson, 1991), with fluency problems (Cooper, 1991), and in order to extend language aims into the curriculum (Achilles, Yates, & Freese, 1991); the group model and the integrated model
(McAllister, 1983); family-centered services (Crais, 1991); and the consultation model at a primary, secondary or tertiary level (Frassinelli, Superior, & Meyers, 1983). What is essential here is to take into account a community-based view, that of primary health care, whereby the services are offered where most accessible. The aspect of community participation (Padayachee & Wilson, 1991) and initiation is vital. Chezik, Pratt, Stewart, & Deal (1989) highlight problems, such as poor or limited access, lack of public transport, limited finances, and low levels of public awareness, in the service delivery in remote and rural areas. Another important concept is that of skill sharing, and demystifying the professional (Toms, 1991).

Most of the above has pertained to service delivery. It is obvious that current methods of assessment would also need to be evaluated, predominantly in the light of the models mentioned above. A novel method for a particular situation has been used by Terrell, Arensberg, & Rosa (1992). It is a parent-child comparative analysis, of use when a SLP is assessing a child with whose dialect he/she may be unfamiliar. A major issue is, of course, the use of tests on a population for which those tests were not normed.

Research

The overriding issue which arises from all of the above and which will finally serve to address the conference questions is
research. In its present position, research has according to Pikk (1991:113) made a great contribution to man's knowledge and progress, but has also had destructive effects (as seen in nature). In South Africa, research, especially health or "disease" research has "...largely been determined by the State through a variety of councils...". At times, academic standards are the main issue, not the "people". Likewise the content of health research has frequently been determined by funders as opposed to, for example, community needs. Herer (1989:79) also comments on the narrow view of society held in previous social science research.

Pikk (1991:113) outlines a route forward for research which he feels would be appropriate. He says, "one of the challenges for researchers is to find ways of getting people or people's organisations to participate actively in research - not just in a token manner but participation at every stage of the research process, from determining the research question, planning, conducting the research and implementing the research finding."

He advocates against the reliance on quantitative research to the exclusion of qualitative research. Despite his harsh criticism, Pikk (1991:114) does believe that academic researchers have an important role, being "mental" workers, transferring their skills to the people, being accountable to the people, and consulting. If research findings are not used, this should be questioned in terms of the relevance of that research. An
example of the kind of appropriate research mentioned above is Essential National Health Research (ENHR). It is appropriate research, developed to fill gaps in health research, and to get equity in health and development. To clarify further, it is essential in that public health problems receive priority; it is national in that it operates at all levels from country to family, but is specific to environments; health is included in that it is aimed at development; and finally, the research must be scientifically valid, but relevant. Traditional research methods may be used, but the most important problems of the population are addressed (Task Force on Health Research for Development Secretariat, 1991).

In this third area of change, the above provides us with a framework within which to view research for a population much as that addressed in this paper, the Zulu-speakers of Natal. Linguistics has much to offer the language professions in this regard, but the two-way relationship between linguistics and SLT must be borne in mind. The input of many other professionals and disciplines, as noted earlier, is also of importance. Relevant research areas include:

- attitudes to communication disorders (Behout & Arthur, 1992), including degree of concern, positive and negative views, desirability of intervention (Cole, 1989)
- attitudes to issues such as views on accent reduction (Shewan & Maja, 1989)
- preferences as to who should provide a service (Cole, 1989)
- research on Zulu. An article by Connolly (1988) stresses the
considerable contribution of theoretical linguistics to SLT, but little of such research can be directly used with Zulu or Zulu-speakers.

- Developing age-appropriate, adequate instruments for use in the assessment of communication (ASHA, 1989b)
- The development of norm-referenced or standardised assessment procedures (ASHA, 1989b)
- Interpreter training (Anderson, 1992)
- Specific developmental norms for different aspects of language, such as those used by Brunwell (1985) which pertain to development of the phonetic inventory and the use of phonological simplification processes
- Aspects of normal development in phonemic, allophonic, syntactic, morphological, semantic, lexical and pragmatic development
- canvassing for change in assessment and eligibility for therapy guidelines with employing bodies (ASHA, 1989b)
- What, if any, information needs to be given about normal and disordered communication, and to whom
- The prioritisation of health problems
- How to use existing knowledge
- The development of new strategies
- Prevention (ASHA, 1991). If emphasis is to be placed on the promotion of health, the ASHA view on research should be considered. Two types of preventive research are discussed: preintervention and intervention research. This is given below (ASHA, 1991:29).
"...prevention research includes only research designed to yield results directly applicable to interventions to prevent occurrence of disease or disability or the progression of detectable but asymptomatic disease. ... Preintervention research involves three things:
1. Identification of risk factors for disease or disability.
3. Refinement of methodological and statistical procedures for quantitatively assessing risk and measuring the effects of preventive interventions.

Intervention research involves the following:
1. Development of biologic interventions to prevent occurrence of disease or disability or progression of asymptomatic disease.
2. Development of environmental interventions to prevent occurrence of disease or disability or progression of asymptomatic disease.
3. Development of behavioral interventions to prevent occurrence of disease or disability or progression of asymptomatic disease.
4. Conduct of clinical and community trials and demonstrations to assess preventive interventions and to encourage their adoption."

Possible topics for research in a prevention programme are given below [ASHA, 1991:30]
"a. Epidemiologic studies in genetics.

b. Documentation of effects of intervention with high-risk individuals.

c. Development of field-tested prevention education materials.

d. Documentation of effects of prevention education with selected groups.

e. Elucidation and quantification of disorder-specific, known risk factors.

f. Attitudes of other professions toward expanded roles of speech-language pathologists and audiologists in prevention.

g. Clinical trials for efforts in prevention and intervention.

h. Reexamination of existing data on incidence, prevalence, and populations at increased risk for communication disorders.

i. Factors influencing individuals to follow prevention guidelines or regimens.

j. Distribution and determinants of conditions to which communication disorders are secondary."

Conclusion

As a broad issue was tackled in this paper, it must be acknowledged that much has been simplified, even oversimplified. This in part reflects the enormity of the task awaiting SLP’s and other disciplines in addressing health, inclusive of communication issues in a changing South Africa. In order to face and
meet these challenges, it is the writer's opinion that linguistics has much of value to offer SLT, and SLT has much to offer linguistics. If we stop doing research for the sake of research, and ensure that future research is relevant to the society we live in.

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