This article is based on the closing General Session presentation at the 1984 AOTA Conference in Kansas City, Missouri. The paper addresses the need for clinicians to become committed to research endeavors. The occupational therapy profession must heighten its commitment to the systematic documentation of its principles and the efficacy of its therapeutic approaches. The practicing clinician has the potential to maximize the outcome of these endeavors by contributing current practice knowledge and by participating in research projects themselves. The factors that seem to be having an impact on clinicians are addressed. External factors include social, technological, and economic pressures, and internal factors include lack of knowledge about the research process and the resulting anxieties about approaching a new territory. Acknowledging these factors, a variety of proposals are made to help the clinician make the transition to clinical researcher.

Clinicians working in the 1980s are being affected by social, economic, and technological issues. We must acknowledge these forces in our culture, and determine how we might face the challenges that they provide. John Naisbitt (1) states that we are living in the "Time of the Parenthesis," the time between eras when change and uncertainty are prevalent (p 249). This gives us the opportunity to make great strides, but we must accept the challenge of instability.

External Factors Affecting Our Profession
Social Issues

According to Naisbitt (1), one factor contributing to this instability is the movement from an industrial society, in which money was the source of power, to an information society, in which knowledge is the source of power. People are interacting with people in many forms today; communications are instantaneous, unlike the past when they had to wait for news or information. It has been reported that 6,000 to 7,000 scientific articles are written each day, and the amount of scientific/technical information available will double every five years.

How many of those articles are generated by occupational therapy personnel? With this insurgence of scientific/technical information, it will be important for occupational therapy to be represented in order to increase our visibility as well as our knowledge base.

Not only is there a lot of information available, but the methods for sharing that information are changing according to Naisbitt (1). We used to depend on bosses and administrators to pass information to us, but more and more networking, the process of people sharing ideas, information, and resources with each other (2), is being used. Each time a new person in a network receives information, synthesis can take place, stimulating new ideas. In this way, networks nurture individuals, and rewards return to the organizations for which these people work. The networks in occupational therapy have been developed through our journals, newsletters, and professional organizations. For these to be maximally effective, we must each be willing to contribute to the information base of the network. Ideas that are not shared cannot be improved or synthesized by others.

A network style of management may also be emerging, which will

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encourage the networking process both within and outside our formal organizations. McPherson commented: “Until we believe that the expert in any particular job is most often the person performing it, we shall forever limit the potential of that person in terms of both his contribution to the organization and to his personal development.” (3, p 201) The power of networking can provide an important resource to managers.

Naisbitt (1) also predicts that we are moving from a representative democracy to a participatory democracy, believing that those who are affected by a decision should be a part of the process of arriving at that decision (p 159).

Participatory democracy affects all levels of practice. Clinicians need to listen to patients and their families and not tune out what is incongruent with present thinking. . . if the reports offered by the patient, concerning aberrant feelings or lack of functional abilities fail to correlate with the rehabilitationists' or researchers' perceptions of how things should be, this valuable and extremely vital information is lost-forever. Very quickly, the patient learns what the experts desire to hear, see or feel . . . (reinforcing) . . . established biases . . . This tuned out atmosphere sets up a climate of sensory deprivation, not only for the expert, but more so in regard to the patient and his/her nervous system's potentials . . . (4, p 16)

The same principle applies to managers. Managers must be willing to sort out information from clinicians that would make the delivery of services more productive and efficient, while maintaining quality.

Economic Issues

As use of technology becomes commonplace, more options become available. An increased number of choices is appealing at first glance, but responsibilities go along with broadened choices. Many choices are economic such as: Who will complete the tasks in the new ways? Who will pay for these services? Is the timeline for task completion altered? The effects of this transition are being felt in rehabilitation departments and in the public schools with the prospective payment system. In rehabilitation sections, occupational therapy departments are asked to identify what they are contributing to the patient's recovery in terms of length of stay and dismissal of patients to outpatient and home-based services. In public schools, occupational therapists are being asked to articulate clearly what they do and to deliver service at a variety of levels. It is no longer a matter of asking whether we provide therapy or not, but what level of service delivery do we provide, and who else might be involved in the recovery or developmental process?

Another economic consideration is the increasing awareness of local problems, values, attitudes, and resources. Foundations or societies in cities, states, or regions might fund small research projects, defray the costs of patient treatment, or sponsor educational activities to improve our knowledge base, and therefore contribute to our networking efforts. Local or regional efforts to provide economic support in these areas may be a more stable option for the future.

To rely on a centralized source (e.g., an administrator or the federal government) for our funding or external support makes us vulnerable. If these sources alter their perspective, we may not be allowed to continue to do what we are doing. Therefore, we must find ways to obtain support from local or regional organizations.

Another economic issue, articulated by McTernan and Leikan (5), is that of supply and demand of health personnel. In the 1960s there was a critical shortage in health staffing; this led to the support of training programs. In the 1980s an oversupply has led to containment efforts, that is, an attempt to decrease the number of new professions, a decrease in funding for present programs, and a potential for decreased use of existing services. Economic concerns have taken precedence over humanitarian concerns. When oversupply exists the greatest pressure will be on the middle trained service providers (5). The larger populated technical groups will apply pressure from below, and the smaller, more powerful physician groups will apply pressure from above in the pyramid analogy set forth by McTernan and Leikan (5). Nonphysician practitioners will be seen as competition for the limited health care dollars.

The Graduate Medical Education National Advisory Committee has directed the government to hold the number of nonphysician providers to their present levels (5). However, mere expansion of physician supplies fails to satisfy the cost/benefit problem; physicians are likely to continue to charge the same (higher) rates. The workers in the middle and lower levels of the pyramid are trained to render quality service at lower cost.

The Graduate Medical Education National Advisory Committee justifies their position with this comment: “Too little is known about the cost and impact on patient care of these non-physician providers” (5, p 745). For occupational therapy to survive this potentially damaging situation, we must find ways to demonstrate the impact of our work on cost effective service delivery in all settings.

Jenkins and Sells (6), who are not occupational therapists, have addressed the problem of the use of occupational therapists and physi-
In developing a long-range plan for our profession, we need to consider the law of the situation, a phrase coined by Mary Parker Follett (1, p 85). This law asks the question, what business are you really in? Occupational therapy must take into account the changes in society and the world, and decide not only what business we are really in, but also what business it would be useful for us to be in (1, p 85).

It may be detrimental to think of ourselves as providers of habilitation or rehabilitation. Perhaps we are in the business of developing life independence. This includes the use of appropriate life occupations, purposeful activity, protection of joints, maintenance of range of motion, reinstatement of perceptual and mental processes, the things we are used to thinking about. Thinking further, the business of developing life independence might also include treatment of persons in settings more familiar to them or the development of computer skills in a young adult.

Technological Issues

"Whenever new technology is introduced into society, there must be a counterbalancing human response, that is, high touch, or the technology is ultimately rejected." (1, p 39) This balance of high tech/high touch is characteristic of our profession. Materials and technology are used to make adaptive equipment or to adjust patients' environments, but these adaptations are rarely made without interacting personally with the patients to introduce the adaptations.

Those clinicians resistant to alternate service delivery patterns may need the high touch inherent in providing direct service. Other forms of service delivery may also provide a balance of high tech/high touch, but clinicians must be willing to explore these possibilities.

Internal Factors Affecting Our Profession

Many persons get uneasy when they hear the word research; to them it means a scholarly activity engaged in by intellectual people. To put it simply and remove the stigma about the term, for clinicians who have questions that need to be answered, research is a way to find out what we want to or need to know. This is really all.

Believe it or not clinicians develop into researchers. They collect internal data from experiences in treating patients and interacting with families, and alter treatment regimens according to these experiences. Over time this background of experience (or clinical research) can be used to refine treatment procedures, and one's personal data base can be shared with other therapists. In a general sense, informal clinical research is conducted each time we question and reassess therapeutic theory and process. Corporate executive officers, administrators, funding agencies, or other professional groups cannot be expected to accept this type of informal data as justification for the costs of our service. Formal documentation of these refinements in our knowledge base must be available to everyone.

Colleague Issues

Many of our distinguished colleagues have commented on the need for research in our profession. Mitcham (7) said that entry level therapists need to become intelligent consumers of research but...
experienced professionals need more. "They will need the skills of examining relationships between their respective environments and OT practice." (7, p 5) Yerxa states that our entire profession needs to make a major priority shift to the devotional of more resources to knowledge development, so that a unique scientific foundation can be documented for occupational therapy (8). Without these types of validation, much valuable knowledge will be lost, and we will be in a precarious position to justify our existence. Christiansen contends that our greatest challenge is to "overcome the attitude of neglect toward scientific inquiry" (9), seeing it as irrelevant to our practice. He believes we need to face the economic importance of our individual and group commitment to scientific inquiry (9). We will not be competitive unless we validate our value and efficacy. Pressure from physicians for health care dollars may require us to defend our activities and productivity disproportionately (9).

The first step in the process of becoming clinical researchers is to acknowledge that the basic principles of occupational therapy are built on research done by others, including biologists, neuroscientists, developmental theorists, and clinical and research psychologists. A research base from our own data needs to be established. Important strides have been made, but we need to commit time, energy, and resources to this objective.

Personal Issues

Anxiety about being part of the research process can be overcome by making the outward signs of anxiety work in our favor.

Research is boring and irrelevant. Research studies are often generated by persons who are not working as clinicians. If each clinician agreed to contribute a few relevant ideas, then the material generated would be relevant and would be interesting. The side effect of this type of activity is that more relevant topics will be generated. When a point of view is placed into the network, others are eager to respond and comment.

I don’t know anything about research. This is often said when people are nervous about a new area of endeavor. Research might be considered just another practice topic to learn about; the best part about research as a topic is that it pertains to everything we do. Being good consumers of research helps us better define what business we are in.

I don’t have time. With the pressures of being cost effective and productive in clinical settings, time has become a precious commodity. We must each decide how much we are willing to invest to safeguard the position of our profession in the health care and educational communities. Other professionals have the right and obligation, in the name of safeguarding the patients and families we all serve, to question the efficacy of what we do. If each clinician were willing to spend 15 to 30 minutes per week toward developing our knowledge base in a formal way, think of how much would be available to everyone.

I can’t write. Research does not limit one to writing. In the information society, there are many ways to communicate ideas. They can be shared informally in a discussion while a plan is being developed. They can be dictated and transcribed (many of us have better verbal skills). Another way to communicate ideas is to work with a group, making sure that one member has writing skills. Some in our profession may need to be part of a clinical research effort, such as university instructors, regional research consultants, or graduate students. These persons are likely to invite expertise in clinical practice.

I am burned out. Stress is often a product of our intense interactions with clients and their families. One way to diminish the feelings of burnout is to develop variety. The challenges to change seem exhausting at first, but often provide energy and enthusiasm as we creatively solve problems. The prospect of providing alternate service delivery patterns has spurred many discussions. This has not increased burnout; perhaps it has diminished it.

We’ve always done it that way. This is a potentially dangerous comment because it can severely limit growth. As Josephine Moore said, when patterns of thought are set, the amount and type of information admitted into our thoughts are limited (4). We preset the filters of our senses and perceptions. Clinical research requires that those filters be kept open, so there is a constant willingness to change patterns of treatment. We need to be willing to listen to environmental cues and question why those cues are present. Seemingly incompatible information should be questioned. Research provides us with the tools to examine incompatible information.

I cannot add one more thing to the curriculum. Many of the things students do on affiliations could be related to the clinical research process. Literature searches are a form of research. One could use the articles that students review to teach research principles. What did the authors do to come up with their results? How many subjects did they have in their study? Were the people in the sample similar to or different from the patients in this setting? Another way to introduce research ideas is to help students systematize their student projects so that results can be interpreted. More questions arise out of
one's own work than out of any other type of learning endeavor.

I cannot justify withholding treatment. Many research projects compare those treated with those who did not have the benefit of treatment. This is not the only method available for scientific inquiry. Additionally, one cannot assume that treatment procedures being used now are the most beneficial or appropriate for patients. We have to be willing to compare different types of service delivery treatment methods through clinical studies and use the information found.

Making the Transition to Clinical Researcher

Some tasks require a minimum amount of personal effort, and others require a great deal of effort. They are intended to serve persons at all levels of preparation. This way each person can contribute to the challenge of evolving into clinical researchers.

Contribute money to research foundations.

Contributing money to research requires little extra time, but supports the work of others in the profession who decide to spend the time on research. One could contribute to the American Occupational Therapy Foundation, which supports many clinical projects or to regional resources that support activity in a field of expertise or in a specific geographic area.

This type of commitment to research has the least direct payback to the participant. One takes a chance that what happens will have a relevance to clinical practice. Since one invests little time, little personal growth occurs.

Read the literature and become a research consumer.

The amount of time invested in this activity is likely to be proportional to the benefit received. The literature holds information at several levels; one can learn direct procedures or about professional reporting style. It also provides the opportunity for the consumer to make decisions about what is being questioned. Are conclusions agreeable? Did researchers forget an important aspect of the procedure? Were they thorough? These types of questions help identify how one might conduct a plan differently.

It also brings into focus that our profession is based on research, and not on "folklore."

Return surveys that are sent to you.

Many surveys come from graduate students, cancer researchers, nutritionists conducting research. Your input will provide them with a more substantial data base. This is a small but potentially important contribution to make to the data base of our profession and to the data base of others.

Standardize documentation procedures.

Documentation can include progress notes, the evaluation process, and the methods for reporting what is present and probable. Many benefits can be derived from standard documentation. It sets the stage for clinical research to be done in a systematic way. Chart audit and quality assurance studies are familiar methods to most clinicians and can be considered clinical research endeavors. The collection of information on a larger and larger group with the same kind of data is a portion of the research process.

Support professional organizations.

State, community, and national professional organizations can provide many important resources. They provide contacts for sharing verbally, and they provide mechanisms such as newsletters and journals for sharing by writing. In building a clinical research base, state or local newsletters could allow a case study submitted by membership on one of their pages. State organizations could sponsor an annual workshop for therapists to present case studies, small projects being enacted, or observations of trends in their populations. The American Occupational Therapy Association (AOTA) produces regional workshops in areas pertaining to clinical study. These methods are all ways to develop increasing comfort with the role as clinical researchers in a supportive environment.

Participate or contribute to AOTA projects.

The American Occupational Therapy Association has developed several programs for its membership, one of which was TO-TEMS. This program was a competency-based curriculum to train therapists for working in the public school environment, but other results also occurred. Pre- and posttest data were collected on the therapists who participated in this project. Their changes in knowledge and attitudes were documented to help learn more about the ways clinical skills are improved. Since that project, AOTA has initiated others in vocational readiness, gerontology, and mental health. Participation in these competency-based programs provides the opportunity to learn, network, and contribute to research in our profession.

Develop work done for governing bodies.

Those who work in facilities governed by other agencies have a premier opportunity to contribute to the clinical knowledge base of our profession. Joint commission projects, quality assurance studies, and individualized education program
documentation are all potential forms of clinical research. Efficient documentation procedures are difficult to set up and maintain. Isn't it likely that departments across the nation discover similar problems and spend hours developing similar solutions? If information were shared, less time would have to be spent on redundant work, and productivity might increase. If these necessary parts of our jobs were systematically planned, then one piece of work could serve several purposes.

**Participate in study groups.**

Professional study groups can be used for many purposes, such as some of the activities discussed here. They can read and discuss the literature together; discuss documentation or treatment problems and develop solutions together; or plan small (or large) clinical research projects by posing questions and then deciding how to go about finding answers. In these activities, people in different areas of practice can share their varying approaches to problem solving. More heterogeneity allows for more potential combinations of synthesized information.

**Participate in peer review.**

Peer review has been a professional activity for a long time. It can be considered a more formalized type of study group. Also, it is a way to identify where improvements or reinforcements are needed. Peer review is a bit more threatening because a colleague reviews your work, but usually there is a plan (the design), a way to collect the information (the method), and a procedure to record and summarize information (the results). Then equitable use of findings can be worked out (discussion). Problem solving together allows more information to be synthesized and is the beginning of research.

**Develop a case study.**

The case study task takes more time yet increases the return on the personal investment. In the case study one systematically records and interprets the sequence of events on one or a small group of patients. They are usually descriptive in nature, but often contain quantified data also. If each rehabilitation occupational therapist had reported in the literature on one cerebrovascular accident (CVA) patient, think of the data base that would be available on that group. Patterns would emerge; new questions would arise. New test procedures might be tried. Workshops can be formed to support this type of task. They could combine introductory research design information with the presentation of case studies, which could eventually be published. The transition from oral to written language is a missing link for many of us.

**Collaborate.**

Each person in our profession has special skills that should be identified and capitalized. No skill should be viewed as unimportant or less valued than another in our endeavor to develop a knowledge base for our profession. Although each of us must be willing to learn more, we must also celebrate our collective and respective strength. This can happen through collaboration. Clinicians know the relevant issues that need to be studied, but do not always know how to get them studied. Educators know how to get a study done, but may not know what is pertinent to study or may not have access to patients. Managers can support these endeavors both with their organizational skills and resources such as time and places to meet. Some thing that one of us could never accomplish might be readily done by all of us.

**Concluding Remarks**

Naisbitt (1) comments that "change occurs when there is a confluence of both changing values and economic necessity, and not before" (p 183). I suggest that we are at that place. Our value system is evolving, and we are feeling the need as occupational therapists to become productive, to become cost effective, and to justify our usefulness in the changing economic environment. Change is painful. It takes courage to abandon our comfortable ways and consider entering the world of the unknown. We need to reaffirm the need to do clinical research and take the necessary risks to develop these skills in ourselves.

We can all grow together through this process of developing our research foundations. I challenge each of you to explore creative options with yourselves and with each other.

**REFERENCES**