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ABSTRACT

A discussion of the field of clinical linguistics outlines the scope of the discipline, notes its relationship to other speech- and language-related fields, and describes the components of an undergraduate program for individuals in a linguistically relevant clinical field. It suggests general linguistics curriculum components for clinical undergraduates (including general and descriptive linguistics, phonetics, field methods and problem-solving, and current theories of syntax and phonology) and the clinical linguistics appropriate for the linguistics undergraduate. Comments on the relationship of linguistics to American Sign Language are also presented. (MSE)

APPENDIX 4-B

Clinical Linguistics

by

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The views expressed are those of the authors and do not necessarily reflect the position of the LSA or the National Endowment for the Humanities.

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PREFACE

The Linguistics in the Undergraduate Curriculum (LUC) project is an effort by the Linguistic Society of America (LSA) to study the state of undergraduate instruction in linguistics in the United States and Canada and to suggest directions for its future development. It was supported by a grant from the National Endowment for the Humanities during the period 1 January 1985-31 December 1987. The project was carried out under the direction of D. Terence Langendoen, Principal Investigator, and Secretary-Treasurer of the LSA. Mary Niebuhr, Executive Assistant at the LSA office in Washington, DC, was responsible for the day-to-day administration of the project with the assistance of Nicole VandenHeuvel and Dana McDaniel.

Project oversight was provided by a Steering Committee that was appointed by the LSA Executive Committee in 1985. Its members were: Judith Aissen (University of California, Santa Cruz), Paul Angelis (Southern Illinois University), Victoria Fromkin (University of California, Los Angeles), Frank Heny, Robert Jeffers (Rutgers University), D. Terence Langendoen (Graduate Center of the City University of New York), Manjari Ohala (San Jose State University), Ellen Prince (University of Pennsylvania), and Arnold Zwicky (The Ohio State University and Stanford University). The Steering Committee, in turn, received help from a Consultant Panel, whose members were: Ed Battistella (University of Alabama, Birmingham), Byron Bender (University of Hawaii, Manoa), Garland Bills (University of New Mexico), Daniel Brink (Arizona State University), Ronald Butters (Duke University), Charles Cairns (Queens College of CUNY), Jean Casagrande (University of Florida), Nancy Dorian (Bryn Mawr College), Sheila Embleton (York University), Francine Frank (State University of New York, Albany), Robert Freidin (Princeton University), Jean Berko-Gleason (Boston University), Wayne Harbert (Cornell University), Alice Harris (Vanderbilt University), Jeffrey Heath, Michael Henderson (University of Kansas), Larry Hutchinson (University of Minnesota, Minneapolis), Ray Jackendoff (Brandeis University), Robert Johnson (Gallaudet College), Braj Kachru (University of Illinois, Urbana), Charles Kreidler (Georgetown University), William Ladusaw (University of California, Santa Cruz), Ilse Lehiste (The Ohio State University), David Lightfoot (University of Maryland), Donna Jo Napoli (Swarthmore College), Ronald Macaulay (Pitzer College), Geoffrey Pullum (University of California, Santa Cruz), Victor Raskin (Purdue University), Sanford Schane (University of California, San Diego), Carlota Smith (University of Texas, Austin), Roger Shuy (Georgetown University), and Jessica Wirth (University of Wisconsin, Milwaukee).

The role of linguistics in the undergraduate curriculum

Nearly all aspects of diagnoses and intervention of language and speech disorders require the ability to conduct a linguistic analysis of language samples to determine the nature of the problem and the amount of progress being made. Common problems can be assessed through the use of already available standardized tests that provide specific details of how to administer the test, how to analyze the data, and how to interpret the results. Unfortunately, in most clinical settings, other problems go unrecognized and untreated. Linguistics provides the key to filling this gap. With further training in linguistics, clinicians could apply standard field methods to collecting language samples; they could analyze these samples using the methodology of descriptive linguistics for phonetics, phonology, syntax, and semantics; they could profit from journal articles that describe language development and disorders using such theories as government and binding or autosegmental phonology. Their diagnostic abilities would not be limited to standardized tests and their better understanding of the ways in which languages are similar and different might assist in the development of innovative intervention techniques. They would in essence become clinical linguists, rather than simply clinicians. In this regard, it should be pointed out that all of the agencies that specify program requirements (ASHA, state education agencies) dictate only the minimum, which is insufficient to achieve this broader goal.

What is clinical linguistics?

Clinical linguistics pays attention to a population with language difficulties, such as aphasic, language disordered, autistic, intellectually handicapped, deaf, emotionally disturbed (schizophrenic, manic depressive, other types of psychotic), and physically handicapped individuals who are speech impaired (e.g., cerebral palsied). The split is not one of the setting (clinic vs. classroom) but rather of normal language vs. language that requires special attention. This definition would potentially include applied psycholinguistics, speech-language pathology, audiology, deaf education, neurolinguistics (including but not limited to aphasiology), and certain areas of special education. But it would exclude so-called applied linguistics (English as a second language, second language acquisition, bilingual acquisition) on the grounds that, although the issues addressed have practical implications for educational concerns, the individuals whose language competence or acquisition is being investigated are normal individuals, rather than a clinical population. On these same grounds, psycholinguistics and language acquisition with normal children would be considered a separate but prerequisite area for those interested in clinical linguistics.

The clinically-trained person with special training in linguistics

Among the LSA membership, we have a number of individuals whose primary training is in a clinical field and who have acquired linguistic training for clinically-related purposes. These include people who are certified (Certification of Clinical Competence, CCC) in speech-language pathology or audiology by the American Speech-Language-Hearing Association (ASHA), or who hold the Certificate in Education of the Deaf (CED) from the Council on Education of the Deaf. Such certification is usually acquired following the Master's Degree by one to five years of professionally supervised clinic or classroom work.

It should be pointed out that an undergraduate degree in linguistics is an appropriate, and in many cases highly valued, background for entry into Master's degree programs in speech-language pathology, audiology, education of the deaf, and certain areas of special education.

General linguistics for clinical undergraduates

Several areas of linguistics must be included in the undergraduate education of anyone contemplating a linguistically-relevant clinical field: a) general introduction to language and descriptive linguistics, b) phonetics, c) field methods and methods of problem solving with emphasis on phonological and morphological problems, and d) current theories of syntax and phonology.

a) Introduction to language and descriptive linguistics

It cannot be emphasized enough that the average undergraduate has little or no conception of what language is or how languages differ; even those who are destined to major in clinical areas that deal primarily or exclusively with language begin with nearly all of the popular misconceptions and prescriptive biases intact. Efforts in introductory courses to separate prescriptive perspectives from descriptive approaches are only marginally successful. It is difficult to erase prescriptive attitudes toward other dialects. The general feeling that differences from the hypothetical standard are wrong permeate the undergraduate population as much as the general population. This attitude prevents a fuller appreciation of the attempts made by linguists to demonstrate the interesting variation in language, whether with dialects of English or with cross-linguistic phonology, morphology, and syntax problems. As a result, the average beginning clinician is generally fuzzy on "different" versus "deviant". A telling example is the recurring question of the role, if any, of the speech-language pathologist in the area of dialect/accent "correction" (referring to normal populations). One state school system assigned a child with a British accent to speech therapy because

they felt that he would not be able to learn to read if he could not make the same letter-sound associations as the other children in the class. The consciousness-raising aspects of introduction to language courses are an important precursor to content more directly related to linguistic terminology and methodology.

Many states require students to take a course with 'linguistics' in the title for any certification in education. What such courses should include varies from state to state, and the distinction between introduction to language and introduction to linguistics is not always made clear. Ideally, students should acquire enough familiarity with linguistic terminology and concepts to be able to read literature relevant to the field of their choice. In reality, a single course is obviously insufficient to accomplish this task. Students who are interested in reading and writing difficulties (e.g., in learning disabled or deaf children) or language pathology should be encouraged to take a separate course in syntax, while those interested in aspects of speech pathology would need more phonetics and phonology. Such courses should be primarily aimed at analysis of language data and should include a wide variety of languages. Some introduction to cross-linguistic typology would also be helpful at this level.

b) Phonetics

Speech-language pathologists and audiologists are already required to take phonetics in addition to a general course in linguistics. Unfortunately, students interested in special education, deaf education, or sign language research are not required to take phonetics and frequently think that it is irrelevant. Given the many similarities between speech and signing, it is a mistake to think that sign language analysis can be done in the absence of phonetic training; for example, much current controversy about the nature of stress in ASL stems from some researchers' lack of foundations in how stress is phonetically manifested in speech.

Future teachers of deaf children will be expected to engage in an activity known as "teaching speech to the deaf". Yet the average teacher of the deaf knows nothing about phonetics, normal speech development, or phonology. Most teachers of the deaf are taught a methodology (usually the method from D. Ling, Speech and the Hearing-Impaired Child) which they attempt to implement during the school day. At the same time, the average speech-language pathologist has little or no understanding of the special problems of a totally deaf child when it comes to speech development. Standard clinical techniques ("listen and repeat after me") are obviously inappropriate with deaf children. The development and utilization of new techniques will require a more sophisticated understanding of phonetics and speech science.

Sign language researchers and future teachers of the deaf need greater expertise in transcription, understanding the vagaries of segmentation, segmental vs. suprasegmental characteristics of speech, speech physiology, the notion of "sound systems", and the varieties of sound systems that exist across languages. Further exposure to speech science would also be helpful, especially given the recent development of computer-based intervention technology.

c) Field methods and problem solving

Speech-language pathologists, as part of their training, receive instruction in methods of assessing abnormal linguistic development. In the areas of vocabulary and syntax, there are several standardized tests of comprehension and production which are scored according to a specific procedure, from which one can obtain an average developmental level for the child and, in some cases, a rough indication of what types of problems the child might be having. There is every evidence that the clinical field would benefit greatly from test developers whose understanding of phonology, morphology, and syntax was more comprehensive, although it is not clear that requiring courses in these areas simply at the undergraduate level would be sufficient.

On the other hand, in the area of phonology, there seems to be a case for including additional coursework on phonological problem solving and exposure to the phonologies of other languages. There are several assessment procedures used in speech-language pathology that can be followed in order to identify ways in which a child's phonological pattern might differ from the adult model. These "phonological process" analyses provide an outline of the areas in which the child might need intervention. Only those differences that are addressed by the test can be identified by the clinician who lacks phonological training. Yet it is clear that children do not limit their phonological "deviancies" to just the frequently occurring ones; the more phonologically-impaired the child is, the more likely that there are also problems in areas not assessed by currently available tests. A clinician with more extensive phonological training could do the field work and analysis necessary to broadly describe the child's entire system. Experience with collecting language samples and analyzing the data would be extremely useful to practicing clinicians. It should be noted that this argument applies also to those clinicians working with adults who have language problems (e.g., aphasia). There is considerably more to be known about disrupted speech and language than can be determined by existing standardized tests.

d) Current theories of syntax and phonology

Although undergraduate students with clinical majors probably do not need to become fluent in the procedures of analysis and argumentation associated with current theoretical approaches to language, there is a strong need for them to be familiar with the differences in perspective, the basic terminology, and the basic notations associated with current theories. This is the result of an increasing number of developmental and clinical research studies that use e.g., government and binding or autosegmental phonology. The ability to read these articles at the graduate level will depend on the student's prior exposure to these concepts. At the present time, there is much duplication; while courses are available that provide overviews to current theories, faculty in departments of speech and language pathology may include an introduction to a particular phonological theory as part of a seminar on recent research on phonological disorders. While it is not possible to provide all the background that one might need at the undergraduate level, the more familiarity the student can attain at the undergraduate level, the more that can be accomplished at the graduate level.

Clinical linguistics for the linguistics undergraduate

The undergraduate linguistics major can rarely predict what type of activity he or she will be engaged in five years down the line. As mentioned earlier, a degree is linguistics at the undergraduate level is appropriate for entry into most clinical linguistics programs.

There are several courses that are usually provided by speech and hearing departments that might be appropriate to include as electives in the undergraduate linguistics curriculum: introduction to communication disorders, aphasia (and neurolinguistics), speech physiology, brain and language, as well as some upper level courses such as phonological disorders, language disorders, assessment procedures, and audiology. Some of these courses provide examples of direct applications of basic linguistics to clinical situations; others provide exposure to areas in which linguistics can eventually be applied. For example, stuttering is frequently thought to be a disruption of the physiological speech production mechanism; at the same time, there is evidence that stuttering occurs much more frequently at the beginning of major syntactic phrases, suggesting a higher level linguistic involvement than is usually recognized. The use of data from aphasics as evidence on brain lateralization is widespread, but is becoming increasingly controversial as linguists delve more deeply into the case studies. Recent investigations into the nature of tone perception, production, disruption, and development in speakers of tone languages who are aphasics, hearing-impaired, laryngectomies, or normal children are evidence of potential applications of basic linguistics to clinical areas (cf. research on Thai by J. Gandour).

Special thoughts on linguistics and ASL

The study of American Sign Language (and, of course, other sign languages) is in many respects not really "clinical linguistics". It is, after all, the study of a language, and the native users are as much a cultural minority as a clinical population. Phonological analysis, segmentation, syllable structure, stress assignment, basic vs. derived forms -- these must all be done on ASL using the same methods that are used for spoken languages. The names of the units may be different, and the phonetic realization may be different, but the linguistic analysis and argumentation that are used on ASL now are the same as those used on spoken languages (and the questions just as difficult to answer). In this regard, students interested in pursuing ASL linguistics should be expected to take the same linguistics curriculum as others who are interested in spoken languages. Unless the faculty members are sign language researchers themselves, the students should be expected to do enough of their research and argumentation papers on spoken languages so that the faculty can assess the students' abilities in data organization, logic and argumentation, writing and presentation. Too frequently, students write papers on ASL that are interesting on the surface, but which the faculty members are unable to adequately evaluate. As time goes on, the notation and description of ASL will become more standardized and widespread, and there will be less need for this concern.

Another issue that comes up concerning ASL is the question of counting it for the language requirement. If the student is a native user (for example, a deaf student), then presumably ASL is the first language and English is the second, and should be treated accordingly (that is, parallel to any foreign student for whom English is the second language). If the student is a native bilingual (for example, a hearing person with ASL-using deaf parents), then whatever policy would be used for any other bilingual (say American Hispanic Spanish-English) would be appropriate. If the student is not a native user of ASL and wishes to use it for the second language requirement, care must be taken in the assessment of competency. Not all signers are fluent ASL users; ASL has a grammar that is distinct from English (ASL is agglutinating, inflected for aspect, and has reasonably free word order), but signers can take the ASL signs and put them in English word order ("signed English"). Signed English is totally unacceptable for the second language requirement (being merely coded English). If the evidence of competency is based on sign language courses taught within the university, linguistics faculty should determine that these are in fact American Sign Language courses (a critical feature is the inclusion of ASL syntax). If a proficiency examination is to be used, some type of committee should be formed to do the evaluation. ASL course instructors, certified sign language interpreters (with Comprehensive Skills Certification "CSC"), and members

of the local deaf community can easily determine whether the student has the level of competency required by the university. It is also important to keep in mind that the absence of a written literature in any culture has always been compensated by an oral tradition, in the sense that the accumulated cultural heritage is transmitted from generation to generation by direct contact (rather than on paper). This is also true for the folklore, plays, histories, jokes, sign play, and even songs that are part of the deaf culture. Since the invention of videotape, a library of deaf literature of different genres has become available. To read and appreciate this literature, one must be fluent in the language. It is common for courses in ASL to include this type of material as part of the curriculum; courses without such material should be scrutinized carefully before being accepted as counting towards the language requirement.

Conclusion

There are many ways in which the study of linguistics can contribute to clinical training. The expansion of knowledge of how languages can differ can provide important perspective on language disruption or disorder. More extensive familiarity with field methods of data collection and analysis can broaden the clinician's ability to determine the nature of linguistic impairment. Greater understanding of the fundamentals of language structure, including phonetics, phonology, morphology, and syntax, can provide students with a deeper understanding of the available information on language and speech pathologies and a foundation for more effective intervention.