Dr. Edell is an ophthalmologist and a surgeon who has pioneered medical reporting in the news media. He currently has four shows, including "Healthtalk" on KGO Radio 81, "Housecalls" on Channel 7 News, "Dr. Edell's Medical Journal," and "Medical News Reports" on Channel 7. Several of the shows are aired in over 120 cities nationwide. Dr. Edell often suggests biofeedback on his talk shows for individuals with stress and anxiety related conditions.

Peter Behel: Recent developments in the field of psychoneuroimmunology suggest that the quality of our thoughts, emotions, and attitudes profoundly affects our health. This opens up a whole new arena in medical treatment and care. If the means for curing ourselves lies within our ability to activate and control our own immune system, shouldn't that change the approach of modern medical science? Shouldn't tomorrow's physician be as concerned with investigating how to promote health as he is about fighting disease?

Dean Edell: That's a big one. Ideally, the prevention of illness should be the goal of medicine. The problem is that it's a wonderful ideal, and it's easier said than done. This is partially because of medicine's failure to pick up the ball, and partially because of the public's unwillingness to want to do these things. We have not seen a change in public eating habits, in terms of fat and cholesterol consumption. Despite all of our analyses, and all that we've told people, we can't get people to change how they eat. Changing how they think is going to be even more difficult! To teach them how to control their minds or bodies and all that is a taller order, in terms of even something as simple as stress-reduction. You have to get people to want to change and to recognize it.

I think psychoneuroimmunology has a tremendous future, and we await the accumulation of good, hard evidence. Early indications suggest that there are effects, and that the mind has a powerful influence on the immune system. It may not be enough to say, fight off AIDS, or fight off a disease; but certainly it is enough to strengthen one's resistance to catching something. You know, the studies of bereaved people show that they seem to have higher rates of illness after bereavement. But it is extraordinarily complex to go from there to figuring out how to get people not to be bereaved. Can you imagine the time involved if everyone who was bereaved went to a shrink three hours a week? It would be prohibitive! It would be more costly than the way we approach medicine now.

It's something certainly to shoot for, and it's a standard to hold up in front of us all, to learn how to prevent illness and teach people how to do it themselves and avoid doctors, but I think most physicians will be employed in the next few decades.

Peter Behel: The thrust of that question was not targeted so much on the removal of the physician's role in pathology and bacteriology as it was focusing on the actual triggering of the immune system and how far that can be taken.

Dean Edell: We've probably learned now that having people visualize their white blood cells gobbling up cancer cells may not alter ultimate outcomes in cancer. But it does seem to make people feel more in control, and feel better, and therefore it really helps and is a positive thing. How do we reduce these things to a practicality? That's the goal, and that's the problem at the same time. It's easy to speculate, and its very difficult to prove. That's the problem you're going to come up against promoting something like these techniques to physicians at large. We're going to be skeptical about it.

Peter Behel: Over the years you've mentioned biofeedback as a viable treatment alternative in several health-related applications on your programs. Have you had any personal experiences with self-regulation and/or biofeedback training, or are your observations more of an analytical nature?

Dean Edell: Well, I was a meditator from the 60's, you know, that kind of thing. As for myself, I thankfully haven't come up against...
Here are a few reasons why many of the most respected researchers and practitioners in biofeedback prefer and endorse ABC.

1. We market and support all quality, clinical grade instruments and computerized systems so we can install the system that is best for your circumstances regardless of whether we make it or not.

2. The incredibly versatile UNICOMP series interfaces with almost all instruments including J&J 1330, 1300, Davicon and provides automatic Blood Pressure, Rehabilitation and Multi-client/Multi Station versions.

3. We introduced to the biofeedback community the first commercial computerized blood pressure system (the D.P. 688) and Bioconductive Therapy in 1983.

4. Full training and consulting services including BCIA Certification, a full range of advanced topics and special opportunities such as Blood Pressure, EMG and other types of assessments, Rehabilitation, and Marketing.

5. Service and support. Our endorsements tell the story. We are part of your team as long as you need us. Remember, when you invest in a Bio Comp or Medac or Orion or Bio Lab or J&J or any other system not made by American Biotec you earn the back up and support of TWO companies (ABC and the Manufacturer) plus 3 days of free training (Module A of the BCIA Certification Series) plus ABC’s ability to modify and extend the capability of most systems plus ABC’s many innovations.

6. We’ve supported EEG biofeedback steadily since 1971. Now we are developing, with the CapScan Corporation, the most advanced 4 channel, phase and coherence sensitive, brain mapping, computerized biofeedback EEG in the world. The software integrates with UNICOMP.

"We believe the ABC team provides the best client support available. People who are just learning our technology or computerizing for the first time will find ABC planning and "hand holding" services extremely comforting. In a field where integrity and skill in action is critically important, I think Adam Crane and his team are the best in the world."

Charles Stroebel, M.D., Ph.D, BSA Past President, Director Stress Medicine Clinic and the Institute for Advanced Studies.

"This is a letter which you may use to help convince other practitioners that using your products and services is a wise decision. I appreciate your reliability, steadiness and ability to deliver quality services and products...and to stand behind those services and products. "Kenneth Greenspan, M.D. Director Center for Stress and Pain Disorders, Columbia Presbyterian Medical Ctr.

"The most incomprehensible thing about the universe is that it is comprehensible."

Albert Einstein

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FROM THE EDITOR

The summer issue of California Biofeedback comes to you with significant changes in our production. As many of you know, the business of our society is now being ably handled by Busher Associates of San Rafael, CA.

The layout and typesetting are being handled by Rosalie Blazev via a Ventura desktop publishing program. We will continue to use Sundance Press in Arizona for the printing and mailing as they have consistently provided us with an excellent final product, good turn-around time, and all at a good price.

In the current issue and in subsequent issues, articles on biofeedback efficacy will be presented that have appeared in the "Annals of Internal Medicine" over the past few years. The articles are products of the Clinical Efficacy Assessment Project (CEAP). CEAP is a program of the American College of Physicians, a group of 66,000 doctors of internal medicine, subspecialists, and physicians-in-training. The program evaluates medical technologies and makes recommendations to physicians based on the factors of cost, effectiveness, efficacy, risk and safety.

The newsletter committee is fully aware that many of the "efficacy" studies cited in some of the reports are flawed by insufficient training sessions, sterile experimental paradigms, and often attempt to delete the significance and role of the trained therapist. The CEAP reports are often what physicians read in forming opinions on "new" or alternate techniques and consequently should be of interest to our readership. An attempt will be made each issue to juxtapose a more favorable article from our membership that will serve as a counterpoint. The current CEAP report on "Biofeedback for Headaches" is followed by a study by Dr. Susan O'Grady that was done at Kaiser Hospital in Vallejo.

Other CEAP reports that may appear in subsequent issues of California Biofeedback are "Biofeedback for Hypertension" (1985), "Biofeedback for Gastrointestinal Disorders" (1985), and "Biofeedback for Neuromuscular Disorders" (1985).

I would like to encourage each and everyone of you to contribute to our newsletter, whether it be a book review, clinical vignettes, humor, guides to stress management, student research article, or a review of relevant articles that you might come across. Because of our changeover to desktop publishing, we would like to encourage you to submit material on disk along with a hard copy if that technology is available to you.

May you all have a wonderful summer with lots of good feedback!
PRESIDENT’S COLUMN

After a thorough search of a dozen or so management firms, I’m pleased to announce to the membership the selection of Busher Associates as the new administrative coordinators for the Biofeedback Society of California. As I noted in my last column, we undertook this effort reluctantly, but I believe we have made a good choice and are now in a position to cultivate new ideas and inject new energy into our operations. I’d like to express special thanks for the diligence of our Search Committee Chair, President-Elect Evie Ginzburg, and Committee members Don Nadler, Pam Erhardt, and Barbara Rossman.

Our new Executive Director is Ms. Beverly Busher. She has had several years of experience in coordinating the affairs of health care associations and has a graduate degree in health education. She is ably assisted by her Associate Director, Ms. Barbara Sutherland. Our new headquarters are located at 1040 B Street, Suite 210, San Rafael, California 94901. Our new phone is (415) 459-1750. Please update your address book or phone list accordingly. Correspondence to our former offices in Sherman Oaks will be forwarded for a temporary period.

Our immediate challenge is to establish workable procedures in order to maintain the quality of membership benefits and programs developed over the past years. The major activities include the Newsletter and Annual Convention. Newsletter Editor Bill Barton and his committee are already hard at work considering not only the normal content issues, but layout, printing and mailing options. You now hold in your hand the results of hundreds of hours of accumulated volunteer time. They all deserve our sincere appreciation. While we continue to encourage constructive input from members, please keep in mind we’ll be experimenting a little more than usual in these next few editions.

Similarly, our Program Committee (headed by Don Nadler) has found itself responsible for a much wider array of decisions regarding the mechanics of producing a “really good show”! Along with Committee member Margie Pappas, Don conducted a facilities review with the management of the Claremont Hotel in Berkeley, the site of our next meeting in November. Many of these organizing functions were previously established and implemented by a full time convention coordinator employed by our former management company. As the program chairman last year, I took a lot of these tasks for granted, relying on the able skills of this professional person who organized conventions full time.

Let’s all pitch in to make their jobs easier. Don’t procrastinate when you receive convention registration materials this year. Write that article you’ve been thinking about for the Newsletter and get it to Bill early. Better yet, use your word processor to write a letter to the editor and send it by disk or modem to the central office. Let your society activity

Continued on Page 29

Announcing the

SECOND ANNUAL RESEARCH PRIZE

for

1 • 9 • 8 • 8

The J & J Instrument Company and the Professional School of Biofeedback Training have generously offered the following prize to be awarded at the 1988 Convention at the Claremont Hotel in Berkeley:

1 330 Physiological Monitoring System
2 Channels EMG 2 Channels Temp
1 EDR 1 Plethysmograph
1 Respiration Assorted Software

PC Clone XT type with a C-Drive

Deadlines for submission are September 1, 1988 and should be sent to the Executive Office.
LETTER TO THE EDITOR

This is in response to the proposal to license biofeedback therapists. It's gratifying to encounter a move to enhance the status and credibility of those clinically applying biofeedback. The resulting establishment of more forcible regulation of treatment standards is likewise promising. Despite other easily recognized benefits from licensure, however, the current proposal (Sandweiss) specifies conditions for such licensing which are premature, limited, and not fully directed to the best long-term interests of the self-regulation field and those who would represent it professionally.

The proposed license would endorse individuals applying biofeedback only for disorders defined by the presence of physical, but not psychological, symptoms. Psychologically dominant diagnoses needing biofeedback would be directed to the psychologically licensed clinician.

My personal experience suggests that such division of functions is clinically unsupported and unjustified. Within my full-time biofeedback therapist position for the last several years in the department of psychiatry and mental health of a large California HMO, approximately 40% of patients referred to me have had psychologically-specific diagnoses lacking any chief complaint of physical symptoms and received no concurrent treatment by a psychological licensee. Supervision of my work was nonetheless maintained. Since my referral base has included predominantly internal medicine, neurology, dentistry, dermatology, gastroenterology, orthopedics and psychiatry, that percentage is substantial considering the comparatively low staffing of psychological versus medical clinicians within the health plan.

As distinct from psychodynamic therapy or behavioral psychotherapy, I believe self-regulation is a treatment entity with assertable elements of appropriateness for both psychological and physiological disorders, regardless of individually determined indications for specific therapeutic processes as either primary or adjunctive. We tend to treat according to therapeutic models in which we have belief and training. A psychodynamic thrust inherently would diminish the thoroughness and focus of a rigorous self-regulation plan, and the reverse applies. I don't feel clinicians freely alternate between major treatment models unless their interpretation of respective models is superficial. Where a psychodynamic emphasis is indicated, the licensed psychological professional is indicated. Where a behavioral self-regulation emphasis exists for patients with psychological diagnoses, a self-regulation professional is indicated. It is problematic that no standard nomenclature exists for behavioral components of psychological disorders.

I have found that the frequent emphasis on psychodynamic aspects of many psychological disorders is not always appropriate or productive. However, it is a traditional pattern. I don't agree that biofeedback applications by and large are concerned ultimately with only learned physiological regulation. Often physiological regulation is only a means of approaching another end in a biobehavioral therapy such as self-regulation. For years, the patient with obsessive-compulsive disorder, panic disorder, or dependent personality was not referred to me. A concern for "a threat to ego boundaries" from presumed deep relaxation goals of biofeedback applications kept traditional referral channels uncluttered (minimized the self-regulation option). Successes with patients who reached me nonetheless have complicated the referral pattern, but have added an individualized option for appropriate patients.

For the most part, I consider self-regulation a special category of behavioral intervention. It's unfortunate that fields of discipline generally evolve toward greater complexity of classification; a framework that can spoil or enrich the future of a biofeedback focus. For licensure to restrict biofeedback applications to a medical domain alone would indeed simplify the ongoing struggle to find an agent which would take responsibility for supervision of the long-standing orphan of mind and body disciplines. Doubtless such motivation is contained within the proposal. I feel containment of biofeedback uses to medical problems alone would degrade the latitude for growth of our field particularly involving clinical relevance and capacity to be a primary treatment mode, which it has shown itself capable of. At times, self-regulation is a tangential treatment, but it isn't always and only that.

Biofeedback seems to have gained a standardized reputation, as non-optimal generally. I'm not at all happy about the diluting effect for the biofeedback industry of less-than-thorough and inappropriate applications being dispensed in the marketplace, though it is an expected problem for a field with the attributes of self-regulation today. Training and education are vital at the level of graduate curricula to make substantial headway. Licensing doesn't have to be as easy as getting certified.

Even with the strength of clinical results, recognition of the value and depth of self-regulation is halting and discontinuous; symptomatic of a difficulty making it fit some established clinical treatment structure. The professional climate is not a good one for providing self-regulation a status which is anything but adjunctive and only marginally relevant in a medical system alone.

To be hell-bent for licensing above all else is clearly risky business at this stage of our development. Beforehand, much additional review is necessary of the domain in which biofeedback applications can function to the broadest extent, even if it means carving a new territory.

It's a long-standing and tough question for biofeedback clinicians to answer. A clear knowledge and perception of how broadly self-regulation will fit into the general concept of "health" in coming times is essential to avoid sacrificing the potential of a unique agent of health.

Wick Hauprich
Glendale, CA
The BCIA Certification Training Series

This Program is Co-Sponsored by:

THE AMERICAN BIOTECH CORPORATION

Biofeedback Review Seminars is an organization approved by the American Psychological Association to offer continuing education for psychologists. APA approval does not imply endorsement of individual offerings. This program is offered for 40 hours of category A Continuing education Units (CEUs).

Upon completion of the UCLA Extension Clinical Biofeedback Review Course and the Post Test each student will receive a Certificate of Completion from UCLA EXTENSION.

As an organization accredited for continuing medical education, the department of Continuing Education in Health Sciences, UCLA Extension certifies that this continuing education activity meets the criteria for 15 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association and the California Medical Association's Certificate in Medical Education.

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This is a Continuing education offered for physical therapists approved by the California Chapter, American Physical Therapy Association, and meets the requirements for 1.5 Continuing Education Units (CEUs).

The BCIA Certification Training Series is an outstanding solution to the problem BCIA certification candidates face acquiring the necessary didactic instruction and supervised training in the most economic and time efficient way. The Series fulfills all training and supervision criteria required by the Biofeedback Certification Institute of America in order to take the certification exams. It is based on the BCIA blueprint for certification and re-certification, and participants receive certificates for each module completed.

Each year since 1986 the BCIA upgraded supervised training requirements as a necessary part of a comprehensive program which has resulted in increased effectiveness with third party payors, as well as increased marketability and distinction for BCIA certificate holders. Our professional certificate training is based on peak performance learning techniques which maximize the rate of absorption of new material and the integration and acquisition of new physical skills. This enables us to compress the required BCIA supervised training into the least number of days possible, saving the BCIA certification candidate precious time and expense.

"I truly feel that you have put the long term perspective... developing biofeedback and self-regulation as a field... over a quick profit. Your standards of excellence, cost containment, and training capabilities provide benefits for your clients and their thousands of patients." - Erik Peper, Ph.D., Faculty, Institute of Healing Studies, San Francisco State University, Director of the Biofeedback and Family Therapy Institute, Berkeley. Past President of BSA, Author of MIND/BODY INTEGRATION and FROM THE INSIDE OUT

"Adam Crane has taken a very complex theory and problem and reduced it into an exciting, effective, cost efficient, powerful, understandable set of procedures which are immersed in human warming, understanding, empathy and positive exhilaration. I strongly recommend both biofeedback and Adam Crane to all clinicians, regardless of their philosophical or therapeutic orientation." - John S. O'Brien, Ph.D., Clinical Instructor in Psychiatry, Tufts Medical School

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MODULE A
$695, 45 hours, 3 days including BR5's UCLA EXTENSION 15 hour home study course 30 hours classroom training, 10 hours instrumentation, 23 hours of clinical intervention, 5 hours health and education and 2 hours professional conduct plus 5 hours BCIA approved personal supervised instrument training. Includes continuing education credits as described above. For many this is all that is necessary as other hourly requirements can be met easily and economically met locally. This is an excellent basic professional biofeedback training program whether or not the practitioner intends to take the BCIA Certification exam. NOTE: Invest $3,000 or more in equipment and receive a $495 CREDIT against Module A.

MODULE B
$495, 30 hours, 3 days. The following training is supervised by a BCIA approved instructor, 5 hours of personal instrument training, 10 hours of case conference and 15 hours of client/patient training. Modules A & B taken together fulfill the most difficult parts of the BCIA pre-exam requirements for didactic and BCIA approved supervised training. Therefore, it is all that is needed for most certification candidates.

"The personal presentation was rich and fulfilling... exceeded my expectations by far." - J.G. M. Motes, M.D., Family Practice

Note! Now is the time to press forward and get certified. Requirements have become much more difficult to fulfill over the past three years and it is expected that they will be increased again within this coming year.

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Based on our close relationships with exceptionally successful biofeedback practitioners, we have developed powerful practice-expanding and business formulas which are the foundation of our consulting strategies

"Wonderful opportunity. Positive learning environment, technically on target, practical, good depth. I appreciated inclusion of theoretical and philosophical discussion. Super learning experience." - Dick A. Genardi, Ph.D., Director Behavioral Health Associates, Inc., Dayton, Ohio

Our consulting methods are basic, solid and founded on long established precedents. By asking and assisting you in finding the answers for a series of questions about your practice we identify your existing resources, strengths and areas of vulnerability. Drawing on our knowledge of the success patterns of many biofeedback practices we assist you in delivered, profitability, growth curve and patient and practitioner satisfaction. After agreeing on the consulting goals, we estimate costs and work with you to make it happen. We become part of your team for as long as required.

Programs beginning July 22 and October 21, 1988 in Ossining, New York. In Los Angeles California programs will begin in March of 1989.
EMG Biofeedback Treatment of Incontinence (and Other Disorders of the Pelvic Musculature)

John D. Perry, Ph.D., Leslie T. Hultett, M.S., R.N., and James R. Bollinger, M.D.
Paoli Memorial Hospital Continence Program, Paoli, Pennsylvania

EMG Biofeedback Treatment of Incontinence (and Other Disorders of the Pelvic Musculature)

This paper was presented at the Biofeedback Society of America, Colorado Springs, Colorado, March 26, 1988

ABSTRACT

Although urinary and fecal incontinence have been successfully treated by behavioral and biofeedback methods for over a decade, most projects report a fixed number of therapy sessions and less than perfect success. In addition, the use of home training instruments has been sporadic or undocumented. The present project was based on a fee-for-service out-patient clinic population where all patients were provided home trainers and all were treated until cured.

Thirty-one patients were treated at either of two outpatient fee-for-service Continence Clinics in suburban Philadelphia. Average age was 46 years; 73% were female. Subjects without a recent urological examination were required to have one prior to treatment.

Basic behavioral protocols established by the NIA were followed. At each visit the patient’s pelvic muscles were evaluated using an EMG perineometer, and all subjects were afforded exercise practice opportunity using a computerized program. An EMG home trainer was issued for twice-daily at home practice. In addition, a telephone report line was installed to increase compliance with exercise instructions.

Of the 31 patients who were admitted to the program and completed training, all were cured of their incontinence in an average of 5 visits. These results were better than other similar projects using biofeedback methods. Contributing factors may have been: (1) this project was the first to use computerized software for diagnostic evaluations, (2) the first to use EMG Home Trainers with every patient, and (3) the use of the patient report telephone line to enhance compliance.

Problem: Urinary and fecal incontinence are the two leading non-life-threatening health problems in America. John Burton of the National Institute of Aging describes them as the second leading cause of admissions to nursing homes, yet fewer than 50 percent of victims even mention their affliction to any health care professional. One study showed that physicians were aware of only 10% of the incontinence found to exist in a large nursing home. Hui (1986) estimated the cost of elderly (only) incontinence to be about $8 billion per year, but newer data (Dijkman, 1986) raise Hu’s calculations to at least double or $16 billion. When incontinent non-elderly are included in the calculations, the annual cost of incontinence may well approach $25 billion. Since the incidence of incontinence increases with age, but the advisability of surgical or chemical treatment decreases with age, most sufferers are (1) resigned to mere “management” of their problem and (2) must bear the costs out-of-pocket. Neal Miller (BSA Presidential Address, 1985) said that the country could “save $13 billion annually” (across all age groups) by utilizing this application of biofeedback.

The NIA has shown in a series of published studies that biofeedback by means of anorectal manometry is both successful and cost-effective in reducing 75 to 94 percent of fecal or urinary incontinence. Unfortunately, their polygraph equipment is expensive and non-portable, and the procedure is invasive, risky, and extremely uncomfortable. More recently published studies have been based on an inexpensive EMG vaginal or rectal sensor that can be used with any EMG instrument. Henderson (1987) had 65 to 85% success treating urinary incontinence among elderly and middle aged women, respectively, using only a hand-held “home trainer” for diagnostic evaluation and training. Smith et al (1987) had 75% improvement in a “free” out-patient clinic using Clinical Perineometer™ home trainers, and Smith et al (1987a) achieved similar success with a more difficult population — home-bound senior citizens — using a portable version of the Clinical Perineometer™.

All of the recent EMG studies have deviated in one or another respect from the “ideal” therapy protocols laid down in the Instruction Manual for the use of the vaginal or rectal sensors employed. The present study sought to eliminate areas of procedural uncertainty by rigorous adherence to the published protocols for the instrument. In addition, maximal compliance was sought by the institution of a patient report telephone line, combined with careful tracking and rescheduling of missed appointments.

Subjects: The initial patient population consisted of 107 consecutive patients who contacted or were referred by their physician to either of
two outpatient fee-for-service Continence Clinics in suburban Philadelphia. In general, this geographic area was well above average in status, education, and income. Average age was 56 years; the range was from 6 to 91; 23 persons (22%) were male. About one third were using Medicare to cover the cost of treatment.

Patients were referred for a variety of conditions relevant to pelvic muscle rehabilitation problems, as shown in Table 1a. 84 of the referrals were for the traditional problems of urinary incontinence, with a majority complaining of Stress and/or Urge incontinence. Five were referred for conditions usually associated with muscular tension in the pubooccygeus and related muscles, including three women with frequent urinary tract infections, and two males with prostatitis. Seven women were referred for atrophy or weakness of the pelvic musculature including four women with genital prolapse, and three women who considered their incontinence or prolapse less important than their lack of orgasm. Ten persons were referred for fecal problems, including two with reconnected colostomies and two suffering from fecal retention (sphincter dysynergia). Finally, one man insisted that his only problem was pain in the tip of his penis upon urination.

Minimum criterion of acceptance into the program was (1) documented urinary or fecal incontinence (by a physician), (2) ability to get to or be transported to the out-patient facilities (one of which was located inside a hospital), and (3) either (a) sufficient presence of mind to understand and follow directions for keeping bladder records and using the home trainer, or (b) the presence of a caregiver who could perform these functions.

A total of 107 persons were referred to the program, but not all were accepted for treatment. A total of eight patients (7%) were not accepted for treatment; 7 of them were referred in the first half-year. Two potential patients were rejected on grounds of apparent emotional instability (paranoid about the treatment). Two others said it was "too much trouble" to do exercises and keep bladder records; and two others had medical problems requiring prior attention. One male was not treated because he insisted his only problem was "pain in the tip of the penis" upon urination.

Finally, one male referred for prostatitis was judged to be suffering from a psychogenic psychosomatic pain and was referred for counseling.

A total of four additional patients (4%) were referred to other biofeedback therapists or continence programs, usually for geographic reasons. Nineteen patients (18%) are currently in therapy.

Method: All subjects were interviewed by telephone prior to making their first appointment. In the absence of a recent urological workup, one was scheduled, usually prior to the first visit. The behavioral and biofeedback components of the program were explained by the Nurse-director. Forms for two weeks of bladder (or bowel) and fluid intake records were mailed to the patient for completion prior to the first visit. At the first visit the records were reviewed and the procedures explained. All patients were seen at each visit by a Psychologist-Nurse team. At each visit, the patient's pelvic muscles were first evaluated using the Electronic Perineometer™ brand vaginal (or, for males, rectal) sensor and Computerized Perineometer™ software program (Biotestechologies, Inc) with a modular EMG interface (J&J Enterprises Model I-800) for a personal computer (Commodore C-64). After evaluation, all subjects were afforded exercise practice opportunity using the program's "Kegel Counter" option. All subjects were issued a Personal Perineometer™ (Farrall Instruments' Model PP-200) EMG home trainer for twice-daily at home practice, and a supply of bladder and fluid record forms. Patients were generally seen weekly for three or four weeks and bi-weekly thereafter. All patients were required to telephone their practice results and symptom experience to a dedicated "patient report line" answering machine every 48 hours. All patients were continued in treatment (including the daily use of an EMG home trainer) until they met the program's goal of being symptom-free for 30 consecutive days. For stress or fecal incontinence, for example, 30 days without a single leak of urine or feces was required. For Urge incontinence, inter-tolieting intervals greater than two hours were also required.

Results: Of the initial 107 referrals, 75 patients had a opportunity to complete the program. Twenty persons (19% of the referrals) failed to complete the training program for a variety of reasons (see Table 1a). Four patients dropped out for financial reasons (fearful that an initial insurance company "rejection" would not be reversed and they would have to pay the entire cost out of pocket). Except for one adult spina bifida patient, they did report a 50 to 90% improvement in symptoms. Eight patients dropped out because of major health deteriorations, seven of

<table>
<thead>
<tr>
<th>Referring Physician's Diagnosis</th>
<th>Total Cases Referred</th>
<th>Patients Still in Treatment</th>
<th>Did Not Accept for Treatment</th>
<th>Referred To Other Cont. Prac.</th>
<th>Dropped Out of Treatment</th>
<th>Patients Who Were Treated in Program</th>
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</thead>
<tbody>
<tr>
<td>Continuous Incontinence</td>
<td>9</td>
<td>1 11%</td>
<td>3 33%</td>
<td>2 22%</td>
<td>3 33%</td>
<td>0 0%</td>
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<tr>
<td>Enuresis-Nocturnal</td>
<td>3</td>
<td></td>
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<tr>
<td>Fecal Incontinence</td>
<td>6</td>
<td>3 38%</td>
<td>1 33%</td>
<td>4 50%</td>
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<tr>
<td>Fecal Retention</td>
<td>2</td>
<td></td>
<td>2 100%</td>
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<td>Giggle Incontinence</td>
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<td>Hypotonic Bladder</td>
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<td></td>
<td>1 100%</td>
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<td>0 0%</td>
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<tr>
<td>Pain in Penis</td>
<td>1</td>
<td></td>
<td>1 100%</td>
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<td>0 0%</td>
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<td>Post-Prostate Inc.</td>
<td>7</td>
<td>3 43%</td>
<td>2 29%</td>
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<td>Prostatitis</td>
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<td></td>
<td>1 50%</td>
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<td>1 50%</td>
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<td>Sexual Dysfunction</td>
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<tr>
<td>Stress Incontinence</td>
<td>29</td>
<td>4 14%</td>
<td>5 17%</td>
<td>19 66%</td>
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<tr>
<td>Stress + Urge Inc.</td>
<td>10</td>
<td>2 20%</td>
<td>2 20%</td>
<td>6 60%</td>
<td></td>
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<tr>
<td>Urge Incontinence</td>
<td>19</td>
<td>6 32%</td>
<td>3 16%</td>
<td>7 37%</td>
<td></td>
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<tr>
<td>Urge Inc. + Pain</td>
<td>5</td>
<td></td>
<td>1 20%</td>
<td>4 80%</td>
<td></td>
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<tr>
<td>U. Tract Infections</td>
<td>3</td>
<td>1 33%</td>
<td></td>
<td>2 67%</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td><strong>107</strong></td>
<td><strong>19 18%</strong></td>
<td><strong>8 7%</strong></td>
<td><strong>4 4%</strong></td>
<td><strong>20 19%</strong></td>
<td><strong>56 52%</strong></td>
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</table>
which required lengthy hospitalizations. The remaining patient was not hospitalized, but elected to deal more directly with psychological aspects of her MS problem and is expected to return to the program eventually. The average age of these patients, excluding two women in their forties with MS, was 78 years.

In addition, two patients dropped out because they moved out of the geographical area (both were then referred to other practitioners). Two other patients dropped out after an average of 6 visits because they were dissatisfied with their progress and elected surgery. (One young mother never managed to “find time” to do the prescribed exercises; one older woman concurrently visited at least a dozen physicians until she found one willing to operate.) Two additional patients dropped out for psychological reasons: one became convinced, despite his physicians reassurance, that the rectal sensor would cause his prostate cancer to return; another quit because she became sexually aroused. (Her husband had just returned to the family home after a year-long affair, and she was determined not to resume sexual relations until he had been appropriately punished for his sins.) Finally, the remaining two patients were asked to leave the program. One, a physical therapist with MS, insisted to keep several office appointments and insisted that she was capable of “self-directed therapy.” The other woman was expelled after 15 weeks when a computerized data-recording home trainer (the Kegel Counter) confirmed what the therapists had long suspected—her written reports of at-home exercise were essentially fabricated.

The 56 remaining referred patients were treated in the program in an average of 5.1 sessions (Table 1b). Length of treatment ranged from a mean of 3 visits for patients with frequent Urinary Tract Infections to 15 visits for a young girl with “Giggle Incontinence” (usually considered untreatable). The most common complaint, Stress Incontinence, was treated in an average of 4.1 sessions.

54 of the 56 treated patients (98%) were symptom-free for 30 days or more before being “graduated” from the Continence Program. Only two patients failed to meet the program’s criterion of thirty consecutive days without an incident. One, a mental patient under heavy sedation, continued to wear perineal pads whenever she left the house, even though she reported only a single leaking episode in the second month of therapy. The other woman was encouraged to consider herself a “success” when her symptoms were reduced from 35 accidents a week at the start of the program to one per week at the end of 12 visits. The exception was decided after the patient’s best friend (who was also a patient) revealed that the women had confided to her that she was, in fact, lying to the therapists about keeping up with the exercises. She had been incontinent for some 20 years, and was actually very content with a 97% reduction in accidents.

The reduction in urinary accidents (or other symptom relief) was accompanied by a corresponding increase in pelvic muscle strength as measured by the Computerized Perineometer program (see Table 2).

Continued on Page 18
many medical problems that might be amenable to it. But I'm a great believer in it, in that I can't think of a disease that certainly can be made worse by it, and I certainly can say that most diseases make people uncomfortable or cause some pain. The techniques of autoregulation certainly can do a lot toward helping people deal and cope with that, if not specifically in turning around the disease. There are diseases that show very specific responses: hypertension, irritable bowel, things like that. I think there is a broad applicability of biofeedback to many different diseases.

**Peter Behel:** Do you think that working to awaken someone's immune system or intending that they be cured ought to be considered the same as the practice of medicine?

**Dean Edell:** My fears are basically over anybody in medicine or health care working in isolation, whether they are a physician, chiropractor, or any of the alternative healing methods. There is a system that has evolved that is very important to adhere to. That system says first that you diagnose a patient. It may sound simple and straightforward, but you'd be amazed at how many people would bypass that, and say to somebody who has a tummyache or may have a bunch of upper respiratory infections, "Well, let's beef up that person's immune system". There's a lot of things you have to figure out first, in terms of what's going on.

Once a diagnosis is established, I sure wish that more physicians were up on referring patients to other types of therapies. Physicians would then have a chance to not only learn about the therapies but also to monitor the patient's progress. After all, if you're dealing with somebody who has certain kinds of infections, you need to follow that infection along to see if its getting better or worse. The physician is going to have to play a role to a degree. A lot of times it's difficult for the patient to know whether something is shrinking or getting bigger. So, I think that working together is ideal. I think the future is going to be rough for solo practitioners of all kinds, just in terms of the way that medicine is going financially.

**Peter Behel:** It seems that new applications for biofeedback are constantly being developed. Do you have any thoughts about how far self-regulation can be taken, in terms of promoting health? Do you think the surface has yet been scratched, in terms of potential?

**Dean Edell:** Oh, I think it's just been scratched. You just have to remember back to the scepticism about regulation of heartbeat and blood pressure. I can see all kinds of diseases as possibly being amenable, depending on the nature of the feedback equipment. I see people with urination difficulties, if we had easy ways of testing and feeding back urinary sphinctor tension; all the way to glaucoma and the eye. I'd love to see how biofeedback could work with high pressure in the eyeball.

**Peter Behel:** I know how you feel.

---

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23131 LAKE CENTER DRIVE, SUITE C, LAKE FOREST, CALIFORNIA 92630"
Dean Edell: So, I see a broad range of potential applications. What I don't see though is a lot of really high quality research being done with a lot of high quality grant money. That's the only way that we're going to learn something. It's just too easy to have a patient come in with a problem, try some biofeedback, come out feeling better, and ascribe the success to the treatment. You know how we've been fooled before in medicine. We need to do really good studies in all these things, but unfortunately it's tough to get money to do these studies, so there's a catch-22 there.

Peter Behel: Knowing what you do about the autonomic nervous system, do you have any thoughts about where future applications of biofeedback training will lie?

Dean Edell: Offhand I can't really think of an organ system that wouldn't somewhere, somehow be responsible to some aspects of this. Even if the disease process itself is unalterable, the patient's perception of the disease and how the patient deals with the pain and discomfort of the disease are amenable to biofeedback. The potential applications, I think, are very broad in all organ systems. It is a very fertile field, and I think we've only scratched the surface.

Peter Behel: Do you have any visions about the shape of tomorrow's medicine in general?

Dean Edell: I see things going downhill in the next 20 years. I just think the economics of medicine are essentially going to play a role in teaching our health care systems how to deliver more care for less dollars, and I think fitting in the new modalities is going to be tough because they're going to have to prove themselves to be cost effective. It may come down to the fact that the government--corporate--medical complex will find that peddling a hypertension pill is a lot cheaper than having somebody spend hours learning biofeedback techniques.

I think that coping with economics is going to be the major change we'll see in the next 10-20 years in medicine, unfortunately. I would rather like to say that medicine will begin to open its doors and open its minds to newer and less toxic ways of treating patients, and more preventive medicine, but I just don't see that. I think that medicine doesn't see itself as playing that role and that a healthy lifestyle is the patient's business. The amount of dollars it takes to promote these things to patients, to teach them, is basically huge. Doctors will still probably be playing a "fix-em-up" role after its broken.

Peter Behel: Biofeedback as a treatment modality still functions somewhere outside the mainstream of standard medical practices, and biofeedback therapists are constantly vying for recognition within the medical community. I've read that you've had to deal with acceptance by physicians in the past. Do you have any advice as to how we as a society can integrate ourselves more effectively within the medical community?

Dean Edell: One thing I've learned in radio and television is that the world turns on publicity. Basically any organization that wants to get a bigger piece of the pie needs to promote that idea, and doctors need to know what you can do for them. By sending doctors something as simple as a mail-out that says, "Listen, have you got patients with tough backaches, back problems you can't cure, irritable bowels or tension headaches? Why don't you give us a try? You have nothing to lose. Our therapy is non-toxic, and your patient will view you as a hero." It all comes down to PR promotion. I would take what resources you have, get a real good professional publicity person, and go at it that way. That's the direct approach. That's the most likely approach to get you results.

Peter Behel: Can you recommend any networking strategies?

Dean Edell: Not off the top of my head, other than not really networking but doing good studies and making sure physicians are aware of these kinds of things.

Peter Behel: As a field, biofeedback is in its adolescent stage of development. Like any organization still in its fledgling state, we are seeking to identify and legitimize ourselves, much as physical therapists and other groups have done in years gone by. Our society has formed a committee to investigate the possibility of pursuing state licensure. Do you think that is a good idea?

Dean Edell: Well, I'm always in favor of these things, because I think there needs to be a certain fundamental knowledge of medicine involved to know when a patient is going downhill, and when you're harming a patient. The first caveat in medicine is "Do No Harm". That's hard to adhere to, and biofeedback is never going to hurt anybody unless they have a condition that is quickly and easily treatable by conventional medicine. For instance, I had a close relative recently who was getting biofeedback and similar therapies for a back problem, and they were treating her for months and months. What she turned out to have was metastatic breast cancer. By the time they caught up with it, it was too late.

I think licensure assures the public of a certain quality of an individual. Even though turning on a machine may not seem like it requires much, it's patient selection that is the most important part of it. Biofeedback on paper can look miserable as a therapy if it's done on the wrong patients. But on the right patients, it can be really beneficial. Patient selection becomes important and that takes a little bit of background and knowledge. I think licensure would add a great legitimacy to it, in the eyes of physicians and even the public. Now what the requirements should be I leave to somebody else.
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Traditionally, muscle spasm is identified through palpation. Hard muscles, however, may be caused both by muscle spasm and muscle shortness. The Cram Scan verifies the presence or absence of spasm. If spasm is detected, relaxation is indicated. Otherwise, stretching is indicated.

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BIOFEEDBACK WITH THE WORKERS’ COMPENSATION PATIENT

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Every year, more than 406,000 injured workers file compensation claims in the state, leading to an annual expenditure of nearly 3 billion dollars for the treatment, and financial relief of temporary and permanent disabilities.

For the clinician, entering into the treatment of industrial injury can be both rewarding and problematic. Frustration with insurance carriers, long waits for reimbursement, endless bureaucracy and political maneuverings, can all be discouraging. Familiarity with the system, however, coupled with skill and experience in the use of biofeedback in psychophysiological disorders can lead to a lucrative practice in this interesting and challenging field.

Workers’ Compensation was originally designed to reduce the perils of litigation within our system of tort law. Established as a “no fault” insurance program, it was intended to facilitate medical treatment and disability payments to the injured worker by rendering irrelevant the issues that tend to bog cases down in lengthy court battles. Only two criteria must be met: (1) that there was in fact an injury, and (2) that this injury was job-related. These criteria allow for the bypassing of considerations of guilt, negligence, intent, or other mainstays of the courtroom.

Until recent years, the system worked fairly well. Medical payments were made without serious delay, wages lost during periods of temporary disability were to some extent compensated for, permanent injuries led to modest monetary awards, and vocational rehabilitation was offered when a return to previous employment was no longer possible. The psychiatric claims for cumulative stress, burnout, and psychophysiological symptomatology began to appear with alarming frequency, and a Pandora’s box was opened.

In California, cumulative stress claims rose three-fold in the 5 year period between 1974 to 1979. In 1980, more than 3,000 psychiatric injury claims were filed and more than half led to monetary awards. By 1986, the figure had reached nearly 7,000. Compared to obvious physical injuries, psychiatric injuries are more difficult to diagnose and more easily disputed by those with a vested interest such as the employer or insurance carrier. Muscle tension, anxiety, and pain don’t show up on x-rays, and the causal link between workplace stressors and physical effects caused is still being clarified. The recent explosion of stress claims, the relative lack of precedent for dealing with them, and the rising cost to employers, have all contributed to a tremendous strain on the system. As a result, there is a significant emerging role for the clinician in providing treatment for these patients, consultation to the insurance carriers, and an important resource for the applicants and defense attorneys.

This specialized practice offers a great deal to the clinician. The patient population is quite diverse, ranging from blue collar workers to upper management personnel. In addition to biofeedback, relaxation training, and stress and pain management, there are continuous opportunities to utilize a variety of interventions depending on the scope of one’s license and practice such as more generalized psychotherapy, marital and family therapy, hypnosis, nutrition counseling, and exercise training. It is also a lucrative practice once one catches up with the lag period of claim processing and recovery. Billing for one-hour

BOOK REVIEWS

Third Line Medicine by Melvyn R. Werbach
Third Line Press, Inc., 4751 Viviana Drive, Suite 208, Tarzana, CA 91333
Price: $13.66 postpaid (includes shipping and sales tax)

Review by Arthur E. Gladman, M.D.

Third Line Medicine offers a welcome voice of reconciliation in the rift between the time-honored ecological model of etiology and the more recent scientific model of etiology. From Hypocrates and Galen (approximately 300 B.C.) until the early 20th Century, the ecological model of illness offered a broad view of possible causation. Disease was seen to result from the interplay of multiple etiologies, including psychological, psychosocial and environmental components. Late in the 19th Century the discoveries of cellular pathology and bacterial infection made the control of some infectious diseases possible, and introduced the doctrine of scientific etiology. This doctrine encourages a reductionistic approach which attempts to trace illness to a “true” single cause.

The potential for a complimentary relationship between the ecological and scientific models was forestalled around the time of the Flexner Report in 1910. This report marked a significant turning point in medical education which eschewed the ecological approach and ushered in our current era of scientific medicine. Flexner was instrumental in forcing medical schools to focus their training on the rigors of the scientific method which has resulted in the modern clinicians’ apparent lack of awareness of psychological or psychosocial factors in evaluating and treating illness. Further, the scientific advances in medicine have produced more and more specialized diagnostic and therapeutic procedures and specialists to perform them. By concentrating on increasingly specialized systems of the body, modern medicine seems to have lost sight of the patient as a whole human being and is frustrated in its efforts to treat patients who do not readily respond to medical and surgical interventions.

Continued on Page 21
**PROGRAM**

**FRIDAY, NOVEMBER 11, 1988**

<table>
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<tr>
<td>7:00 am</td>
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<tr>
<td>7:30 am</td>
<td>BCIA Written Exam</td>
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<tr>
<td>8:00 am-8:00 pm</td>
<td>Workshops (#1-20)</td>
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<td>12:00-4:00 pm</td>
<td>Board Meeting</td>
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<td>5:00 pm</td>
<td>Exhibits Open</td>
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<td>7:00 pm</td>
<td>Welcoming Remarks</td>
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<td>BSC Board of Directors Election Results</td>
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<td>Science Enrichment Presentation—</td>
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<td></td>
<td>William Dement, MD, PhD “Speaking on Disorders of Sleep”</td>
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<td>9:00 pm</td>
<td>BSC Social</td>
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**SATURDAY, NOVEMBER 12, 1988**

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<tr>
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<tr>
<td>9:00 am</td>
<td>Breakfast Discussion Groups</td>
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<td>9:00 am</td>
<td>Exhibits Open</td>
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<tr>
<td>10:30 am</td>
<td>Panel Discussion #1 Treatment of Anxiety: Integrating Clinical Procedures</td>
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<td>Donald Nadler, PhD, Chairman</td>
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<td>11:00-12:00 pm</td>
<td>Key Note Speaker—Robert Freedman, PhD “Physiological Foundations of Temperature Biofeedback and their Clinical Implications”</td>
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<tr>
<td>12:00-3:00 pm</td>
<td>BSC Luncheon/Business Meeting</td>
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<td>Presidential Address—William Coby, PhD “Collaboration and Competition in Science and Professional Health Care”</td>
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**SUNDAY, NOVEMBER 13, 1988**

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<tr>
<td>3:00-4:30 pm</td>
<td>Panel Discussion #2 Scientific Award Presentation</td>
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<td>M. Barry Sterman, PhD</td>
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<td>4:30 pm</td>
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<td>Panel Discussion #3 “Biofeedback Approaches to Pain”</td>
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<tr>
<td></td>
<td>Mel Weisbach, MD, Chairman</td>
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<tr>
<td>6:30-8:00 pm</td>
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**Certificate of Honor Award & Presentation—Erik Peper, PhD “Dimensions in Self-Regulation and Health”**

**Lunch**

**Workshops (#25-28)**
THE PROFESSIONAL BIOFEEDBACK CERTIFICATE PROGRAM meets all training and supervision requirements for the Biofeedback Certification Institute of America (BCIA) exam, and recertification. We are the only national program with training sites throughout the country. Participants completing the program will receive a Certificate of Completion from The Biofeedback Training Institute.

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Center for Stress Medicine
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"I received a firm foundation on which to start a clinical practice of biofeedback. The training, I'm sure, is responsible for my passing the national exam."
Laura Bushnell
Biofeedback Technician
San Bruno, California

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Lou Rothenstein, Psychologist
Veterans Administration
Outpatient Clinic
Oakland, California

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Co-Chaired by:
PHILIP A. (TONY) HUGHES, M.A., M.F.C.C.
Director of Clinical Services, The Biofeedback Center of Berkeley; Ph.D. Candidate, Professional School of Psychology, Biofeedback Therapist at the University of California, San Francisco General Hospital; Instructor of Psychology, California Institute of Integral Studies; BCIA, BSC Certified.

STEPHEN H. STERN
Founder and President, The Stens Corporation; Founder and Director, the Biofeedback Center of Berkeley; Past Vice-President, Autogenic Systems, Inc.; BCIA, BSC Certified.

FACULTY INCLUDES:
Associate Clinical Professor, Dept. of Prosthodontics, Fairleigh Dickinson University, College of Dentistry; President and Founder, New York Biofeedback Society; past Chairman of the Task Force on Dentistry for BSA.

JEFF CRAM, Ph.D.
Director, Biofeedback Institute of Seattle; Past President, Biofeedback Society of Washington; Author, “Cran Scan”.

STEVEN L. FAHRION, Ph.D.
Associate Director, Voluntary Center’s Program, The Menninger Foundation; Past President, the Biofeedback Society of America (BSA); served as Chairman of the Certification Committee for BSA; Founding Member, BSC; Past President, Biofeedback Society of Kansas.

KENNETH GREENSPAN, M.D.
Director, Center for Stress and Pain Related Disorders, Columbia Presbyterian Medical Center; Associate Professor of Psychiatry, College of Physicians and Surgeons, Columbia University.

PHILIP A. HUGHES, M.A., M.F.C.C.
Professor of Medical Psychology, University of California, San Francisco; Past President, BSA (1975); Founding Member, Association for the Psychological Study of Sleep.

KRIS KLINE
Biofeedback Therapist for the Reno-Sparks Back Program and The Reno Psychological Associates; Computer Consultant to the Psychology Department, University of Nevada, Reno; Researcher, Social Psychophysiology Lab at UNR.

JOEL LUBAR, Ph.D.
Director, Southeastern Biofeedback Institute; served on the Executive Board of BSA and BCIA; President of the Biofeedback Society of Tennessee for three terms.

KENNETH R. PELLETIER, Ph.D.
Associate Professor, Dept. of Medicine and Dept. of Psychiatry, University of California School of Medicine, San Francisco; Author “Mind as Healer/ Mind as Slaver”; Director, Corporate Health Promotion Program, UCSF involving 14 major corporations.

ERIK PEPPER, Ph.D.
Faculty Member, San Francisco State University; Director, the Biofeedback & Family Therapy Institute; Past President of both BSA (1976) and BSC.

KEITH SEDLACEK, M.D.
Director, Stress Regulation Institute NY; Faculty Member, Columbia Medical School (P & S); Adjunct Professor, CCNY; Board of Directors BCIA; former board member BSA; Associate Editor “Biofeedback & Self-Regulation Journal”.

STEPHEN H. STERN

The Biofeedback Training Institute

The Biofeedback Center of Berkeley, parent organization of THE BIOFEEDBACK TRAINING INSTITUTE, was established for the treatment of stress-related disorders in 1972. Founder, Stephen H. Stern, began training seminars for therapists in 1976. From 1976 to 1980, programs were conducted for a number of groups, including NASA, the Western Psychological Association, the Iowa Psychological Association and individual therapists in the fields of medicine, physical therapy and psychology.

By 1980, an intensive course was offered which was adaptable to varied clinical settings. In 1984, THE STENS CORPORATION, a national distributor of biofeedback instruments, became co-sponsor of the training with The Biofeedback Center of Berkeley. In 1986, and again in 1988, the program, under the direction of Phillip A. Hughes, was updated to meet the requirements of the BCIA. In 1986, The Biofeedback Training Institute was created to direct the program and coordinate resources from The Biofeedback Center of Berkeley and The Stens Corporation. The program offered today is uniquely designed to provide experience with all leading biofeedback instru-

ments, including, but not limited to: J & J J-300 and J-330, ORION, BioComp, Cyborg, the BioLab by Autogenic Systems, the Medac by Davicon, and many stand-alone instruments. It is the first program to incorporate a variety of computerized systems with a full range of options for training. The Biofeedback Center of Berkeley serves as a testing facility for the clinical efficacy of all new lines of biofeedback systems.

THE STENS CORPORATION is nationally recognized as a leading distributor of all major lines of biofeedback systems. Incorporated in 1979, The Stens Corporation has sales offices in Oakland, Los Angeles, New York, Atlanta, Dallas and Seattle, with plans for future expansion. Since 1972, president and founder, Stephen H. Stern, has been involved in biofeedback training and product development. The Stens Corporation offers state-of-the-art instrumentation backing this with technical support.

Instructors may vary from program to program. For information on specific instructors and dates please call us at 415 339-9053 or outside California at 1-800-25-STENS.
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- Personal Training: 7 hours
- Instrumentation: 10 hours
- Clinical Intervention: 6 hours
- Health and Education: 5 hours
- Professional Conduct: 2 hours

Introduction to Biofeedback and Clinical Applications
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- Model of clinical applications
- Behavioral medicine
- Progressive relaxation
- Forms and records
- Certification procedures
- Psychophysiological basis
- Diaphragmatic breathing
- Training effect
- Life stressors
- Business and financial issues

PART II
CLINICAL APPLICATIONS AND CASE CONFERENCE
45 hours, 5 days (Tuesday - Saturday), $880.00 ($780.00 when taken with Part I)

For trainees who have completed Part I or its equivalent, this seminar covers advanced clinical applications of biofeedback over a wide range of stress disorders. Clinical literature reviews are presented along with case presentations. Completion of Part I and Part II meet the BCIA exam requirements for didactic education, personal training and case conference hours.

- Personal Training: 3 hours
- Intake Treatment Planning: 3 hours
- Clinical Interventions: 19 hours
- Diagnostic Models - Muscle Scanning & Stress Profiling: 4 hours
- Case Conferences: 10 hours
- BCIA Exam Review: 4 hours

Stress-Related Disorders and Procedures
- Structure of the Autonomic Nervous System
- Interview techniques
- Treatment planning
- Diaphragmatic breathing
- Migraine headaches
- Aromatherapy
- Dental disorders
- Raynaud's Syndrome
- Diagnostic profiling
- Tension headaches
- Gastrointestinal disorders
- Anxiety
- Pain management
- Insomnia
- Vascular applications
- Hypertension
- Current research

ADDITIONAL REQUIRED HOURS

A. CLINICAL BIOFEEDBACK SUPERVISION
15 hours (over a 10-15 week period) (Fees arranged by individual instructors)

Individual arrangements will be made at any of our national training locations to provide trainees with 15 hours of clinical biofeedback supervision which include at least 3 hours of direct observation (audio-tape, video-tape or live).

B. DIRECT CLINICAL BIOFEEDBACK TREATMENT
45 hours, San Francisco Bay Area $450.00

For trainees who have completed Part I and Part II (or equivalent), a limited number of field placements are available in the Bay Area through The Steens Corporation. Trainees will acquire 45 hours of direct clinical biofeedback treatment with clients/patients. Participants from our workshops outside the Bay Area may arrange field placements with faculty at their location.

BCIA EDUCATION - TRAINING REQUIREMENTS

A. EDUCATION
Minimum of bachelor degree level (or R.N.), in a health related field or equivalent college level education.

B. TRAINING - 200 hours as follows:
1. 40 hours didactic experience - college level or accredited courses, seminars or workshops including the content areas of instrumentation, clinical intervention and patient management, professional conduct and health education. Parts I & II meet all of these requirements.

2. 80 hours clinical biofeedback training/experience as follows:
   a) Personal Biofeedback Training - 10 hours. (Parts I & II).
   b) Direct Clinical Biofeedback Treatment with clients/patients—

45 hours. (See above).

3. Clinical Experience/Training in health care — 80 hours.

Option A: Licensed Health Provider (i.e., Ph.D., R.N.). If you are licensed, you already meet this requirement.

Option B: Individuals who are not licensed must document basic education/training in a health care field or in supplemental biofeedback experiences as follows:

- Didactic Education
- Patient/Client Contact Hours
- Supervision

45 hours
15 hours
# PROGRAM SCHEDULE FOR 1988

**PART I:** Saturday, Sunday and Monday  
**PART II:** Tuesday through Saturday

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<tr>
<th></th>
<th>CALIFORNIA (Berkeley)</th>
<th>GEORGIA (Atlanta)</th>
<th>NEW YORK/NEW JERSEY (Newark Airport)</th>
<th>FLORIDA (Boca Raton)</th>
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<tr>
<td><strong>JANUARY</strong></td>
<td>Part I 16-18</td>
<td>19-23</td>
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<td>Part II 19-23</td>
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<td><strong>FEBRUARY</strong></td>
<td>Part I 20-22</td>
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<td>Part II 23-27</td>
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<td><strong>APRIL</strong></td>
<td>Part I 16-18</td>
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<td>Part II 19-23</td>
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<td><strong>JUNE</strong></td>
<td>Part I 4-6</td>
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<td>7/30-8/1</td>
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<td>Part II 7-11</td>
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<td>8/2-8/6</td>
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<td><strong>JULY</strong></td>
<td>Part I 10-12</td>
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<td><strong>AUGUST</strong></td>
<td>Part I 13-17</td>
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<td><strong>SEPTEMBER</strong></td>
<td>Part I 8-10</td>
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<td>Part II 11-15</td>
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<tr>
<td><strong>OCTOBER</strong></td>
<td>Part I 5-7</td>
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<td>Part II 8-12</td>
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<tr>
<td><strong>DECEMBER</strong></td>
<td>Part I 3-5</td>
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<tr>
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<td>Part II 6-10</td>
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</tbody>
</table>

### REGISTRATION FORM

A COMPREHENSIVE MANUAL AND AGENDA IS PROVIDED AT EACH WORKSHOP

**PART I PARTICIPANTS—PLEASE COMPLETE:**

I currently have the following instruments:

- J & J Stand-alone
- J & J Commodore
- J & J IBM
- ORION
- Cyborg
- Davicon

---

**Registration Form:**

- ☐ Part I: $595.00
- ☐ Part II: $880.00
- ☐ Parts I & II: $1,375.00 (includes $100 discount).

**Dates:**  
**Locations:**

**Deposit:** $100.00 is required for all programs.  
Cancellation/Refund Policy: Deposits are non-refundable, but may be applied to subsequent dates.

☐ Enclosed is my check for $________  
☐ I wish to charge $________ to my: ☐ Visa ☐ MasterCard  
Card #: __________________________ Exp. Date: ______

Mail to: **THE STENS CORPORATION**  
6451 Oakwood Drive  
Oakland, California 94611
WORKSHOPS

1. Integrating Guided Imaging and Biofeedback to Overcome Disease
   Jeffrey Auberback, MFCC

2. Elimination Disorders: Basic Skills for Evaluating Patients
   Ray Lambert

3. The Return of “A Little Bag of Tricks for Biofeedback Therapists: Part II”
   Robert N. Wolf

4. Emotional Self-Regulation — The Happiness Response — Research, Theory, Techniques
   Robert Kall, MED

5. BCIAC Practicum Assessors Preparation Workshop
   David Van Zak, PsyD
   Richard Gevirtz, PhD

6. An Integrated Approach to Working with Anxiety
   DeLee Lantz, PhD

7. Medical Applications of Biofeedback
   Sally J. Nelson, PhD

8. Headaches and Biofeedback: An Update
   Jack Sandweiss, MA
   Chrystyna Loren

9. Facial Pain: An Integrative Approach
   Dennis Michael Harness, MA

10. Open Focus Training
    Fern Selzer, PhD

11. Respiration Retraining in the Treatment of Panic Disorders & Hyperventilation
    Karen Naifeh, PhD

12. Biofeedback in Family Practice Medicine
    Barry Solof, MD

    Gary J. Shummer, PhD

    Aleene M. Dorn, PhD

15. Developing a Comprehensive Stress Management Program in a Higher Education Setting
    Margreta Klassen, PhD
    Richard R. Rogers, Jr., PhD
    Kevin P. Austin, PhD

16. Introduction to Sleep, Insomnia, & Disorders of Excessive Sleepiness
    Sonia Anzol-Israfil, PhD

17. Deep Abdominal Breathing
    Rosemary MacGregor, RN

18. Advanced Self-Psychology in Biofeedback and Self-Regulation: A System of Diagnosis and Treatment of Self-Regulatory Disorders
    William Rickles, M.D.

19. Mechanisms of Pain & Pain Control in English by an Expert
    J. Peter Rosenfeld, PhD

20. Biofeedback Augmented Stress Innoculation Training
    William Coby, PhD

21. Report Writing
    Suzanne Sankey, RN

    Dennis Ettare, MA

23. Muscle Scanning Workshop II
    Sally Nelson, PhD

24. The Feldenkrais Functional Approach to TMJ Dysfunction
    David Zernach-Bersin

25. Using Biofeedback in Couple Counseling & Family Therapy
    David Mares, PhD

26. Effortless Breathing
    Erik Peper, PhD

27. Biofeedback Instrumentation and the Self-Analysis of Dreams: An Asthmatic Patient, A Case Study
    John Meany, PhD

28. EMG Biofeedback Evaluation and Treatment of Soft Tissue Injury in Chronic Pain
    Marjorie Toomim, PhD

Convention registration information will be available soon. All BSC members will receive registration brochures. For information on attendee or exhibitor information, call or write the BSC Executive Office, 1040 B Street, Suite 210, San Rafael, CA 94901, 415/459-4414.
In general, all patients learned to lower abnormally high resting levels (an average of 20%) and to more than double their net contractile strength (an average of 108% increase). Resting level reductions were (under the therapists' encouragement) lowered more for those patients suffering from conditions believed to be the result of chronic pelvic tension: Prostatosis, Urge with Pain, and frequent UTIs. These patients averaged 3.5 uv before therapy, and only 1.3 uv after (see Table 3). In contrast, patients suffering from conditions associated with pelvic muscle weakness (Stress, Urge, Prolapse, and Fecal Incontinence) lowered their resting levels only 0.2 uv, but more than doubled their net contractile strength (46 patients averaged 3.7 uv before, 7.8 after becoming dry for 30 days).

**Discussion**: The present research model is based on a "client-centered" algorithm which involves treating the patient for as long as necessary to cure the problem. Since fully 18% of the referred patients were "still in treatment" at the time of this report, the possibility exists that the "in treatment" group could contain intractable patients who were being carried in therapy beyond a reasonable point in order to avoid classifying them as failures. While it is impossible to predict the future, we did compare the number of visits of patients "in treatment" with those who had completed the protocol (in Table 4).

In each category, we observed that those still in treatment had competed only 23 to 61 percent of the number of sessions typically required for such patients to be cured. They are, therefore, "new" patients, and not unimproving. At this time, the patients "still in treatment" cannot be expected to have a different outcome from those already treated successfully, although that is still possible.

The results obtained by these clinics were somewhat better than other similar projects using other biofeedback methods. Some of the success may be attributable to the use of the new computerized Perineometer™ software, which provides standardized data collection and vivid, criteria-referenced exercise patterns. The algorithm employed in the "Kegel Counter" program only rewards patients for exercise that is strong and long enough to be of therapeutic value. Also, this was the first project to use the specially designed Personal Perineometer™ EMG Home trainers with each and every patient for as long as necessary to achieve results. Other programs have provided home trainers only to selected patients, or only for an initial two week period or both.

It is difficult to measure the contribution of the patient report, but clinical observation suggests it may be a major factor in ensuring compliance, often cited as the most difficult aspect of pelvic muscle rehabilitation. One patient, only 95% improved and still in treatment after 12 visits, admitted to her best friend (also a patient) that she had lied to us about the amount of exercise done. This problem will be resolved when the new "Kegel Counter" home trainer instruments become available. Developed under a federal SBIR grant, these devices store the results of at home practice in a computer chip for downloading at the therapist's office. Preliminary testing has already begun.

Finally, this is the first incontinence project to be based entirely on data from fee-for-service patients. While not all patients were required to pay full price (according to their circumstances), all were required to pay a significant portion of the fee. According to Perls' theory that "they don't get better unless they pay", this policy may have also been a contributing factor in the success of the project. It is difficult to determine whether either of these factors, or some other factors, account for the greater success rate than other programs.
REFERENCES


Hu, Teh-wei. The Economic Impact of Urinary Incontinence. Clinics in Geriatric Medicine, November, 1986, 2,4:673-687. [The title is misleading, since he deals only with the "over 65" population.]


WORKERS’ COMPENSATION

Continued from Page 15

Psychotherapy or biofeedback sessions ranges from $75 to $105 per hour. Progress reports, due periodically, can be billed at $25 or more per page. In addition, the patient pool continues to grow at a staggering rate.

Establishing a practice takes time and patience. During the first 30 days following the injury report, the worker must be treated by a doctor specified by the employer. After this period, the worker may seek help from someone of his own choosing, which opens the door to any licensed practitioner. Referrals can come from many sources (e.g., Yellow Pages, advertising, professional directories), but one of the best is other practitioners not specializing in biofeedback (e.g., psychiatrists, orthopedists, and internists). Promotion directed at these sources is the most effective, since all see a multitude of cases and have an interest in useful and cost-effective treatment approaches. It is worthwhile to locate specialists in your area who do little clinical treatment of their own but who focus primarily on examinations and evaluations. Occasionally, approaching the insurance carriers themselves can lead to referrals. Biofeedback sessions tend to be more time-limited in scope than some other therapies, which is an obvious plus to the financially liable. Applicant attorneys are also possible sources of clients since they initiate referrals for evaluation, and are relied upon by their clients for guidance and help.

Treatment of industrial injury by clinicians trained in biofeedback and related modalities falls into two primary categories. The first includes those workers suffering from stress-related emotional and psychophysiological disorders such as hypertension, G.I. distress, tension/migraine headache, insomnia, anxiety, and depression. The second category includes the treatment of the emotional and psychophysiological

Continued on Page 21
UNICOMP™ was originally developed in order to fill a major need for power, flexibility, expandability, and ease of use at low cost without sacrificing quality or innovation. The UNICOMP series has become one of the most successful technological developments in biofeedback with very little investment in marketing. However, there has been and continues to be a substantial investment in both hardware and software development.

That commitment has made UNICOMP the most complete, perfectly integrated biofeedback and physiological monitoring data acquisition package available. UNICOMP’s combination of power, ease of use, ease of installation and flexibility is unmatched in the industry. UNICOMP allows you to easily monitor and manipulate your physiological and biofeedback data even if you do not have in-depth knowledge of data acquisition or computer systems. UNICOMP is compatible with all quality instruments including J&J 1330, 1300 and Davicon. It also has outstanding Blood Pressure, Rehabilitation, Scanning, and Multi Client/Multi Station software available. The UNICOMP series integrates with CapScan™ which is the best 4 channel phase and coherence sensitive computerized biofeedback EEG in the world!

*I am extremely satisfied with your service. Every time we needed support, your organization came through 100 percent.* Erik Peper, Ph.D. BSA Past President, Director Biofeedback & Family Institute.

THE RIGHT TOOLS FROM THE RIGHT COMPANY AMERICAN BIOTEC

24 Browning Drive Ossining, NY 10562 Telephone 1-800-4-BIOTEC 914-762-4646
components of physical injuries such as back and neck sprain/strain, sympathetic reflex dystrophy and other chronic pain, neuromuscular, musculoskeletal, and vascular conditions. The back and spine are the most frequently injured body part, comprising over 22% of all claims. In fact, 43% of all work-related injuries fall into the category of sprains and strains.

The clinician's role is not limited to treatment, however. Diagnosis and/or objectification of subjective states is also made possible through multimodality physiological monitoring. ECG, EEG, EMG, GSR, and respiration changes correlating with pain and discomfort can be documented, to confirm or dispute the patient's verbal report. The recognition of right-left asymmetries of muscular tension or of vascular constriction, dyspneic functional or resting patterns, and physiological responses to psychological issues, is largely the domain of the biofeedback practitioner. Strip-chart recordings or computer hardcopy add detailed and valuable information to a claimant's medical/legal file, as do the clinician's interpretations of these findings.

As most of the symptoms and conditions mentioned make up the standard grist for the biofeedback mill, very little needs to be said about procedures and protocols. Effective treatment, however, must address more than just the presenting complaints. Often the Workers' Compensation system itself creates more distress for the worker than the injury does. Feelings of helplessness and rage are commonplace. It may appear to clients that every major decision affecting their future is being made by others — attorneys, doctors, insurance adjusters, and employers. A thorough grasp of the structure and procedures of the Workers' Compensation system enables the clinician to educate patients and help them to understand the course of their adjudication from the initial filing to the final settlement. This process works hand-in-hand with one of biofeedback's greatest gifts to the patient — the sense of mastery and control that follows from elicitng conscious and voluntary physiological change. This enhances badly needed self-esteem and self-confidence. Helping put the worker back in the driver's seat of his life is half the battle.

Careful record keeping of both verbal reports and training progress is, as always, important. Timely submission of the "Doctor's First Report", monthly progress reports and billing is expected. Filing of liens in cases where claims are in dispute should be the standard practice to protect your interests. The forms are simple and straightforward and can be obtained from the Workers' Compensation Appeals Board in Sacramento. Confidence, savvy and proficiency in the treatment of industrial injury come from experience, and, of course, there's only one way to obtain that.

Corry Butler, Jr., MFCC is a Ph.D. candidate in counseling psychology at the Professional School of Psychology in Sacramento and specializes in the treatment of industrial injury using psychotherapy, biofeedback, and hypnosis at his office in Davis, California.

BOOK REVIEWS Continued from Page 15

Without presenting Third Line Medicine as a panacea, Dr. Werbach addresses the emerging movement within the medical and health care establishment which recognizes that the practice of medicine is an art which utilizes science. According to this view, it would be desirable to integrate science into the ecologic model. This concept is clearly different from the popularized term "holistic" which too often seems associated with rejecting science outright.

According to Werbach's model, the first line physician is identified as the patient's regular doctor. He or she may be a pediatrician, internist, or family practitioner who takes a comprehensive, albeit scientific, view of the patient's complaints. If the problem falls into an area in which a specialty has developed, the non-specialist tends to refer such problems to the certified specialist.

The second line physician is a specialist who focuses on those symptoms which fall into his or her area of expertise. The scientific etiology, however, begins to pale in the often elusive search for fundamental causes which are expected to be specific for each disease. Many patients suffer from physical and emotional complaints that do not lend themselves to definitive medical or surgical interventions.

The third line physician attempts to understand and treat those patients by integrating the vast body of medical knowledge with methods of healing which utilize neither medicine nor surgery. This person may be a medical doctor, or may be an individual appropriately trained in a complimentary field. Either way, the third line physician must integrate an ecologic approach with a strong commitment to scientific medical knowledge. Being versed in alternative therapies as well as traditional medical procedures, the third line physician teaches patients to improve their states of health and to assume responsibility for their wellness. A series of case studies are presented which demonstrate how patients who do not respond to regular medical interventions can be helped using alternative methods.

Dr. Werbach presents a thorough discussion of the mind-body relationship, and includes a chapter on cures for "non-disease". According to Werbach, disease is characterized by at least two of the following criteria: 1) a recognized etiologic agent or agents; 2) an identifiable group of signs and symptoms; and 3) consistent anatomical alterations; given this definition, there are many non-disease cases in every health care practice.

Those of us using biofeedback as one of our therapeutic interventions will find this an interesting and worthwhile book because it discusses the type of work we do in a way that will be understandable to the medical establishment. It is a relatively short book (185 pages) but carefully researched and thoughtfully written by a physician who is well qualified to speak about the current state of health care. The concept of third line medicine is a real breakthrough to the understanding of the therapeutic approach that certain physicians and health care practitioners use in a majority of their successfully treated patients.

Continued on Page 22
BOOK REVIEWS
Continued from Page 21

Stress Management And The Healthy
Type A by Ethel Roskies
The Guilford Press, New York, 1987

Review by Lynn Pizzitola, MFCC

This book provides a systematic and carefully researched guide to stress management for the healthy A type. The author claims that although her program does not contain any techniques that are particularly new, it does have 3 novel aspects: 1) its use of stress theory to achieve greater specificity of diagnosis and treatment goals; 2) the manner in which the individual techniques are organized into a structured and hierarchical learning program; and 3) the attention devoted to arousing and sustaining motivation for change in a “hard to reach” target population. Throughout the book, Roskies uses her unique conceptions as well as drawing on the work of other researchers and practitioners. The book begins with three chapters of theory which I found interesting reading. Her belief is that “effective intervention...must be based on a clear understanding of both the problem being treated and the remedy proposed.”

In her opening chapter, Roskies presents convincing arguments and documentation that the Type A behavior pattern does constitute a serious risk for coronary heart disease. She establishes as a goal maximal reduction of risk, while leaving untouched those aspects of the behavior pattern that foster productivity and achievement.

The next chapter is a discussion of stress management. Focusing on the conceptions of stress problems, she discusses stress as a physiological response, as an external stimulus, and as cognitive appraisal. She continues with ideas on goals and methods of treatment, including the therapist-client relationship.

Roskies identifies two problems with the Type A coping style: 1) “excessive reactivity to the minor challenges and irritants of daily living” and 2) “the firmly held belief that this hyperactivity constitutes a necessary condition for achievement and productivity.”

To accomplish the goal of risk reduction, Roskies enhances coping skills by teaching progressive relaxation, communication skills, cognitive restructuring, and other techniques. Furthermore, she teaches Type A’s when and how to use them. The “when and how” is taught by increasing the person’s awareness of what they are feeling, thinking, and doing during a stress episode, and of how these reactions affect mental and physical well being. Her program also includes repeated practice of the coping techniques to increase skill and habit of use.

Roskies recommends a group program of 20 sessions, but has also used abbreviated versions of 10 and 12 sessions. The remainder of the book is a step by step detailed guide to the program. Also available is the client workbook that includes the rationale for the program and home practice guidelines and recording forms.

I recommend the book to anyone who works in stress management with A or B types and wants more practical or theoretical information.

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BSC ETHICAL CODE REVISED

The following revisions to the Ethical Code were voted and passed by the Board of Directors at its May 1, 1989 meeting. The revisions will go in effect on January 1, 1989, and consist of all items which appear in underline with the content to be removed in parentheses.

D. Public Statements

BSC members recognize that all public statements, announcements of services and products, advertising, and promotional activities concerned with biofeedback should be (offered) presented in such a manner as to help the public make informed choices. Statements about biofeedback will be based on scientifically verifiable information, including recognition of the limits and uncertainties of such data. BSC members accurately represent their qualifications, affiliations, and functions and do not mislead the public by implying that their membership in BSC implies BSC endorsement of their professional skills or competency.

1. Biofeedback providers accurately represent the efficacy of biofeedback procedures for all disorders or conditions being treated.

2. (In) When providing services or publishing and marketing a product, BSC members are truthful and do not give misleading information in either direct or indirect statements about biofeedback and themselves. BSC members consider the context and source requesting information when making a public statement and (guard against) do not misrepresent (action) either the efficacy of biofeedback for any disorder or their own credentials. All statements should be objective and avoid sensationalism or superficiality.

3. BSC members recognize that they have financial or career interests in the promotion of biofeedback activities and agree that this interest must be superseded by professional objectivity, humanitarian concern, and the ethical principals of BSC and the other professional societies to which they are members. When a question arises as to their objectivity they seek professional guidance from appropriate professional sources such as BSC or the professional association of the discipline in which they are licensed.

4. Membership in BSC will not be used directly or indirectly as evidence of competence in biofeedback or as justification for offering to provide biofeedback services or any other service.

5. Announcements and listings of services and training offered by BSC members, such as telephone directory listings, letterheads, business cards, and descriptive brochures should be made in a dignified and professional manner and must adhere to the guidelines and standards of the profession to which the member belongs. Only factual and clearly accurate claims will be made.

6. All Biofeedback Society of California members who present themselves as being certified in biofeedback must list their certification number and granting agency on all such materials.

[Implemented January 1, 1989]
Board voted and passed at May 1, 1988 Board of Directors meeting.
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<th>Stage III</th>
<th>Stage IV</th>
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<td><strong>PERSONAL CHARACTERISTICS</strong></td>
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<td>&quot;STAGNATION&quot;</td>
<td>&quot;FRUSTRATION&quot;</td>
<td>&quot;APATHY&quot;</td>
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<tr>
<td>Do I invest my &quot;whole self&quot; in my work?</td>
<td>Am I beginning to question whether I like my job and whether it meets my personal needs?</td>
<td>Am I only questioning the value of my job but also the value of the entire profession?</td>
<td>Am I feeling totally disinterested in my job?</td>
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<td>Do I set extremely high goals for myself?</td>
<td>Am I beginning to see that there are limitations in my work environment?</td>
<td>Do I blame myself when a patient does not improve or returns to treatment?</td>
<td>Do I avoid work by using all my sick time?</td>
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<td><strong>MODALITY USE</strong></td>
<td>Do I work towards increasing my repertoire of activities and/or attempt to create new program ideas?</td>
<td>Do I find myself using the same activities over and over again?</td>
<td>Is my stress so great that I no longer feel creative?</td>
<td>Am I disinterested in patient progress?</td>
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<td>Do I verbally discuss with my patient the purpose of an activity and the progress which I have observed?</td>
<td>Do I focus with the patient on only one or two aspects of their performance?</td>
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<td>Do I always let the patients choose their activity, even when another modality may be more therapeutic?</td>
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<tr>
<td><strong>USE OF THEORETICAL BASE</strong></td>
<td>Am I interested in learning about new theories and applying them to my practice?</td>
<td>Do I prefer to use the theory base with which I am most comfortable? Do I attempt to use new concepts after discussion with peers and supervisors?</td>
<td>Do I find new theories to be a waste of time and more professional jargon?</td>
<td>Am I disinterested in my patient's response to the modality selected?</td>
</tr>
<tr>
<td><strong>INTERDISCIPLINARY RELATIONSHIPS</strong></td>
<td>Do I attempt to engage other disciplines in the activity process?</td>
<td>Do I get annoyed when other disciplines ask to observe my groups?</td>
<td>Do I feel competitive with other team members and avoid talking to them outside of required meetings?</td>
<td>Do I feel like there is no need to deal with my team about unresolved issues because &quot;nothing&quot; helps?</td>
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<td>Do I work to increase communication among team members and to effectively resolve conflicts?</td>
<td>Do I feel that my domain is being stepped on by other team members?</td>
<td>Do I find myself expressing my anger about the team to the other therapists in my department?</td>
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<tr>
<td><strong>EDUCATION OF OTHERS</strong></td>
<td>Do I enjoy the opportunity to educate others about what I do professionally?</td>
<td>Do I get tired of always having to explain my practice?</td>
<td>Am I beginning to resent the need to always educate others, especially team members?</td>
<td>Do I avoid having to explain what I do?</td>
</tr>
<tr>
<td><strong>BUDGET</strong></td>
<td>Do I find it easy to adapt to a low budget by finding creative ways to use limited supplies?</td>
<td>Am I becoming tired of the constant need to adapt my programs to supply/budget constraints?</td>
<td>Do I find myself frequently complaining to my co-workers and supervisor about our limited budget and supplies?</td>
<td>Have I given in to our low budget by limiting my program to only those supplies which are readily available?</td>
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<tr>
<td><strong>RESPONSE TO SUPERVISION AND INCREASED RESPONSIBILITIES</strong></td>
<td>Do I look forward to supervision and the opportunity to improve my job performance?</td>
<td>Do I become anxious when my supervisor suggests a change or that I take on additional responsibilities?</td>
<td>Do I resent changes implemented within the department and frequently discuss my resentment with my peers?</td>
<td>Do I avoid work because of &quot;what&quot; will happen next?</td>
</tr>
<tr>
<td><strong>PROFESSIONAL DEVELOPMENT</strong></td>
<td>Do I actively pursue workshops, seminars, and courses to improve my skills?</td>
<td>Do I find that outside of work I always choose to pursue other activities over continuing education opportunities?</td>
<td>Do I find suggestions to pursue continuing education to be an imposition? Will I pursue these activities only on work time?</td>
<td>Am I totally disinterested in professional activities and continuing education?</td>
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"In looking over the agenda everything expected was covered plus my thinking was stimulated in so many areas. Helped me gain a clinical knowledge of biofeedback and become comfortable with the equipment. Inspired me.

H. Wicker
Phy.S.

"Wonderful opportunity. Positive learning environment, technically on target, practical, good depth. I appreciated inclusion of theoretical and philosophical discussion. Super learning experience.

Dick A. Genardi, Ph.D., Director, Behavioral Health Associates, Inc., Dayton, Ohio

"It was very worthwhile. It gave me the confidence in my ability to use the equipment advantageously and also provided sound clinical guidance. The theoretical insights were great."
Dr. R. A. Townsend

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Professor Teresa Rizzelio, Director of Behavioral Health and Physical Education, York College.

"Adam Crane has taken a very complex theory and reduced it into an exciting, effective cost efficient powerful understandable set of procedures which are immersed in human warmth, understanding empathy and positive exhilaration. I strongly recommend both biofeedback and Adam Crane to all clinicians, regardless of their philosophical or therapeutic orientations."
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"Thanks for a really exciting weekend. After 3 such intensive days I thought I would fall into bed; but I found myself so full of ideas that it was impossible to sleep."
J. Plumphoff Clinic Administrator.

"Very Educational. Helpful to anyone in biofeedback practice."
M.E. Popp RN.

"Excellent. A most enjoyable, Intense, motivating, self actualizing weekend."
Dr. W. Harrison

"It was intellectually stimulating and the ideas and experience coincided with my goals and opened fresh areas to explore."
Dr. J. Reedy

"The personal presentation was rich and fulfilling... exceeded my expectations by far."
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"The UNICOMP IBM System that ABC put together for me is outstanding. The patients love the feedback and print outs and so do the physicians. I could say a lot but the bottom line is that I tripled my practice in eight months using the system."
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"I find the UNICOMP System is an effective adjunct to stress management treatment. I have been particularly pleased with its ease of operation, multi-channel recordings and the system's capacity for expansion."
Warren Leib, Ph.D.

"Discussions held were inspirational. Super."
L. Coian, Biofeedback Clinician, Center for Stress and Pain Related Disorders, Columbia Presbyterian Hospital.

"The material and insights obtained are far superior to any knowledge one could obtain elsewhere. Only years of experience could give that type of knowledge. Direction for further study was given, and specific areas to focus on were pointed out. I was definitely achieved."
Bryan M. Rehabilitation Consultant.
HEADACHES
Continued from Page 11

response biofeedback techniques are safe. The fee for biofeedback ranges from $35 to $80 per session.

Efficacy

The efficacy of biofeedback for headaches is difficult to assess because of the limited nature of most evaluative studies done to date. Clinical outcomes are necessarily limited to patient-reported data concerning such variables as headache frequency, duration, intensity, and medication used. Headache frequency is the variable that is most often reported to be decreased by biofeedback. Reports of reduced headache duration and intensity are fewer. Although several studies report reductions in medication use, the effect of biofeedback on medication cannot be determined reliably because of the wide range in potency and type of medications taken and the complexity of factors mediating medication behavior. Variations in technique, definitions of clinical improvement, reports of outcomes, population selection and use of confounding behavioral or pharmacologic therapies make comparisons of efficacy among studies difficult. In many studies specific inclusion and exclusion criteria for selection of a patient population are not explicitly stated. Studies differ in the professional training and experience of the therapists involved and the extent of patient-therapist interaction (26). In addition, criteria for adequate performance of a biofeedback task by a patient (for example, the amount of temperature increase or percentage of reduction in baseline electromyographic levels or pulse amplitude) vary with each study. Few trials of biofeedback stratify results on the basis of age, refractoriness to previous therapies, length of headache history, concomitant use of medications during the study, or extent of home practice techniques. It should be pointed out that these same methodologic flaws also make assessment difficult for other headache therapies, including medication.

Various studies report that electromyographic frontalis biofeedback is able to reduce headache activity by at least 20% in 50% to 80% of patients having tension headaches (3, 6, 7, 27-44). Therapeutic gains appear to be no more effective than relaxation techniques (taped instruction, group instruction) currently in use (3, 28, 29, 34, 35, 47, 48). Although there is much controversy concerning the pathophysiology of muscular contraction headaches, a majority of studies do not support intrapatient correlation of electromyographic levels and headache activity (3, 8, 28, 40, 41, 46, 49, 50).

Headache frequency is the variable that is most often reported to be decreased by biofeedback

Thermal biofeedback likewise has been reported to reduce overall migraine activity by at least 20% in

Continued on Page 28
HOW TO INCREASE THE QUALITY OF YOUR PRACTICE

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University of Colorado Medical Center,
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Past President - Biofeedback Society of America
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Most patients look forward to sessions in this pleasant, protective environment. I believe that it allows them to let go and relax quickly and efficiently.”

Gary E. Schwartz, Ph.D.
Professor of Psychology and Psychiatry
Yale University
Past President - Biofeedback Society of America
Past President - Health Psychology Division of American Psychological Association
“This is quite simply, a remarkable product. Its potential for improving theories and applications in health promotion and education deserves to be taken seriously.”

Charles F. Stroebel, M.D., Ph.D.
Institute for Advanced Studies in Behavioral Medicine, Hartford, Conn.
Professor of Psychiatry at the University of Connecticut Medical School

Elizabeth L. Stroebel, M.Ed., M.S.
Children/Adolescence Stress Center
Graduate Fellow, University of London

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Chairman of Psychology of the U.S. Olympic Sports Medicine Council,
Behavior Scientist to the Apollo Moon Program Astronauts

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Southern California
by Eveline Ginzburg, M.A.

Our most active regional meeting remains the Foothill Valley Group. In fact this has been the only regional meeting to be held in Southern California since my last report in the Spring 1988 Newsletter.

On Thursday, March 31, Margaret Ayers, M.A. was the guest speaker at the Foothill Valley regional meeting. Her topic was "EEG Biofeedback: Epilepsy and Depression". She discussed her use of the Neuroanalyzer by presenting case studies of her treatment with both epileptic and depressed patients. She explained the similarities of brain wave patterns in depressed patients, and her treatment, which includes inhibiting these patterns. She emphasized inhibition rather than reinforcement.

Gary Schummer, Ph.D. was the guest speaker of the Foothill Valley Group on Thursday, April 28. His topic was "Biofeedback and Learning Disabilities". Gary talked about his work with Attention Deficit Disorders. Because these children have a deficit in frequency and duration of beta in their brain waves, treatment includes using EEG to reward beta activity. Gary also quoted research by Dr. Arnold Scheibel and Dr. Marian Diamond, which indicates that when beta amplitude and the brain cells are stimulated, the glial cells in the cerebral cortex increase in weight and thickness. This is particularly indicated in children with learning disabilities. Gary's talk included an extensive bibliography and was very well received by all those who attended.

We would like to thank Wayne Henkelman for coordinating this group so efficiently, and for coming up with excellent meetings each month. Thanks also to Rory Chitwood for all his help, and for the attractive fliers he creates for each meeting.

Los Angeles, Long Beach Regions

The Los Angeles and the Long Beach region scheduled their meetings in late June and will be reported in the next Newsletter.

San Francisco Region
by Carl Thatcher, R.P.T.

The Bay Area regional meeting was held on May 16th at the home of Peter Litchfield. The group's usual meeting time and place at French Hospital was cancelled due to a strike threat. Twenty attendees were on hand to listen to a presentation by Margaret Buck on "Biofeedback for Exceptional Well-Being." Margaret is an instructor at J.F. Kennedy University who has been involved with biofeedback and education for over twelve years. She drew from the models of Ilya Prigogine and Abraham Maslow, and described a human potential orientation for clinical work that views stress and pathology as an opportunity for higher personal re-organization rather than as merely an "adversary" or obstacle to be overcome. It was a very stimulating meeting with some rich interaction. The next meeting is scheduled for July 11 at French Hospital at the usual time of 7:30 p.m. The tentative topic is "exercise" strategies for "More Effective Biofeedback Training from a Feldenkrais Perspective"

Please remember that continuing education credit in nursing, psychology, and BCIA credit are available for most regional meetings. Also, they are informative, stimulating and fun! If you are not receiving notices about your regional meeting, please call the Executive Office at (415) 459-1750. If you would like more information about regional meetings, call Eveline Ginzburg (213) 556-0603.

BIOFEEDBACK SOCIETY OF CALIFORNIA

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Los Angeles, CA 90024
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HEADACHES
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40% to 80% of patients in a range of studies using many variations in experimental design (2, 10, 12, 13, 29, 30, 38, 51-60). In most studies this improvement represents a reduction in the frequency of headache. Reports concerning changes in headache intensity and duration are more variable. Most of the therapeutic gains in headache variables appear to be maintained at 3 to 4 months of followup (2, 53, 63, 65). Thermal biofeedback appears to be no more effective

Current data suggest that cephalic vasomotor response biofeedback is equally as effective as thermal biofeedback than various relaxation training techniques currently in use (48, 54, 56, 67). The lack of correlation between alterations in physiologic variables and clinical outcome suggests the effect of the procedure on migraine activity is mediated by unexplained nonspecific factors (12, 13, 17, 54, 56, 59, 63, 68, 69).

Current data suggest that cephalic vasomotor response biofeedback is equally as effective as thermal biofeedback (70-75). Lack of adequate studies does not permit substantive conclusions concerning its efficacy and mechanism or comparison with other modes of treatment.

A few studies have shown some effectiveness of electromyographic feedback, thermal biofeedback, and cephalic vasomotor response biofeedback, used singly or in combination, in reducing headache activity by 20% in 30% to 75% of patients with mixed vascular and muscular contraction headaches (7, 38, 51, 55, 65, 76).

Recommendations
At this time, insufficient evidence of its efficacy precludes recommending biofeedback for the treatment of mixed headaches of vascular and muscular origin. Biofeedback may be useful adjunctively in some patients with muscular contraction or vascular headaches to assist relaxation or in patients whose headaches are refractory to other forms of therapy including medication. However, current data suggest that biofeedback for muscular contraction and vascular headaches is no more effective than various relaxation techniques currently in use.

Because headache is usually a chronic problem in patients having biofeedback therapy, extended periods of follow-up should be included.

Many issues concerning electromyographic frontalis or tensest muscle biofeedback, thermal biofeedback, and cephalic vasomotor response biofeedback remain unresolved. Additional randomized controlled trials that take into account the effects of placebo, suggestibility, and expectancy should be conducted. Because headache is usually a chronic problem in patients having biofeedback therapy, extended periods of follow-up should be included. Studies should attempt to uncover both the
specific mechanism of the treatment and the population most likely to benefit from the treatment. More adequate comparisons with medication should be done. Results of studies should be stratified for age, refractoriness to previous therapies, and concomitant use of medication or other behavioral therapies. Particular attention should be paid to population selection, underlying neurologic and psychiatric disorders, therapist-patient interaction, and compliance with treatment regimens. Until such studies are done, it will be difficult to evaluate properly the usefulness of biofeedback and other therapies, including medication, for the treatment of tension and vascular headaches.

Acknowledgments

The Clinical Efficacy Assessment Project (CEAP) of the American College of Physicians is designed to evaluate and inform College members and others about the safety and efficacy of diagnostic and therapeutic modalities. Evaluation of technologies begins with a notice in the *Annals of Internal Medicine* and the *ACP Observer* inviting comments. Appropriate members of the Council of Medical Societies and the Council of Subspecialty Societies as well as other experts are asked to review technologies. The CEAP statements thus represent a synthesis of the literature and expert opinion and are intended to reflect the current state-of-the-art knowledge concerning a technology. Statements may be reconsidered as new information becomes available.

Grant support: The development of this paper by the Clinical Efficacy Assessment Project was funded by the John A. Hartford Foundation.

Requests for reprints should be addressed to Linda Johnson White; Clinical Efficacy Assessment Project, Department of Health and Public Policy, American College of Physicians, 4200 Pine Street, Philadelphia, PA 19104.

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**PRESIDENT’S COLUMN**

Continued from Page 4

be a catalyst for your own new learning. Don’t forget to try to promote our society by encouraging others to join or renew their membership now. We will succeed through this transition, and with your cooperation, most members will hardly realize any change has occurred. We’ll be able to maintain our low dues, and serve one another and the public as well as ever.

Our early efforts to establish an electronic bulletin board for members at no charge is progressing slowly. We’ve learned quite a bit about telecommunications in the past few months and the hazards of relying on voluntary part-time effort have become more clear. The psychologist functioning as the "sysop" for our project has run into unexpected system hardware problems that we’re trying to resolve with no budget. We’ve talked with those in the National association about their plans for on-line information services and we’ve also looked at some of the commercially run services which charge a subscription for their use. I’m encouraged by the response of the computer users in our membership. Despite currently being the minority of our membership, they appear to have both enthusiasm and potential for great things. Imagine eventually having access to 650,000 citations from 1,420 journals from your home or office desktop computer. That’s already available to subscribers of PsychINFO. Another service, DIALOG, offers 300 different databases with 152 million citations. Public Relations Chairperson Dona Renell has used this particular company for several years and has even done some research for the Board on her computer. I realize that it requires a substantial investment of time and money for those who do not currently use computers to see the benefits. Surveys by Instrumentation Committee Chair David Van Zak and previously by Tom Brod indicate biofeedback clinicians are slowly accommodating to the rapidly shifting technology of our profession. As the benefits of these tools become more apparent, and as the systems themselves become even easier to use and less expensive, modems will be as common as telephones. Feel free to drop me a line if you currently are equipped to communicate via computer and would like to join with others in the Society who are developing this opportunity.

As our convention planning gets into full swing, I’d like all members who are full time teachers to contact the executive office for information on our new scholarship program. Once again, each full time teaching member will be given the opportunity to grant one scholarship to our convention to a student of their choice. We have no current list of members who teach full time and ask your assistance in getting this list together as soon as possible.

As with my past columns, I like to pass along information about new scientific developments which may have some future impact on the development of biofeedback technology. We’ve all heard in the mass media over the last year or so about the breakthroughs by physicists in the area of "superconductivity". There have been cover stories in periodicals ranging from the New York Times to Time Magazine. President Reagan hosted a special White House Conference on the topic. Without elaborating on the details of these discoveries, let it suffice to say they have the potential to revolutionize anything electronic, including physiological monitoring and feedback. Indeed, one of the first, and perhaps still only a commercial application, has been in the medical diagnostic area. Granted, time will pass before cost considerations are overcome (pessimists argue they never will), but recent work at the University of Erlangen-Nuremberg in West Germany show promise. Professor

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PRESIDENT’S COLUMN
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Jurgen Vieth has reported successfully measuring weak magnetic fields in brain nerve cells which are able to detect a wide range of functional variables. The procedure is referred to as MEG or magnetoencephalography. It is harmless, fast, accurate and allows one to look at the brain as if it were transparent. Let your creative mind speculate on how such information might be applied to a feedback loop and what potential for self regulation such a procedure might provide...

I hope your summer is going well and that your professional and personal pursuits are successful and rewarding. Keep BSC in your priorities. Consider becoming more active by attending regional meetings, volunteering for committee activities, and perhaps prepare to nominate or run for office yourself this year.

The Question Man Asks...

WHY ARE YOU A MEMBER OF BSC?
Asked at the 1987 BSC Convention by the Question Person

Eleanor Criswell:
"Because I am interested in the development of biofeedback in the state of California. I am interested in meeting with the kind of people that biofeedback attracts, people interested in health and well-being, human development, from a personal and psycho-physiological perspective. The people, needs, and goals are from our geographic region. California has always been a leader in biofeedback development, and I am interested in fostering that."

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Seminar D: Instrumentation and Electronics for Biofeedback Clinicians: This advanced Seminar acquaints you with instrumentation and electronics knowledge required to pass the BCIA. (18 hours)

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