

TRAINING OF APHASIOLOGISTS

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Four days ago, while supervising one of my graduate students in an acute hospital, I was perusing the file of the handsome 50 year old aphasic who was on the other side of the one-way mirror with my student therapist. My eye caught this interesting note in a typed progress report: "Bedside therapy will be continued until patient is able to come to our apartment". This little eyefull--I mean the report, not the therapist--convinced me that I should say something this morning about therapist communication skills. Possibly Emerick might call this an "oral to aural" breakdown with the Central Stenographic Office.

As this little true story suggests, countless questions can be subsumed under the title of my presentation this morning. The possible answers to those questions are even more numerous, and certainly I don't profess to be aware of more than a fraction of them. I have, however, participated in the education of speech and language clinicians for almost a quarter of a century and, in the process, have given the subject much thought. I would like to share with you some of my convictions (a high-class term meaning "biases") and also define a number of problems to which we must continue to seek more satisfactory solutions.

My thinking must obviously be influenced by the university communities in which I have worked, but I have no intention of standing here and boasting about how we do it in Milwaukee, or how we did it in Michigan, etc. On the other hand, neither do I intend to confide with you everything that I think is WRONG with aphasiology training in Milwaukee--or in Michigan, or Florida. I hope I can somehow eliminate a parochialism of approach, and speak instead as an evaluator of the national scene.

How to start? One seemingly reasonable approach is through the outline afforded us by the "hw--" words. Now any self-respecting phonetician knows that society has kicked the "h" out of most of our "hw" words, such as where, when, why and what. Therefore, let me start by pitching a little woo. [Write "WHO" on chalkboard]

This topic breaks down into two subsections--"BY WHOM" and "TO WHOM".

With respect to "BY WHOM" we might reasonably question whether this should be the senior professors of Speech Pathology, or the university, hospital, or rehabilitation center clinicians.

With respect to "TO WHOM", since we are discussing training, we mean the CLINICIAN, not the PATIENT. Not only are we concerned about admittance criteria and retention criteria, but we are also concerned that the clinician have a healthy personality. He must be able to relate to

clients and their families. He must feel "comfortable" in order to interrelate effectively with other health professionals. He must understand their terminology, training, competencies, ethical boundaries, and TOLERATE their inadequacies.

We all know that a would-be aphasiologist must be something of a diplomat/politician, a psychologist, possibly the host of a marathon talk show, a marriage counsellor, and perhaps even a games referee. (I have just described the requirements which appeared in a recent Milwaukee Journal article for the profession of BARTENDING. We'll discuss other necessary requirements a little later.)

WHAT [Write on chalkboard]

This subject lends itself to a three-way approach: Basic knowledge, techniques of modifying behavior, and application of both of these.

Our basic knowledge must include aspects of neurophysiology, psychology, theories of learning, the nature of language, language development, language pathologies (plus related apraxias, agnosias, and dysarthrias), applied linguistics, psycho-linguistics, the aging process (AND related psycho-social and economic problems), introductions to Occupational Therapy, Physical Therapy, Nursing, Medical Sociology, and Medicine, as well as problems of health care and health delivery systems.

I will not elaborate on techniques of modifying language behavior, since that constitutes the subject of other papers at this conference.

Applications of knowledge and techniques is usually termed "Practicum". This includes diagnosis, prognosis, therapies, and evaluation (so important in "accountability").

WHERE [Write on chalkboard]

Is this practicum best mediated in the university classroom or clinic; in the hospital (acute, rehabilitation, Veterans Administration); or in nursing homes, patient's homes, homes for the aged, etc?

If I find myself feeling particularly heretical within the next sixty minutes, I might even elaborate on the possibilities of

WHEN [Write on chalkboard]

Should aphasiology training occur at the undergraduate level, the master's level, or the Ph.D. level? What phases should occur at the different levels? How much of this training should be required of all Speech Pathology majors and how much should be "elective"?

So there we have a neat little "hw--" outline for tackling the

subject of this talk. Only the outline doesn't stay "neat". Consideration of one facet quickly demonstrates the need to consider other facets simultaneously. Hence I'll use this structure merely to supply suggested points of entry to the great number of problems facing us.

For our first subject of extended discussion, let us take a look at the undergraduate level of a theoretical clinician-training program in our present college/university educational system. We will look at an institution that trains public school speech and language clinicians. Imbued with the belief that one post high school year can mold a well-integrated personality--that is, will create a responsible citizen--we will require 12 semester hours of natural sciences, 12 of social sciences, and 12 of humanities. We will require these 36 credits regardless of the students' experiential or formal educational background!

To this we will add 15-18 credits in Psychology--namely:

Introduction to Psychology,
Child Psychology,
Adolescent Psychology,
Psychology and nature of exceptional children,
Child Growth and Development, and possibly
Abnormal Psychology.

You understand that this type of "education by the numbers" (i.e., sprinkle in three credits of this, and three of that, to achieve your desired goal) is only one of many approaches, but I have reasons for wanting us to consider it at the moment.

If we add nine credits of Speech Pathology-readiness courses, such as "Anatomy and Physiology", "Phonetics", and a smorgasbord course called "Introduction to Communication Disorders", we will have completed four normal-credit-load university semesters, satisfying half of the requirements of a baccalaureate degree.

Now, two years post high school, we can begin professional training.

However, our students have discovered that hospital jobs are scarce; they are counseled that they may wish to meet the requirements for public school speech pathology, thus taking less of a gamble on being able to work as a speech and language pathologist upon completion of the master's degree.

Accordingly, the student takes courses in:

the history of Education,
the psychology of Education,
the philosophy of Education,
school and society, and possibly
early language development.

Two and a half university years have now been completed and the student still has had no developmental reading course, and has been exposed to little if any information on speech and language readiness.

There's something additionally unsettling, however, in that last group of subjects. If courses in the history, philosophy, and psychology of education, plus "School and Society", indeed prepares the clinician to work more effectively with young children, where is a similar sequence of courses designed to better prepare the clinician to work with an older, brain-damaged population?

If "Child Growth and Development" is a viable requirement, where is a similar course in "Aging"? If "School and Society" is a viable requirement, where is a similar course in "Patterns of Health Care and the Delivery of Health and Health-related Services"?

I make these comparisons not to put down clinical work in the public schools, but to question, by comparison, whether our communication impaired adults are getting appropriately prepared clinicians.

Be that as it may--we return to our present curriculum. We now cram into our remaining one and a half undergraduate years a lot of material which should develop our understanding of articulation, voice, rhythm and language problems. Ready or not, we also get going clinically. After doing something in the College or University Clinic with two articulation cases twice a week for a semester, we now go out into the public schools and satisfy the State Department of Public Instruction's requirement of public school practicum. Incidentally, this can occur (dependant on the University of our choice) prior to taking courses in the evaluation and diagnosis of communication disorders, in counselling, etc.

In order to assure continuation of the benevolent approval of the U.S. Office of Education (and its funding of our graduate fellowships) we comply with the CCC practicum requirements of the American Speech and Hearing Association. By requiring 150 clock hours of practicum at the graduate level, we incur the continued displeasure--if not outright opposition--of the Dean of the Graduate School who (1) doesn't want outside agencies dictating the content of graduate programs, and (2) has never been quite able to balance the thrusts of his own academic training with the professional training demands sought by so many of today's university students.

Nevertheless our graduate students' feverish hunt for the appropriate practicum cases continues in order to satisfy ASHA's minimal hour requirements of twenty-five hours remediation with each of the following types of problems: articulation, voice and rhythm. Seventy-five hours are required with language disorders. Please note that the requirement of seventy-five hours with language cases can be satisfied exclusively with childhood language problems. It is possible to enter the post-

master's clinical fellowship year without ever having seen an aphasic!! It is also possible to have received one's sole instruction in aphasia in a single 3-credit undergraduate course dealing with the speech, language and hearing of three different types of clinical cases: the cerebral palsied, persons born with cleft lip and/or palate, and aphasics!

What are the implications of this type of training? It is possible for a student following such a curriculum to obtain employment in a public school system and to show up moonlighting with aphasic adults! If such an individual is clever enough, he will find the loopholes by which he can meet the spirit of Medicare reimbursement legislation. Result? In some cases, some good aphasia therapy; in other cases (possibly the majority) something far different from what the members of this audience are willing to condone! For example, not too long ago a colleague found a school clinician using her preschool materials with a 65 year old aphasic man, teaching him to respond to a picture card with the name "Cinderella"!!

Let's go back again, and look at our ideal clinical aphasiologist. We said he needed, or had to acquire, the traits of a good BARTENDER. Another set of skills and attributes that we might consider are those of the DETECTIVE SLEUTH. Does he need to track down the guilty embolus, thrombus, hemorrhage, vasospasm, or mechanical occlusion? I think not! In a colossal confusion of verbiage, one might say that he needs only to play Dr. Watson to the physician's Sherlock Holmes. But he must be sufficiently cognizant of pertinent aspects of medicine to be able to work with Holmes!

Another occupation to consider is that of LIFEGUARD. As the embolus goes thrashing downstream (or is it upstream?) through the Supra Marginal Gyrus, must the aphasiologist play lifeguard? Again, only the physician can perform this task. However, the aphasiologist, using tests such as the Boston and the PICA, might serve as RESPONSIBLE CITIZEN in directing the physician's attention to the presence of trouble, and possibly to the site of the trouble.

He can also join the physician in playing the role of FRIEND/COUNSELLOR to the patient and his family relative to the high risk of the patient's problem. He can counsel about the dangers of continued

heart disease,
hypertension,
hypercholesteremia,
diabetes,
obesity,
cigarette smoking, and
insufficient
rest and
exercise.

Let us also look at a problem in OPHTHALMOLOGY. Before beginning my talk this morning, I distributed to each of you paper mock-ups of eye-glasses. I'd like you all to put on a pair of these glasses, after making sure that you have bent out the folds at each eye. Dependant on the direction of folding the earpieces, you now have the means of simulating either a right or a left homonymous hemianopsia. I don't know who originated these devices, but my first contact with them was through consultants of the Wisconsin Division of Health. The glasses are helpful in demonstrating to many types of audiences the problems involved in homonymous hemianopsia.

Today, however, I'd like to use these glasses for a completely new purpose. I would like you to put on the glasses, or keep them on, for a few minutes, and imagine yourselves to be Speech Pathology students. OK? Here comes the prof:

"Friends, you are now in Schuell Country. This is where it's at! Hildred and I rode these ranges for the better part of 20 years! So pay attention. Here's the paydirt!"

Now if you were to wear these glasses in the east, you might see Eisenson country, possibly even Wepman turf. But in any case, your glasses probably haven't been "functionally 'Taylored'."

Whether your simulated field cuts can be related to neglect or to denial, you are unable to see either PICA country or TOKEN country, let alone REVISED TOKEN territory.

I have also brought along to share with you today a gift from one of my former classes. Today I'd like to introduce you to a set of glasses with an equally despicable problem [the speaker put on a pair of these glasses which had been covered with brilliant multi-colored spangles]. These afford a look at PICA territory to the exclusion (neglect, or denial) of all other terrain!

How did this state of affairs come about? How did you students acquire your present visual difficulties? Obviously your ability to see your cases has been affected by your instructors. Who have they been? Grey haired university professors? How did these professors become the repositories of aphasiology knowledge? Did they study with Fred Darley before he left the ivy and returned to the clinic to clarify what he was teaching? If so, they had probably the best training available at the time. (Incidentally, who else in our profession has so magnificently demonstrated the value of post-doctoral study--for professional renewal, for pioneering discovery?)

Let's say your professor was not of the stature of Fred Darley. What then did friend prof transmit to you? How to use the Eisenson, the Wepman-Jones, the Taylor, the Schuell? Fine! But we are now living in 1975!!

In the last decade a monstrous thing happened. A member of our profession dared to devise a test requiring a training period of a minimum of forty hours to learn to administer reliably. This posed very real problems for prof. The easiest thing was to condemn the blasted Index, and decry anyone who talked of cases as if they were numbers, percentiles.

A somewhat more difficult course of action was to actually study the test manual and then ask the students to "try it". Can one merely intellectualize the PICA and meaningfully read the literature which has received such significant contributions from several of you in this room? I think not!

Must prof put himself through a workshop or two in order to come to grips with this tool? How, otherwise, can he responsibly teach aphasiology in 1975?

Let's say that prof, having gotten involved, and catching some of the enthusiasm generated by clinicians who use PICA, now finds himself confronted with a problem unknown to him in the past. Should a speech pathology student receive a master's degree without being taught PICA? If not, what is the device through which the student learns this test? Remember, forty hours is approximately the equivalent of a semester's 3-credit course. Should PICA training be bootlegged under such existing course titles as "Independent Study", "Clinical Practicum", "Seminar"? Should a course in "PICA Theory and Practice" be recommended through the normal course and curriculum approval channels? I have heard vociferous objections by members of our own profession to such a move. Yet for years, the name of Binet has appeared in course titles in various psychology departments. Can such a listing occur only after the test designer is dead? Must we deprive our students--until time renders appropriate the gospel according to "Saint Bruce"? I strongly assert that any such action will convert the university into a museum, if it hasn't already attained that status. However, can't a new course entitled "Aphasia Diagnostic Testing" be used to accomplish the desired ends?

Do master's programs have an obligation to see that their students get PICA training--within or outside of university channels? I believe that this matter has become a very real problem--even when the prof is convinced of the merit of devoting 1/10 of the master's credit requirements for this purpose. This type of problem is not easily solved in a good number of institutions of higher learning. There is the added related problem of access to the appropriate cases for such training.

So, let's talk about another major training problem --
CASE AVAILABILITY.

How many University Clinics service other than chronic aphasics?

Do we not face quite different problems if our cases are seen (1) within one month of onset, (2) between two and four months post-onset, and (3) more than four months post-onset? Where do our students have access to acute cases if our programs do not have a working relationship with medical school clinics? Do we have the necessary entree to acute hospitals, and to rehabilitation hospitals? Do we see any role for ourselves in nursing homes? If so, have we the appropriate entree there?

When we consider the accessibility of at least three different types of cases (on the basis of months post-onset) we must also ask who is available and qualified to instruct our students in diagnostic, prognostic, and remediation techniques for these three different types? Is it the senior university professor whose primary job is to teach and to do research? Is it the clinician whose primary job is to render service? Should our students be taught by other health and allied health professionals such as the neurologist, neurosurgeon, neuroanatomist, physiatrist, linguist, or psychologist? Or is a team approach of some of these specialists preferable or mandatory?

If any of these alternatives seem less than optimal, or incapable of achieving, we might be tempted to consider an apprenticeship system. It seems to me that this is the route followed by the Veterans Administration in its hospital traineeship program. With a certain degree of trepidation before this particular audience, I must note that such training is only as good as the individual V.A. Hospital's personnel. But, the same statement must also be made of University-based personnel attempting training in other settings!

I can remember very clearly an episode in my undergraduate training--back in the Pleistocene Era of Aphasiology--when I was sent to a V.A. domiciliary to see if I could learn something about aphasics. To understand this incident you must adequately perceive the milieu--this was not only the Pleistocene era, it was B.A. (that translates to "Before Adermann")! The ward nurse was delighted to see me. She turned me loose in her ward with the hope that I might find the experience beneficial.

Protected by my profound ignorance of aphasia and aphasics, I proceeded to chat with these men. My first self-introduction was greeted by "God Damn!" Isolated from that type of person by my Jesuit training, I quickly switched the subject to what the resident had just eaten for lunch. Only to find it was "God Damn!" As soon as I could get away from this fellow--after all I had had something of a Catholic upbringing--I introduced myself to the next resident. This man's lunch turned out to consist of "Ninny-Ninny". "Ninny-Ninny" was also the color of the sweater he was wearing. Etc. There I was, with inadequate armor, in a Pica III ward!

Is it possible that 1975 aphasics encounter clinicians equally inadequately trained? Or, that clinicians encounter equally chronic patients? I would like to think not.

Is an apprenticeship the ideal solution? In a way, the present V.A. traineeships afford apprenticeship training. But what is adequate preparation for such a traineeship? Is it best for the student to arrive relatively unknowledgeable with respect to aphasiology? Or should he be sophisticated theoretically in the subject, and merely chomping at the bit to put his theory into practice? In either case, the apprenticeship is only going to be as good as the cooperating V.A. personnel. I can't give the V.A. traineeships any more of a blanket endorsement than I would endorse university arrangements where the cooperating hospital's implementation of multidisciplinary teamwork may leave much to be desired.

I cannot see this as an "either-or" problem. The strength of education in America rests partly in its diversity of approach. Perhaps this is also true of aphasiology training. We may merely need to upgrade instruction and supervision in all its various settings.

I would like now to advance a few RECOMMENDATIONS which might be effected within the context of present educational system practices:

We have already referred to the need to find a means of teaching PICA administration and interpretation within the university curriculum. I suspect that very shortly I might also like to add the REVISED TOKEN TEST to the university's instructional obligations.

We have also referred to apprenticeship training with the V.A. This technique is bound to be affected by the perceptions that the V.A. personnel have of the consultant university professors, and that the professors have of the V.A. personnel.

A similar problem can plague my next suggestion--namely, the university appointment of acute and rehabilitation hospital personnel as Clinical Instructors. This suggestion would require, between the hospital and university personnel, a spirit of mutual helpfulness and respect, NOT rivalry or obnoxious status observation, and the playing of political games.

In France, Sweden and the Netherlands, part-time faculty are preferred in many of the technically related academic programs. In our own country we have similar trends in the health related professions such as Medical Technology, Occupational Therapy, etc.

My next SUGGESTIONS concern the traditional university prof directly. We must assure that present aphasiology professors get themselves updated through participation in extended workshops wherein they could increase their fund of basic knowledge, and increase their skills with the latest tools and techniques for diagnosis, prognosis and therapy.

Another recommendation is to initiate ongoing in-service training for the professor, similar to that available to hospital personnel in the more advanced hospitals of this country--Veterans Administration and

others.

An additional, and possibly more controversial suggestion, is for the university prof to devote every fifth summer to working full-time in a hospital rehabilitation ward where he would see a large number of aphasics, and where he would be required to directly apply his knowledge within the time strictures and departmental policies and procedures governing the regular hospital speech pathologists.

I cannot view these suggestions for the prof as being in any way radical. If we look at education outside the United States we can find that since 1959 the USSR mandated and implemented paid educational leave for managerial, technical and scientific personnel.

In 1966 a decree of the Supreme Soviet made it obligatory for every teacher in every higher education establishment in the Soviet Union to spend one term in each five-year period improving his or her teaching qualifications.

Poland, in 1965, legislated training on a compulsory basis for certain types of workers in activities where rapid technological change makes it particularly imperative for them to acquire a wider range of skills and knowledge.

Surely the United States need not lag behind these countries in improving its higher education system!

Another recommendation is for greater experimentation in curricular approaches utilizing the new media and technology more creatively. We all view (and many of us use) videotape as a teaching tool to expose students in training to a larger variety of cases, and to demonstrate new clinical techniques. Have we similarly pursued the exciting possibilities inherent in use of the computer, in programmed instruction, dial access retrieval systems, and the automatic playback of lectures and/or therapy in both video and audio forms?

My next set of SUGGESTIONS might require greater ingenuity to implement, or might prove to be less congenial to the decision-making bodies of the universities.

For example, as part of degree requirements, we might require a full-time hospital internship in an acute or rehabilitation hospital, such as is required of occupational therapists, physical therapists, physicians, etc. Such an experience bears some similarity to our present Clinical Fellowship Year, but emphasizes the in-training pre-degree aspect, rather than a beginning professional status. Such affiliation would presumably lead to greater inter-disciplinary cooperation, coordination and communication. If we do indeed work together, should we not at least partly train together?

Another possibility is to admit that the field of aphasiology has become too big to be encompassed in a single university course. In addition to requiring complementary courses in Aging, Neuro-physiology, Delivery of Health Care Services, Legal aspects of our work, etc., DIRECT attention to aphasia could be included in a three-course sequence: (1) a 3-credit course in the history and nature of aphasia; (2) a four-credit course encompassing diagnostic and prognostic instruments (including "old 40-hours") as well as aphasia therapy techniques, and (3) a two-credit practicum experience.

Within such a sequence, the student would not only be able to get an historical appreciation of his field, along with a working knowledge of test instruments, but he would be apprised of the various concomittant problems he might encounter (such as emotional lability, swearing, suicidal tendencies, paralysis, family role problems) and how to deal with them. He would know what complicating factors to expect and what to look for in addition to speech and language behaviors.

His practicum might incorporate monthly evening workshops attended by all students currently in hospital practicum, along with their hospital-based supervisors, as well as the coordinating university professor. In these sessions clinical problems encountered during the preceding month would be shared, and alternative solutions would be discussed by all.

Another recommendation, despite a tight curriculum, is to give specialty training enabling the student to work as a consultant to nursing homes where he would conduct staff in-service training.

Another possible refocusing of present training programs would be to afford future aphasiologists with a better working knowledge of clinical research and research techniques to enable them to contribute to the fund of knowledge, designing such new tests as the RTT, and demonstrating the superiority of one treatment plan over another, for different types of cases.

Finally, it might also be recognized that ASHA requirements are merely minimal and perhaps we might entertain the requirement of a Clinical Ph.D. rather than accepting current master's products. (Whatever became of Fred Darley's decade-long crusade for higher standards?)

An alternative to be considered concurrently with the Clinical Ph.D. is the possibility of getting the entire professional training sequence started at a much earlier time in the student's undergraduate program, recognizing that the type of values expected from the required liberal arts background might be more beneficially pursued at a later time as part of the individual's ongoing continuing education. This would enable obtaining a firm neurological background as a sophomore. The junior year could bring introductions to the other health professions (PT, OT,

Nursing, etc.) along with information on the theory and nature of aphasia, augmented by controlled observations of testing, therapy and counseling. The senior (or master's) year could bring practice in several different settings where the students would experience, in action, the various hospitals' different

responsibilities,
relationships with PT, OT, etc.,
approaches to therapy and diagnosis,
resources,
ideas, etc.

I can anticipate immediate reactions by many Arts and Science deans who might still be hoping for a renaissance of general education. But it seems to me that more and more we are becoming reconciled to the fact that occupational training and general education are going to develop together. I don't believe we should rid higher education of occupational training on the grounds that it is getting in the way of general education. Also, it seems to me that there is a fair amount of intellectual content in some occupational training--or that at least there can be.

I've talked at some length about possible revisions to the present three-degree system (bachelors, masters and doctorate). Perhaps we should present our students with other educational options.

For example, with reference to timing we are encountering a movement toward life-long learning--expansion of the educational experience throughout life. Concurrently, new educational technology can enhance independent exploration on the part of the student. Can we take the concept of self pacing into a wider context and build a stair-step approach in which each advanced degree must be preceded by "X" number of years of full-time employment?

If we accept the idea of lifelong learning, then we must find better ways to prepare each student to rely more on himself to learn things for which he has an awakened interest and motivation.

While we might admit that there is no one educational model--can we be receptive to non-traditional approaches? Are we willing to experiment with such concepts as the Open University, various work study schemes, recurrent education, Inter-Institutional Cooperation and Coordination, different student support schemes?

These last few possibilities may have sounded platitudinous. I hope not. But in order to conclude in a more concrete vein, let me get right back to some of the nitty-gritty of 1975.

There are things happening in aphasiology that shouldn't be happening. These things vary with many factors, including section of the country,

population density, training of the clinician, etc. Various non-condonable practices are being excused because we have too many cases to see. In other settings there are too many students requiring training and an insufficient number of cases to facilitate such training. Perhaps we must demonstrate the maturity of our profession by making sure that no school with an insufficient availability of acute cases, or with insufficient or inadequate staff, be allowed to pretend to teach hospital-bound clinicians.

Well, I have rambled on for quite some time. Some of you have recorded a note or two; others, I hope, have filed an idea or two at some level of the brain stem or higher. Since I have used a minimum of visual aids, I'd like to conclude by asking you to visualize another anecdote of life in Milwaukee. However while I relate this true story, please try to view the two old gentlemen as a personification of present day Higher Education and Mabel and Mollie as educational administration.

Two men of advanced age, living in a nursing home, were complaining of the monotony of their daily routine. They tried desperately to conceive of a means of escaping the tedium of their daily routine. Finally Joe had an inspiration and suggested to Jake that they "streak" the grounds of the nursing home. With great glee they proceeded to do just that. Clearing the front of the building they passed a bench with two M & M's. Mabel said to Mollie: "Did you just see what I saw?" Mollie said, "Yes, that was Joe and Jake running past." But Mabel had identified the men; something else was bothering her. She said, "Mollie, I've been a spinster all my life so you'll have to forgive my ignorance, but what garment were those men wearing?" Mollie quickly retorted, "I don't know either, but it sure looked like it needed pressing!"

Training Of Aphasiologists:

Discussion

James Aten, Ph.D.

The word "aphasiologist" is a relatively new and descriptive term that is being used to identify certain speech pathology specialists with expertise in aphasia diagnosis and treatment. "Aphasia" may be defined as a multi-dimensional speech and language disorder that requires multi-disciplinary knowledge and skills for understanding and management. The suffix "ologist" refers to one who engages in the intensive exploration and application of current knowledge to the treatment of individuals having "aphasia." The training essential to the aphasiologist must necessarily be oriented toward the multiple academic and experiential dimensions suggested by the term that has evolved. Training which includes theoretical, diagnostic, and therapeutic aspects of aphasia is a demanding responsibility that is not easily accomplished in a single course, nor can it be effected by "exposure to a few patients." Let us examine some specific topics or dimensions that may be appropriate in training a qualified and professionally attuned "aphasiologist."

1. Anatomy. Rote learning of structures that subserve CNS functioning is not only an important discipline, it should be mandatory for all serious students of aphasia rehabilitation. All too frequently a modicum of training is provided for the tuition payment that teaches the student that we have a hippocampus. A more thorough and meaningful exposure will teach the prospective aphasiologist that the hippocampus is proximal and mesial to the temporal lobes. Such an awareness enhances one's understanding of the patient who presents us with an infiltrating temporal lobe tumor with initial symptoms of "literal paraphasia" with emergence later of a severe memory dysfunction.
2. Physiology Somewhat akin to our responsibility for anatomical orientation, geologists are required to learn by rote the structures of various rock formations. In comparison with the limited interrelationships of inorganic rock formations, however, the vastly complex and significant interplay of anatomical structures in human organisms faces the serious student with an awesome task. An effective training program must introduce that student to the dynamic interaction that obtains among physiological systems (e.g. the Reticular Activating System and its influence upon auditory reception, the general alerting mechanism, and inhibition). Students must be expected to critique and compare the classic contribution

by Penfield and Roberts - "Speech and Brain Mechanisms" (1959)
with Pribram's "Language of the Brain" (1971).

3. Neurology. Before the aphasiologist attends his/her first neurology rounds or picks up a medical chart, the following terms should have some degree of meaning (examples only): Air studies, flow studies, EMI scans, Babinski and Hoffman reflexes, disconnection, sensory neglect, ictal aphasia, infarct, bleed, watershed lesion, slow waves, akinetic mutism, CSF, frontal lobe affect, parietal lobe syndrome, cortical blindness, spikes, etc.
4. Psychology. There should be some Weschler and some Halstead thinking in all aphasiologists. By the same token psychologists should have some Wepman, Schuell, and Porch indoctrination. We would benefit greatly to have such psychologists test our aphasics just as they would profit from our profiles of language disabilities. Differential diagnosis as well as effective treatment requires some knowledge of the following: dementia, intelligence, general mental impairment, organic brain syndrome, paranoia, reactive depression, perseveration, distractibility, recent and remote memory defects, etc.
5. Physical Medicine. To understand the neurological and psychological ramifications of the disorder your patient presents is mandatory in establishing a complete diagnostic profile. More important for rehabilitation, however, is the information to be obtained from the physical medicine team directed by a competent physiatrist. A rehabilitation medicine team consisting of physical therapists, occupational therapists, corrective therapists, educational therapists, manual arts therapists, a home-based-hospital-care nurse, (and, of course the physiatrist) are formidable forces in the recovery of the patient. As assessed by a competent rehab. team, the patient's ADL (activities of daily living) profile can offer the aphasiologist a vital view of the patient. Naturally, the aphasiologist must learn to work and contribute as a member of that team. Learning to participate effectively in rehab. conferences is a vital aspect of training.
6. Social. It goes without saying that the social needs of the patient must not be neglected. To serve these significant needs a social worker can be the most vital member of the therapeutic/rehabilitative team. If the aphasiologist is to be effective in speech/language treatment, there is little time left to solve problems concerning insurance claims, medicare, medicaid, compensation, family dissolution, vocational and avocational needs, subsistence, and re-socialization in the community. The aphasiologist must be trained to consult with and to utilize the full spectrum of skills to be found in competent social workers.

These areas of concern are but a few of the dimensions that directly influence the patient. Consequently they must be clearly understood and appreciated by the aphasiologist for effective, comprehensive interaction with the aphasic. It must be admitted that our past training may not always have equipped us adequately to deal with these disciplines nor has it afforded us cognizance of their impact on diagnosis and treatment of the patient with aphasia.

The key aspects of professional training are the depth and quality of the knowledge and skills gained in testing for speech/language disturbances and administering speech and language treatment to the patient. The aphasiologist must be an (the) expert in assessing reading, writing, listening, speaking, gestural, and calculation skills. If present, dysarthrias must be differentially classified. Apraxia also must be differentially described as it often may be intricately complicating the aphasia patterns. Mental and emotional states which either inhibit or facilitate recovery must be appraised and considered prior to and during treatment. Selective or general inattention must be compensated for or otherwise considered. Sensory dysfunction and agnosias should be definitively described prior to treatment. All therapy must be based upon a profile of residual "can-do" behaviours which the aphasiologist has competently and laboriously detailed. Intact and deficit linguistic processes must be isolated and linguistic levels of functioning must be evaluated according to the processing involved. Testing must utilize the best instruments (most objective yet descriptive and reliable) available while contrasting these data with astute, clinical impressions and logic obtained from other sources mentioned earlier.

At this point we should ask, "What kind of a person can do all of this and in addition be a warm supportive, and effective clinician? What kind of super-human individual is this so-called aphasiologist?" I would trust that the student aphasiologists have been well-screened prior to acceptance into the training program we are suggesting. I would hope that they can first and most importantly be the kind of individual who has a deep capacity for empathy with one who, though non-verbal, is not in any way non-human. The aphasiologist must learn to respond through the disabilities to the residual abilities and human qualities of the patient they attempt to help. Besides understanding the other numerous dimensions, they must have a capacity for identifying with the patient who has lost the most vital of human functions-- i.e., the ability to communicate.

After assuring ourselves that the aphasiologist has these super-human traits, we can set about the following "simple" tasks of training:

- A. Developing competence in assessment. The PICA Test (Porch, 1967) has provided a model and means by which all diagnostic competence might be measured. Our training should consider ways to assure that the aphasiologist can evaluate a patient and derive appropriate clinical

data and interpretations that are as reliable and valid as those obtained from students completing the workshops devised for learning to administer the Porch test. Observations of other types of behaviors in aphasic patients could and perhaps must be so systematized, so as to develop competency-based criteria relevant to assessment.

- B. Assuring a Minimal Knowledge Base. Certainly ASHA does not currently assess an aphasiologist's "base of knowledge" in the dimensions cited as vital to working effectively with aphasics. Perhaps they will develop tests for speciality areas such as aphasia in the future. At present we can only hope that definitive mid-term and final exams may be evolved to measure a student's knowledge competencies on certain of these vital dimensions.
- C. Competence in Treatment Skills and Prognoses. Our training in competence to treat and predict may have to necessarily await a better knowledge base within the field. I would personally like to see student's therapy work systematically evaluated utilizing such tools as the Boone & Prescott (1972) scoring system for detailing what was actually done in therapy with the patient and what were the responses of the patient to the variety of stimuli employed. Eventually tools such as the Base Ten programs developed by LaPointe (1973) may assess efficient, effective clinicians from those less productive clinicians. We certainly are not now adequately training students to assess transfer and maintenance effects of these language skills regained in the clinic setting. Functional assessment of clinical treatment is a neglected area.
- D. Competence in Communicating with other Professionals and Families. The aphasiologist needs training in interviewing and counseling and imparting "loaded" information so that the facts neither threaten nor induce catastrophic reactions. "Sensitivity training" for the aphasiologist may be an appropriate exposure for this aspect of preparing our "super-human".
- E. Training Humility. Developing within the aphasiologist the capacity or ability to say something akin to, "I don't know." We should expect and/or instill within the aphasiologist the capacity for being an "open" person whose protective mechanisms are so oriented and known by the individual person as to facilitate his/her productivity and sharing behavior. When the student demonstrates attitudes which promote atmospheres of learning and development within each teaching session, which

encourage selflessness in others, and which strengthen everyone alike we may see the development of this clinically superior aphasiologist. Achieving this level of maturity is essential in rounding-out our specialist who develops a full recognition of the complexity of the aphasic's problems and the awareness that we are still in the dark ages of the 20th century relative to a full understanding of human brain and language functions.

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Training the aphasiologist should be more like treating the aphasic patient. First, the student wanting to become an aphasiologist should be evaluated in terms of future potential in the field. Second, the student should be trained in the following four areas: academics, clinical work, research, and management; and third, he should be taught to compensate for any deficiencies he displays.

By screening students, universities may gain insights into the intellectual capacities, motivation, and personality traits of those applying to their programs. What kinds of personality traits does an aphasiologist need in order to be successful? In general, he must be flexible, have a good sense of humor, and possess a certain degree of patience. During the evaluation process, universities need to determine whether the individual student is potentially Master's degree or Ph.D. material. And by setting higher standards for acceptance, the teaching institution can improve the quality of the graduates they send out into the field.

Since training the aphasiologist is such a complex task, I would propose breaking it down into four areas, and placing the steps in each major area on a task continuum. The first area would be academic work. It is recommended that Aphasia be a two-semester course so that the student can absorb theories in the field, classical points of view, terminology used in speech pathology as well as medical terminology, and learn how to read and decipher medical charts. The student needs additional background in phonetic principles, drugs and their effects on speech, and the primary functions such as respiration, phonation, and deglutition.

Since the student, like the aphasic patient, wants to be functional from the very first day, this necessitates a smoother transition from academic to clinical work. This can be accomplished in part by using multisensory approaches in teaching--visual as well as auditory input. For example, videotapes of actual patients from day one showing trends for recovery and films of various techniques for eliciting responses from the verbal as well as nonverbal patient. A smoother transition may also occur if the second semester of aphasia is taken simultaneously with a hospital externship.

In terms of clinical work, the student should gain exposure to the acute aphasic as well as the rehabilitative patient. The number of externships does not seem as significant as a wide scope of exposure to a variety of patients with varying kinds and degrees of aphasia. The student should learn about multidisciplinary approaches to treatment, and how to interact successfully with members of the physical and occupational therapy teams.

The third major area of training is research. Since this

aspect of training is becoming increasingly more important, the student needs to know, 1) What questions need to be asked and answered about aphasia, 2) How the aphasiologist conducts research on this particular population, 3) What factors influence the validity of our experiments, and 4) How the professional writes and submits articles to scientific and research journals.

The fourth area of training is management. This should include information on how the aphasiologist deals with physicians and other professionals; and should educate the student regarding the intricacies of accountability of services, budgeting, licensing, and state standards.

All of the above areas are significant in training the aphasiologist. And it is projected that if educators would evaluate their students in terms of a multidimensional scoring system--such as the PICA's 16 point scoring system--they would discover that the student scores around the 13 to 15 level in academic work; but falls to a 6 or 7 in terms of research and management. Thus, indicating the need for more in depth training in these areas.

In concluding these remarks on training the aphasiologist, I would like to note that graduate programs in speech pathology are necessarily comprehensive and generally longer than other graduate programs; and this means that professors may see many characteristics in their students which are reminiscent of aphasic behavior. For example, abnormal distributions of attention, fatigue, emotional lability, euphoria, and even a little of Wepman's "Shutter Effect". Educators therefore need to motivate their students, facilitate and stimulate their responses, keep them working at high levels of success, show them their progress at periodic intervals, and above all teach them to self-correct their errors. By applying the principles for the treatment of aphasia to the training of the aphasiologist, both the student and the teacher will benefit.