WINTER CONFERENCE ON BRAIN RESEARCH

A RETROSPECTIVE

This booklet contains a thirty year history of the Winter Conference on Brain Research. Under the direction of Bernice Wenzel, the first 20 years, 1968-1987, were chronicled to commemorate the twentieth anniversary of the WCBR. The text was distributed at the 1988 meeting in Steamboat Springs, Colorado and is reprinted in its entirety.[1] Michael Zigmond, Chairman of the Thirtieth Annual Meeting, constructed, with contributions from several present and past board and staff members, a history of the third decade, 1988-1997.

Jim Preston, Chairman 1987-88, wrote in the preface of the twenty year history that it is important to establish a written record "to provide future chairpersons and participants with a document that defines the unique purpose and flavor of the Winter Conference on Brain Research." That is still the intent of this historical documentation as the WCBR moves into its fourth decade.

[1] Original text reprinted with correction of typographical errors.

PREFACE

The Winter Conference on Brain Research celebrated its twentieth year of existence last year at Vail, Colorado.

Because the WCBR is only a quasi-formal organization, there has been no systematic record keeping or historical archives. In preparation for our twentieth anniversary celebration, Bernice Wenzel undertook the formidable task of putting together a historical record of our first twenty years. Following the Vail meeting, Bernice sent to me the information and records she had assembled. We decided that this material should be organized and put together as a booklet so that we would have a permanent historical document of WCBR's origins and development. Bernice agreed to oversee this task. She commissioned Patricia Payne Lawton, a graduate student in the Department of History at UCLA, to write a brief history of WCBR. The results of this undertaking are presented in the following pages.

The establishment of a written record of our first twenty years is not the only reason for this undertaking. A more important reason is to provide future chairpersons and participants with a document that defines the unique purpose and flavor of the Winter Conference on Brain Research. If we do not maintain the goals and flavor that characterize our unique conference, the WCBR could lose its significance and its value.

Through the years of my participation, I have found the WCBR to be a breath of fresh air. The continuous opportunity for provocative informal discussions about one's own research interest has been almost unique to the WCBR. The ever increasing size of already overcrowded national society meetings has seriously reduced the opportunity for relaxed and quiet discussions. Furthermore, the format of WCBR makes it possible to learn, virtually without effort, about the current status of other areas of Neuroscience. To me, this is the essence of WCBR and it is worth keeping.

I hope this brief history and restatement of what we are, will insure the continued success of WCBR and the dedication to maintain its unique flavor.

James B. Preston
Chairperson 1987-1988

THE FOUNDING YEARS OF THE WINTER CONFERENCE ON BRAIN RESEARCH

A casual greeting in the corridor, with an offhand complaint about smog, gave rise a few months later to one of the most eminent and enduring annual conferences of neuroscience in the United States. When Stephen Bernstein and Frederick Abraham met in the hall of the Brain Research Institute (BRI) at UCLA that hot summer day in 1967, Steve had recently returned from postdoctoral study in Zurich. He eagerly praised the week of meetings and skiing at the Alpine EEG Conference, which he had attended while in Europe. Before the day was over, Fred--whom Steve calls "the doer, the creator, a whirlwind"--had recruited Edward Carterette of the UCLA Psychology Department, whom he had known since their student days at Indiana University, to help create the January 1968 meeting that was to become the annual Winter Conference on Brain Research (WCBR).

In its twenty years of existence, the Winter Conference has grown from about 135 scientists the first year to a present-day limit of about 500 invitations. In the first year, attendance was 80% westerners, 26% of whom were from UCLA alone. By 1987, western participation was only 23% (with 5% from UCLA): 42% of the participants came from the east, 20% from the midwest, 9% from the south, and 5% from foreign countries. With its sophisticated interdisciplinary program, informal interchange in multiple neuroscience fields, and first-rate skiing, the WCBR is now widely acclaimed by many brain researchers as the best conference they attend. How did it become such a success? All three founders remember that their original goal was a judicious mix of serious scientific communication, professional companionship, and the pleasures of skiing. The plan was fourfold: 1) participants could hear scientific presentations at the highest level, 2) everyone would meet scientists working in the same or complementary fields, 3) members of different but related disciplines would exchange stimulating comments, and 4) everyone--away from the campus and the city--would have time and opportunity to focus full attention on the subjects raised. From the very first mailing of that

fall, Fred, Steve, and Ed were surprised at how well their idea was succeeding. Not only was the response greater than they had predicted, but also the number of fine papers submitted forced them to give up their original plan that all sessions be plenary. Throughout the meeting itself, they were especially impressed with the level of enthusiasm displayed. "Even on the ski lift you heard people talking about their work," Steve Bernstein remembers today with gratification. Many participants have pointed to the ski lift, offering just the right amount of relaxation and isolation during the twenty-minute ride to become acquainted, as a frequent catalyst of new friendships and collaboration.

AUTHENTIC NEED IN THE SIXTIES

The immediate enthusiasm for the WCBR--a popularity that has continued through its first twenty years--can be taken as evidence of the need that existed in the 1960s for scientific conferences that could provide new contacts and easy, relaxed communication with other investigators in one's field. The sciences had boomed in the United States just after World War II, when the country assumed both the scientific and economic leadership of the world. Not only had European scientists flocked to American academic communities before the war, but a determining role had also been played during and after the war by federal funds ranging from the GI Bill, which provided higher education for a far greater number of young veterans than would have received it otherwise, to grants both for research and postgraduate training of scientists. Swollen institutions of higher learning were demanding instructors in ever larger numbers, while projections of future needs promised greater and greater increases.

Neuroscience was in the forefront of this scientific growth, propelled by such twentieth century achievements as explicating the role of neurotransmitters and the conduction of nerve impulses, the anatomical and functional description of the nonspecific systems of the brain, and the breaking of the genetic code, as well as by new technology, including the cathode-ray oscilloscope, the microelectrode, electroencephalography, stereotaxic surgery, and new anatomical tracing techniques. Serving all branches of science, the electron microscope was in wide use after World War II, and computers, offering control methods as well as rapid data processing, were

becoming available by the late 60s. Ed Carterette remembers that he got his first lab computer, a DEC, in January 1969.

The Brain Research Institute had been founded at UCLA in 1961, with funding split evenly between the California Department of Mental Hygiene and a matching award from the National Institutes of Health. In the next decade, it became the largest training institution for neuroscientists in the United States, marking a historic shift in the geographic distribution of scientific activity. Two of the three WCBR founders were working in the BRI.

The history of neuroscience organizations reflects the pressure of numbers, as well as the intellectual ferment of the profession. In the early days those Americans interested in neurophysiology had to be content with the American Physiological Society (APS), founded in 1887, and its occasional papers on the subject. The first national group devoted purely to neuroscience was the Axonologists. Started in 1930, it met informally at an annual dinner before the APS meeting and lasted until 1942. It never grew larger than several dozen. Predictably, however, in the fifties and sixties organizations large and small began emerging rapidly. The International Brain Research Organization (IBRO) was founded in 1959 under the sponsorship of UNESCO. The Western Nerve Net sprang up in the early 1960s meeting once a year, open to one and all from California, Nevada, Oregon, Utah, and Washington. In 1965, the National Research Council of the National Academy of Sciences provided American liaison to IBRO in the form of the Committee on Brain Sciences (CBS), which in turn recommended the formation of a national neuroscience organization that was to become the Society for Neuroscience, for which preparation began in August 1968. Earlier that same year, the first Winter Conference had convened at Tahoe City.

ORGANIZING THE FIRST CONFERENCE

Fred Abraham and Ed Carterette co-operated in the laborious process of organizing the first conference, with the help of Ed's secretary, Mrs. Louise Werling. By August 1967, a reservation for 28 January to 2 February 1968 had been made at the University of California Alumni Center at Tahoe City, California. The cost was $16 per person per day in a double room, with three meals a day included!

A stylish letterhead listed, in addition to the three founders and the sponsors, a committee of Al Ahumada, Dick Atkinson, Bill Beckwith, Jay Dowling, Sam Eiduson, Mike Herz, John Houston, Grant Newton, Orville Smith, John Schlag, and Wally Winters, all but two of whom were affiliated with UCLA.

Announcements were placed in the *American Psychologist, Brain Research. Communications in Behavioral Biology, Electroencephalography and Clinical Neurophysiology, Journal for the Experimental Analysis of Behavior, Journal of Neurophysiology, Psychonomic Science, and Science.* "Preliminary Announcements" were soon sent to the departmental chairs of universities in the twelve western states including Hawaii, and in British Columbia, inviting research, technical, review, and historical papers. Despite this western concentration, inquiries and reservations were soon being received from as far away as the University of Rochester and the University of Minnesota, Lethbridge and McMaster Universities in Canada, Fels Research Institute in Yellow Springs, Ohio, and the Aeromedical Research Laboratory at Holloman Air Force Base, New Mexico.

Somewhat uncertain about the success of their project, Fred and Ed hoped to obtain legitimacy and prestige for the conference by seeking sponsorship from research institutions in the west. In July, Fred approached John D. French, director of the burgeoning BRI, who granted them the right, after consultation with his Advisory Committee to list the BRI as a sponsor. To signify their interdisciplinary hopes, Ed also recruited as sponsors the Institute for Mathematical Studies in the Social Sciences at Stanford University, and the Regional Primate Research Center at the University of Washington. In the second year the University of Colorado Medical Center, the Department of Psychobiology at the University of California, Irvine, and the BRI were listed; in the third year, these three were joined by the University of New Mexico and the Lovelace Foundation for Medical Education and Research, Albuquerque, New Mexico. Several of these organizations continue to appear as frequent sponsors, usually joined by the academic institutions employing the current organizers of the conference.

Escaping the huge size, rapid pace, and impersonality that characterized meetings of the large professional organizations had been one of

the founders' early goals. In October, Ed Carterette replied to an inquiry about paper length:

> We have not yet decided the length of papers, but you may rest assured that it will be longer than the 10 minutes allowed for APA papers. Hopefully papers can be about 20 minutes in length; and, if the substance warrants, even longer. . . . I wish it were possible to tell you more, but since neither of these conferences has been held before we have no experience. I can say the response has been excellent so far, and from those I would characterize as serious scientists, whether they work in psychology or physiology.

Ed arranged for abstracts to be published in the new Communications in Behavioral Biology, and he remembers that rewriting them in its required format took more of his time than any other aspect of conference management. From the fourth year through the eleventh, 1971-1978, the abstracts were published by the Brain Information Service of the BRI, and since 1978 have been printed only in the conference program. At the present time, most participants strongly prefer that talks be planned with no publication in mind, so that speakers can feel free to speculate.

TAHOE CITY - THE FIRST CONFERENCE

When the conference finally assembled on Sunday afternoon, 28 January 1968, approximately 135 scientists, some with their spouses and children, gathered at the Alumni Center where they were greeted by a heavy snowstorm that continued throughout the week. Claude Baxter recalls that the storm prevented him from arriving on opening day, and Steve Bernstein remembers that it was difficult just to get in and out of the buildings all week long. With a format roughly copied from the Alpine EEG Conference, some sessions began at 8:00 a.m. and lasted until noon, followed by a break for skiing (and a bag lunch) before papers resumed at 4:00 p.m. for a two-hour meeting. The evening session ran from 8:00 to 10:00 p.m. Three days were completely free for skiing, with the first session at 4:00 p.m. Skiing was available near the conference center at Granlibakkan Olympic

Hill, but most participants traveled the few miles to Squaw Valley or Alpine Meadows, either in their own cars or using low-cost transportation provided.

MOVING TO THE ROCKIES

Many in the group were dissatisfied with the accommodations, especially the spartan cafeteria, and with the slopes. Claude Baxter recalls that he frequently skied in more water than snow, and Charles Markham remembers skiing on cornices built up by the wind, high above a 10- or 12-foot drop. Many participants also wanted more housing large enough for families. As early as the first business meeting, at dinner on the opening day, John Swett made the suggestion of scheduling the next conference in the Rockies. John was soon enlisted as Co-Chair with Fred and arranged accommodations for 1969 at the Wildwood Inn, Snowmass, Colorado. This successful arrangement, particularly happy because of the proximity of the lodgings to the skiing, was repeated for the next two years. When Anna Taylor took over as Facilities Chair in preparation for the 1972 conference, Snowmass had already been outgrown. Anna, who has been in charge of facilities ever since, moved the group to Vail. Except for one year at Sun Valley, Idaho, the conference has remained in Colorado, moving among Steamboat Springs, Keystone, and Vail, all of which have suitable conference facilities. Participants hope to avoid returning to the same spot every year and always seek the adventure of new slopes.

EVOLUTION OF THE WCBR FORMAT

To attract many disciplines, Fred Abraham had suggested early in the preparations during the summer of 1967 that two conferences be offered back to back during the week, with no formal separation between them. First came the "Western Conference of Experimental Psychology," followed immediately by the "Western Conference of Neurophysiology and Brain Research." Theoretically, a participant could attend only one of the two conferences but, as far as the founders remember, nobody did; the idea of the double meeting was abandoned after the first year. An announcement in a professional journal spoke of the two conferences as "overlapping," and the

"Preliminary Announcement" used in mailings spelled out an elaborate, conscientious effort to offer something for everyone:

> The Experimental Psychology sessions will come first followed by the Neurophysiology sessions, with the first couple of days principally devoted to behavioral topics, the next couple of days principally to neurophysiological aspects of behavior, and the last couple of days to neurophysiological topics. . . . A tentative, partial list of topic areas includes language and communication (Sun.), Psychophysics and perception (Mon.), learning and motivation (Tues.), ethological and comparative aspects of behavior (Tues.), neurophysiology of learning and memory (Wed.), neurophysiology of emotion and motivation (Wed.), autonomic function (Thur.), neuroendocrinology (Thur.), motor and somatic systems (Thur.), sensory systems (Thur.), biochemical and biophysical aspects of neural action and integration (Fri.), phylogenetic and ontogenetic aspects of the nervous system (Fri.), and neuroanatomy (Fri.).

The actual program of the first year shows a faithful adherence to this plan. The opening day, Sunday, featured a session on learning and motivation, followed by a nine-speaker symposium, "In Search of the Engram: A Discussion of Controversial Issues in Research on Consolidation of the Memory Trace." Monday offered a choice of a psycholinguistics symposium or an ethology and comparative session, followed by a plenary visual perception meeting in the evening. On Tuesday, developmental and biochemical psychobiology competed with a psychophysiology session, followed by a plenary meeting on sensory neurophysiology after dinner. Wednesday saw double plenary sessions on the neurophysiology of learning and motivation, and in the evening a symposium on the recording of single neuron activity in awake animals. On Thursday, two 2-hour sessions were devoted to neuronal population studies of the somatosensory system, with an option, during the second session, of attending the reading of miscellaneous papers. Friday offered two 2-hour sessions of a symposium on cortical activation and active inhibition. In a third session that last day, the planning of a computer for behavioral experiments was discussed.

The format has evolved through the years. By the fifth year, the characteristics of both panels and workshops were firmly established. Panels continue to the present day to give summaries of the current status of research in selected fields for the general information of the group; they are not designed for specialists. Four speakers, in two hours, are the maximum allowed, and audiovisual material is encouraged. This format lends itself particularly well to the original goal of interdisciplinary education.

Workshops are directed at the specialist. They are meant to examine new research, concepts, or techniques that are emerging or controversial. Four or five participants lead the discussion without formal papers, and participation by the audience is strongly encouraged. Slides and other formal audiovisual aids are largely banned in order to promote a spontaneous atmosphere for active discussion.

Free paper sessions were discontinued in 1972 because of the increasing size of the conference as well as the popularity of both the panel and workshop formats. The size of the conference now dictates that four to six sessions must be scheduled concurrently.

In recent years a small number of posters prepared by participants have been displayed. Selected by the Program Committee, these illustrate special projects or concepts. At stated times during the week, the author is available in the poster area to answer questions.

The present title, Winter Conference on Brain Research, was fixed by the second year. The snowflake logo appeared for the first time on the program for the third year. It was used soon after on the armbands, first suggested by Anna Taylor, which have been worn ever since. Because the armbands also bear the WCBR initials, townspeople and skiers not affiliated with the conference often ask the wearers where this radio station is.

COMMERCIAL EXHIBITORS

To facilitate contacts between conference participants and commercial organizations on a friendly and leisurely basis, the founders solicited several firms to take part in all activities and place their exhibits on view. Becoming convinced through the years that the WCBR, although small compared to many conferences, was worthy

of their time, many exhibitors have returned again and again. They have always been welcomed as full participants, have learned first-hand about technical and professional needs, have dispensed much valuable information, and have even given seminars. The number has grown from three commercial firms in the first year, viz., BRS, David Kopf Instruments, and Lehigh Valley Electronics, to approximately 15 to 18 instrument companies, publishers, and other exhibitors.

A HIGHLY DEMOCRATIC ORGANIZATION

From the very beginning, all three founders expressed a desire for an informal structure, and this ideal has persisted as the basic philosophy of the organization. Throughout its history, the WCBR has had no membership, no dues, no constitution, no bylaws, no permanent office, and no full-time staff. To date it has resisted all proposals for incorporation. Financial support comes from the annual registration fee and small awards from corporate donors. The business meeting at each conference is open to all registered participants. It elects two officers, the Conference and Program Chairs, for two-year terms. Each office is filled in alternate years, to provide some administrative continuity. The Program Chair appoints, partly from volunteers, each year's Program Committee, which reviews the proposals submitted and sometimes initiates others if needed to fill obvious gaps. A Steering Committee was set up at the 1973 conference, and now consists of all present and immediate past Chairs. An Organizing Committee of approximately 20 members serving for three years is appointed from volunteers by the Conference Chair in consultation with the Steering Committee; about a third of its members are new each year. There is a deliberate effort to enlist young participants to serve on the Organizing Committee. The Steering Committee is consulted by the various current Chairs as needed to advise on management details throughout the year. The Steering and Organizing Committees meet jointly on the first day of each conference for discussion of operational and policy matters.

THE PROBLEM OF NUMBERS

After the first year, the WCBR grew by enthusiastic word of mouth from its original total of about 135 registered scientists to 400 two

years later, overcrowding meeting rooms and jeopardizing the meeting's success. The business meeting that year reluctantly agreed to limit size by imposing restrictions. For the next two years, 1971 and 1972, invitations were to be sent only to those who were on the program or who had participated as speakers or organizers in either of the two previous conferences. Ever since then, participation in a panel or workshop has carried with it the right to attend for two additional years. Service on a committee allows attendance as long as that appointment continues. Presentation of a poster entitles the scientist to attend for that year only, with the chance of earning only one successive invitation by the same method. These procedures have stabilized scientific registrants at about 500, a number said by Anna Taylor to represent a practical compromise between the size of the hotels available and the pressures of popularity. About one-third of the group is new each year, one-third consists of those who come off and on, and one-third is the regular participants.

The WCBR's unique means of qualifying attendees has proven to be a fair and impartial method of controlling growth, as well as a way of selecting those professionals especially active and energetic in their fields. An announcement of the next meeting with a request for program suggestions is sent in March to a large mailing list and to anyone else who requests it. Each year some 150 to 200 proposals for panels and workshops are received by the Program Committee, which must select no more than 75 to 80 for the time slots available. The selection of the sessions, which choices in turn determine the speakers' eligibility for three successive years of participation, is often made partly on the basis of the anticipated popularity of the topics. While some longtime members of the Program Committee realize that eliminating subject matter less in demand may jeopardize highly innovative or original ideas, various methods of preventing this loss have been tried through the years, such as an "Unpopular Topics" program, tape-slide programs by individual authors for private viewing, ad hoc panels, and the current poster display.

THE FUTURE OF THE PROFESSION

An effort to facilitate participation by especially promising neuroscientists just beginning their careers began in 1985 with an offering of travel support and complimentary registration for a small number,

designated as WCBR Fellows, who were speaking in scheduled sessions. Program organizers are encouraged to include such speakers and to nominate them for a fellowship.

In the 1970s, recognition grew of the need to interest pre-college students in a career in neuroscience, and arrangements were made for a few participants to visit the local school and speak to science classes. This informal beginning was developed in 1984 into a regular program involving a number of speakers and topics. Depending on the size of the community where the WCBR is held, one or several schools may be visited.

THE INTERDISCIPLINARY GOAL

The need for interdisciplinary communication was one of the strongest motivations for the founding of the WCBR. Claude Baxter recalls that, in the sixties, "we were all prisoners of our own vocabularies," even though the neuroscientist really needed to be a jack of all trades. At the first conference, to which he says he was invited "at the last minute" to add some additional breadth as a biochemist, he was delighted to learn, for example, about single cell recording. "Sitting there in front of a fireplace, all of us together in one room, we could find out about new areas. In such a setting, rapport is built up. You don't have to posture in any way. Nobody is really embarrassed to ask a dumb question."

In the beginning, Fred Abraham particularly desired a plenary format for all presentations so that scientists from all fields would be present at the same time and could offer stimulating perspectives on any subject, in what he calls "gab sessions, brainstorming sessions." Brainstorming is also Baxter's word, and he states that this kind of communication is like firing a shotgun. Not every pellet will reach a target, but some always will.

But the plenary goal was not possible for all programs even in the first year because of the large number of high-quality papers that could not be rejected, and the organizers searched for imaginative programming that would appeal to everyone. By the second year Steve Bernstein, along with John Hanley and Fred Abraham, arranged a plenary session that superbly met the goal of interdisciplinary exchange. "Outsiders" not professionally affiliated with neuro-

science were invited to join brain researchers for the week and take part in a closing-night discussion on Friday that was described in the program as "The Neurosciences Mystery Tour."

> A panel discussion of the methods and problems of brain research. . . . The hope is that such a discussion may yield new ideas for research methods and data processing techniques; new directions for research problems currently in vogue; and most significantly, suggestions for totally new research areas.

The announcement ended facetiously, "If all else fails, the panel can discuss snow conditions and skiing techniques." Donald A. Glaser, the 1960 Nobel Prize winner in physics; J. B. Mudd, lipid chemistry of plants; Theodore T. Puck, molecular biology of mammalian cells; Ernest Sabbagh, geography; and Friedrich A. von Hayek, the 1974 Nobel Prize winner in economics who had formerly been a sensory physiologist, joined with neuroscientists Harry J. Jerison and G. S. Kittredge in a memorable discussion that reached beyond its assigned subject of methodology to tackle the whole topic of the current state of brain research. Finally, after three hours, Chair Steve Bernstein felt obliged to call a halt to the highly enthusiastic and wide-ranging discussion. He remembers this program as "interdisciplinary cooperation at its best--a very exciting evening." Everyone who heard it shares his opinion.

After this great success, perhaps the second such program, at the third conference, was destined to suffer by comparison. Though provided with the promising topic of "Possibilities for the Evolution of Nervous Systems in Terrestrial and Extraterrestrial Life Forms" and a panel including W. Ross Ashby, cyberneticist; Sterling Colgate, astrophysicist; Alan Grinnell, zoologist; and Fritz Wendt, botanist, the closing session in 1970, as Steve and others recall, never reached the uninhibited heights of the previous year. In the succeeding years, the Friday night program offered such topics as Social Values and Brain Research, Aggression and Psychosurgery, and Research Funding. The closing program was later succeeded by a banquet with a speaker, and most recently by the celebratory banquet alone. The present practice of opening the conference with a plenary breakfast meeting including a speaker began in 1981, after an initial trial in 1978. The speakers have been members of Congress, the chief science

reporter for a TV network, a university president, and scientists in cognate fields. Most have spent at least part of the week at the conference.

Although the growing size of the conference has reduced the opportunity for plenary sessions, an effort has been made through the years to include such varied participants as clinical researchers, nutritionists, pharmacologists, physicists, lawyers, astronauts, and computer experts. Topics have run from space and high altitude medicine, the dangers of smoking, and mother-child interactions to meditation. Panels or workshops have been deliberately arranged to draw in disciplines not previously well represented among the participants, for example, endocrinology, genetics, and invertebrate biology. Because each program involved several speakers, and because the new attendees were then qualified to be present for two more years, these experts from new fields frequently have become faithful participants, bringing new interests and new personalities into the group.

As the conference grew to its present size, easy communication among all attendees has inevitably suffered. Separateness has been fostered by increasing use of condominiums and the availability of many good restaurants, both of which have reduced the earlier pattern of eating and socializing together in bigger groups. Despite such influences, vital interdisciplinary communication continues to thrive. A notable example is the good balance between basic and clinical science in programs. Occasionally, groups with special interests have wanted such an increased proportion of sessions in their fields that they have broken away to found their own organizations.

THE EUROPEAN MODEL FOR THE WCBR

The founding model for the conference, which all three founders had experienced, was the "European format." An early morning session was followed by skiing through the middle of the day, after which late afternoon and evening meetings were held. Not only had Steve Bernstein attended the Alpine EEG Conference at Courcheval, France, while pursuing postdoctoral study under Konrad Akert at the Hirnforschung in Zurich, Switzerland, but Ed Carterette as a student in the 50s in Dr. Mary A. B. Brazier's brain wave laboratory at the Massachusetts General Hospital had read a paper at Jasper-en-Quebec at the annual skiing conference of the Eastern-EEG

Society. As a postdoctoral trainee under Frederic Worden and James Marsh in the Neuropsychiatric Institute at UCLA, Fred Abraham had attended the American EEG Society conference at Santa Fe, New Mexico, in the mid-sixties, where three programs a day were scheduled with large blocks of time in between for sightseeing and recreation. Fred remembers today that he, along with Frederick Bremner and Alfred Bruner, used to fantasize about getting away to ski at some neuroscience conference in snow country. Steve recalls that the Alpine EEG he attended offered some notable differences from the WCBR. Not only did the full professors do all the talking, with the junior scientists lying on the floor around them listening attentively, but drug companies heavily subsidized the conference so that participants enjoyed the best accommodations, food, and drink at very little cost and were even presented with handsome briefcases full of gifts.

THE SINCEREST FORM OF FLATTERY

The WCBR itself has been used as a direct model by at least three organizations around the world. After attending the 1975 conference at Steamboat Springs, Stylianos Nicolaidis of the College de France set about organizing a European copy that combines a broad interdisciplinary approach to neuroscience with skiing in the Alps. In 1981, his European Winter Conference on Brain Research (EWCBR) convened for the first time, and has met annually since then with about 350 participants. It always assembles in a French alpine resort because it receives support from the French government. Anna Taylor, among other Americans, has attended several times and states that the EWCBR has encouraged a large amount of international scientific collaboration.

A similar Australian group, the AWCBR, was organized in 1983 by the late Graham Goddard, a former WCBR participant from Canada and then Chair of the Department of Psychology at the University of Otago in Dunedin, New Zealand. It meets every August in Queenstown, New Zealand; participants come primarily from New Zealand, Australia, and Japan. Other small conferences located in North America have also borrowed the WCBR format.

Widely hailed after twenty years as one of the most prestigious neuroscience conferences, the WCBR can attribute its success to the high quality of its interdisciplinary program, its relatively small size,

the stimulating contacts it offers with some of the foremost scientists in the field, a special informality that encourages effective communication. Much credit for the value and influence of the WCBR must be paid to its highly democratic organization, which remains flexible and responsive and operates with a minimum of apparatus and cost. The unique selection method for participants has limited the size of the conference in an impartial manner, at the same time selecting men and women who are among the most active in the profession. With a line of descent direct from Europe, it has in turn spawned its own progeny, including one descendant returned full circle to Europe again. In its short life, the WCBR has risen from a regional group to achieve the national and international renown it enjoys today.

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Patricia P. Lawton

THE THIRD DECADE, 1988–1997

In general, the format of WCBR remained relatively stable during the third 10 years of its existence, although several modifications were made. On the other hand, this period was notable for the changes that occurred in WCBR's administrative organization.

INCORPORATION OF WCBR

Throughout most of its existence, WCBR had been governed by an executive committee, consisting of past and current elected officers and the facilities chair, and a steering committee, consisting of individuals with substantial WCBR experience chosen from a list of volunteers by the executive committee. The conference chair was responsible for financial management. Upon retiring, the chair would transfer all financial resources to the newly elected chair and this chair would then deposit the money into an interest bearing account in his or her name. During the conference chair's tenure, all funds received by WCBR were sent to that chair for deposit. With this arrangement, the conference chair was required to pay income tax on interest earned in the WCBR account, resulting in an unnecessary expense to the conference. Moreover, on two occasions in the 1980s the savings banks where the funds were deposited (under the name of the conference chair) either closed or were about to close. These banking crises placed our elected officers in precarious situations. Furthermore, the officers were openly vulnerable to litigation.

The idea of incorporating WCBR as a solution to these and other difficulties had been discussed in steering committee meetings. In the fall of 1988, Facilities Chairperson Anna Taylor, her husband, Ken Taylor, and Richard Rubin incorporated WCBR as a California corporation with the three of them as officers. However, the elected officers of WCBR argued that it was they who represented the organization. This led to many attempts to ameliorate the situation. Finally, in a series of meetings that took place during the 1989 meeting of WCBR, this issue was successfully resolved, and WCBR became incorporated later that year in a format that still continues.

The new WCBR corporation was established with bylaws through which the elected conference chairperson became the president of the

WCBR corporation upon beginning his or her term of office; the elected program chairperson became vice-president; the steering committee was replaced by an elected board of directors, with each member elected to represent one of six content areas of the neuroscience field; and a treasurer was elected from the board of directors by the board. Election of officers and the newly-instituted election of members of the board of directors continued to occur at the annual business meeting of WCBR.

INSTITUTION OF MEETING PLANNERS

With the incorporation of WCBR, the role of Anna and Ken Taylor was altered. The Taylors had organized another corporation, "Scientific Conference Planners," designed to assist in organizing scientific meetings such as WCBR on a professional basis in return for certain fees and commissions arising from the travel and lodging arrangements. A new WCBR facilities chairperson, Frances Grover was elected with the Taylors serving as meeting planners through their new organization.

In 1994, a new conference planner, the McGettigan Corporation, was selected to organize the 1995 WCBR. However, the 1995 WCBR was a serious financial setback. There were several reasons for this, including fewer than usual sessions for that and the preceding year and consequent lower than usual attendance. The Steamboat Sheraton organization imposed contract-stipulated charges for the use of meeting rooms and for the failure to fill the guaranteed number of hotel rooms, such that the meeting, given the additional burden of charges in the McGettigan contract, lost several thousand dollars. In 1995, under the guidance of Conference Chair Bill Greenough, the University of Illinois at Urbana-Champaign Office of Conferences and Institutes was retained as a meeting planner for the 1996 meeting. Their financial arrangements were more favorable to WCBR and to its participants than were those of the previous planners, the number of sessions and of participants and attendees was increased, and the 1996 meeting was a financial success, recouping some of the previous year's losses. The University of Illinois at Urabana-Champaign Office of Conferences and Institutes continued to serve as the meeting planner for the 1997 WCBR.

MODIFICATIONS OF WCBR'S FORMAT

Several new programs have been greatly strengthened or added to the WCBR format during the past ten years. The **Fellowship Program** was initiated in 1985 by Pierre Dreyfus. Pierre and his committee developed strategies to solicit support of WCBR fellowship awards for promising junior investigators. This undertaking proved to be very successful and by 1988 WCBR was supporting eight fellows. Jim Preston became Fellowship Committee Chair in 1989. With the help of Michael Schmidt of Eli Lilly, funding continued to grow and over the past 10 years as many as 15 fellows have been supported at one conference. Following the 1995 Conference, Don Stein replaced Jim Preston. One of Don's innovations was to create additional fellowships supported by contributions from the Board of Directors. In 1996, it was decided to make two modifications in the fellowship program. First, eligibility was extended to anyone who had received their PhD within the past 10 years (see below). Second, Nat Pitts accepted the challenge of increasing the number of minority neuroscientists attending WCBR, some of whom were supported through the Fellowship Program.

In 1996, WCBR initiated its first **Short Course** at the suggestion of Harvey Karten. That initial course was organized by Greg Sutcliffe and consisted of four hour-long presentations which aimed to increase the appreciation of molecular neurobiology. The format proved extremely popular and a second short course is organized for 1997, this time focusing on "Animal models of human disease" and run by Karl Herrup.

Other adjustments in WCBR procedures were initiated from time to time. For example, in 1995, the board of directors expressed concern at the "graying" of WCBR participants. This resulted in several modifications which were instituted as experiments for the 1996 meeting in Snowmass. First, eligibility requirements were altered such that it no longer was necessary to include in a proposal individuals who had been part of a WCBR session within the past two years. Second, "Data Blitz" sessions were initiated during which individuals were given 10 minutes to present new results. Third, the requirements for a WCBR Travel Fellowship were altered to allow the inclusion of somewhat more senior investigators who might be more likely to return to the Conference in future years. Finally,

WCBR entered cyberspace, establishing a homepage complete with photos of the meeting site. And it became possible to register—and even pay—for the meeting via the internet.

WCBR REACHES OUT

The **School Outreach Program** had been tried out by Conference Chair Bill McClure in 1980 and initiated as a regular program in 1983 by Conference Chair Bernice Wenzel. The program continued to grow under the dedicated leadership of Marsha Melnick, and was passed on to Paula Dore-Duffy in 1996 when Marsha became the facilities chair. Throughout the decade, a dozen or more conference participants have gone each year to local primary and secondary schools and talked to students and teachers about neuroscience. This program has been enthusiastically received by all those involved. The WCBR can be proud of the efforts of Bernice, Marsha, Paula, and the many WCBR participants who have worked in this program.

In 1997, at the suggestion of Conference Chair Michael Zigmond, WCBR will hold its first **Town Meeting** for the lay community. Suzanne Roffler-Tarlov is organizing the meeting which will feature four WCBR participants speaking on "Learning, memory, and aging." The event will be open to people living and visiting in and around Breckenridge and is part of an increasing effort by WCBR to communicate the excitement and importance of neuroscience. This theme will be reinforced by a special workshop on "Aging and the brain" organized for WCBR participants by the keynote speaker for the 1997 conference, Jon Miller, Director of the Institute for the Advancement of Scientific Literacy.

Thus, we move into our fourth decade and toward the 21st Century remaining true to the objectives of our founders, while still searching for—and finding—ways to become an evermore exciting Winter Conference on Brain Research.

WCBR CONFERENCE SITES

1968	Tahoe City, California	1971	Snowmass, Colorado
1969	Snowmass, Colorado	1972	Vail, Colorado
1970	Snowmass, Colorado	1973	Vail, Colorado

1974	Steamboat Springs, Colorado
1975	Steamboat Springs, Colorado
1976	Keystone, Colorado
1977	Keystone, Colorado
1978	Keystone, Colorado
1979	Elkhorn At Sun Valley, Idaho
1980	Keystone, Colorado
1981	Keystone, Colorado
1982	Steamboat Springs, Colorado
1983	Keystone, Colorado
1984	Steamboat Springs, Colorado
1985	Vail, Colorado
1986	Keystone, Colorado
1987	Vail, Colorado
1988	Steamboat Springs, Colorado
1989	Snowbird, Utah
1990	Snowmass, Colorado
1991	Vail, Colorado
1992	Steamboat Springs, Colorado
1993	Whistler, Canada
1994	Snowbird, Utah
1995	Steamboat Springs, Colorado
1996	Snowmass, Colorado
1997	Breckenridge, Colorado

WCBR CHAIRPERSONS

1968	Conference Chair	Frederick D. Abraham Edward C. Carterette
1969	Conference Chair	Frederick D. Abraham John Swett
1970	Conference Chair	John Swett
1971	Conference Chair	Alfred Bruner John M. Rhodes
	Facilities Chair	John Swett
1972	Conference Chair	Alfred Bruner
	Program Chair	Claude F. Baxter
	Facilities Chair	Anna N. Taylor

1973	Conference Chair	Michael H. Chase
	Program Chair	Claude F. Baxter
	Facilities Chair	Anna N. Taylor
		Kenneth C. Taylor
1974	Conference Chair	Eduardo Eidelberg
	Program Chair	Richard H. Rech
	Facilities Chair	Anna N. Taylor
1975	Conference Chair	Graham Hoyle
	Program Chair	Richard H. Rech
	Facilities Chair	Anna N. Taylor
		Kenneth C. Taylor
1976	Conference Chair	Graham Hoyle
	Program Chair	Bruce S. McEwen
		Donald J. Reis
	Facilities Chair	Anna N. Taylor
		Kenneth C. Taylor
1977	Conference Chair	Charles H. Markham
	Program Chair	Donald J. Reis
	Facilities Chair	Anna N. Taylor
		Kenneth C. Taylor
1978	Conference Chair	Charles H. Markham
	Program Chair	Marion E. Smith
	Facilities Chair	Anna N. Taylor
		Kenneth C. Taylor
1979	Conference Chair	William O. McClure
	Program Chair	Marion E. Smith
	Facilities Chair	Anna N. Taylor
1980	Conference Chair	William O. McClure
	Program Chair	Bernice M. Wenzel
	Facilities Chair	Anna N. Taylor
1981	Conference Chair	Pierre Dreyfus
	Program Chair	Bernice M. Wenzel
	Facilities Chair	Anna N. Taylor

1982	Conference Chair	Pierre Dreyfus
	Program Chair	Jean De Velis
		Bernard Haber
	Facilities Chair	Anna N. Taylor
1983	Conference Chair	Bernice M. Wenzel
	Program Chair	Jean De Velis
		Bernard Haber
	Facilities Chair	Anna N. Taylor
1984	Conference Chair	Bernice M. Wenzel
	Program Chair	William T. Greenough
	Facilities Chair	Anna N. Taylor
1985	Conference Chair	Henry deF. Webster
	Program Chair	William T. Greenough
	Facilities Chair	Anna N. Taylor
1986	Conference Chair	Henry deF. Webster
	Program Chair	Regino Perez-Polo
	Facilities Chair	Anna N. Taylor
1987	Conference Chair	James B. Preston
	Program Chair	Regino Perez-Polo
	Facilities Chair	Anna N. Taylor
1988	Conference Chair	James B. Preston
	Program Chair	Jean M. Lauder
	Facilities Chair	Anna N. Taylor
1989	Conference Chair	Jean De Velis
	Program Chair	Jean M. Lauder
	Facilities Chair	Anna N. Taylor
1990	Conference Chair	Jean De Velis
	Program Chair	Marion Murray
	Facilities Chair	Anna N. Taylor
1991	Conference Chair	Fritz A. Henn
	Program Chair	Marion Murray
	Facilities Chair	Anna N. Taylor
1992	Conference Chair	Fritz A. Henn
	Program Chair	Allan I. Basbaum
	Facilities Chair	Frances Grover

1993	Conference Chair	Donald E. Stein
	Program Chair	Allan I. Basbaum
	Facilities Chair	Frances Grover
1994	Conference Chair	Donald E. Stein
	Program Chair	Miles A. Herkenham
	Facilities Chair	Frances Grover
1995	Conference Chair	William T. Greenough
	Program Chair	Miles A. Herkenham
	Facilities Chair	Frances Grover
1996	Conference Chair	William T. Greenough
	Program Chair	Irwin B. Levitan
	Facilities Chair	Marsha E. Melnick
1997	Conference Chair	Michael J. Zigmond
	Program Chair	Irwin B. Levitan
	Facilities Chair	Marsha E. Melnick

WCBR ATTENDANCE RECORD TWENTY OR MORE YEARS

M.V.L. Bennett

James R. Bloedel

Stephen C. Bondy

Robert E. Burke

Michael H. Chase

Victor H. Denenberg

Shirley G. Diamond

Howard Feit

Donald N. Franz

William T. Greenough

Sebastian Grossman

Frances S. Grover

Bartley G. Hoebel

Charles H. Markham

James C. McElligott

Eric N. Naftchi

William T. Norton

J. Regino Perez-Polo

Richard H. Rech

Eric J. Simon

Marion E. Smith

Sheldon B. Sparber

Donald G. Stein

Kenneth C. Taylor

Anna N. Taylor

Jan Volavka

Wendell E. Jeffrey

Stanley B. Kater

Andrew Kertesez

Conan Kornetsky

Abel Lajtha

Barry E. Levin

Michael S. Levin

Roc E. Walley

Forrest F. Weight

Trent H. Wells, Jr.

Bernice M. Wenzel

Roy A. Wise

Eugene F. Yates

Laurence R. Young