Obese Degeneration of Scientific Congresses

Most of the major international scientific congresses have run to fat, to such an extent that intelligence gives way to stupor and social vitality to incoherence. This paper urges a reexamination of the patient and proposes one regimen which might restore health. Those responsible for the Second International Congress of Endocrinology, held in London in August 1964, have instituted some experimental medicine; for the sake of concreteness, this paper refers specifically to endocrinology, but the comments have a general applicability to a worldwide situation which government agencies, private trusts, and industry all view with growing cynicism and with reluctance to provide further financial support for international conferences.

There was a time when international congresses included important announcements of developments in research and promoted personal contacts, often of inspirational value, especially between young beginners and gifted leaders. But now, with some conferences having attendances of up to 20,000 (two recent congresses numbered 16,000 and 18,000, and there is a story of 38,000 in Japan), there is rapidly growing despair about their scientific and even their social value. Eminent workers withhold important lectures for smaller and more specialized audiences; the obligation to give a paper in order to obtain travelling expenses swamps the vast congresses with stale or unripe material; with 20 or more simultaneous sessions, the most diligent member can only attend a small fraction of the proceedings; and with perhaps a dozen or more coincidental social functions, a man finds it hard to meet his own brother, much less an unknown author from another laboratory. The larger the congress, the further in advance titles and abstracts must be fossilized; there is competition with regard to official languages and resultant demand for simultaneous translation, which is hugely expensive and overstrains the availability of competent technical interpreters. A major trial, in countries outside North America, is the presence of large numbers of transatlantic tourists, who register in order to put their traveling expenses against tax and who dilute the more serious membership—sometimes to such an extent that in some of the more attractive venues two out of three members have never published any work on a subject within the scope of the congress.

I recognize the growing necessity for scientists to communicate personally, if they are not to choke slowly on a surfeit of literature. "Scientists are like the unicellular organism, paramoecium; they must conjugate from time to time if they are to remain fertile" (L. J. Witts). Endocrinology, in particular, draws nourishment from a great many disciplines, and in the next 5 years it can set an example to all of them by carrying out an experiment in human and scientific communication. The essential financial support depends on due recognition of the need for such an experiment.

The opinions and suggestions in this paper represent only my personal views and are not intended to be destructive of existing admirable efforts (such as the Laurentian Hormone Conferences and the Acta Endocrinologica Congresses and Journal). The proposals are intended either to be complementary to such organizations or to preserve what is admirable in them in case future developments injure their integrity.

At the Second International Congress of Endocrinology in August 1964, the establishment of an International Society of Endocrinology will be proposed. Such a society would have certain duties which will be generally approved; these would include the keeping of a register of national endocrinological societies (and appropriate alternative societies or associations) and their memberships: the recording and, where necessary, the coordination of arrangements for dates, places, and subjects for endocrinological meetings throughout the world, whether national, international, or regional in character; the issuing of some bulletin or calendar of information containing news of future meetings, courses, opportunities for degree studies, and perhaps also of important research progress, with appropriate references; the appointment of study groups to consider problems such as nomenclature and standardization of assays; some rationalization of existing national and regional journals of endocrinology, and the discouragement of new journals except where there is a real need for them; the improvement of methods of documentation and communication; the supervision and facilitation of all international congresses in endocrinology; and finally, the collection of fees from member societies adequate to maintain a small international secretariat, provide the services indicated above, and restrict attendance at international meetings to those sufficiently interested in endocrinology to be paid-up members of paid-up societies (apart from those outside endocrinology who may be specifically invited to participate in any one meeting).

The international society could also, more controversially, take steps to improve the scientific quality of conferences and journals; provide more opportunities for early recognition of the work of young people of ability and promise; and foster, broaden, and strengthen the existing national societies, promoting appropriate alternatives where such societies obstinately persist in narrow, biased, or sterile policies.

There are now over 30 national societies of endocrinology and at least 14 distinct international meetings concerned with hormone research, which meet at regular or irregular intervals. Under the stimulus of the Second International Congress, with its membership mainly restricted to quotas filled by national societies, a number of other national societies are now being formed, and, if past experience is any guide, they will shortly congregate in more international meetings based on geographical, linguistic, or subject divisions. All recurrent congresses suffer from inflation; for example, the membership of the International Biochemical Congress, excluding associates, has increased as follows:

1949	Cambridge	1741 members
1952	Paris	2000
1955	Brussels	3000
1958	Vienna	3500
1961	Moscow	6000
1964	New York	6350

The disease, *Monsterkongresskrankheit* (Delafresnaye), ends in disintegration, dismemberment, or parthenogenesis. Parent and offspring may well show renewed vigor for a time, but, the more vigor they show, the sooner they cease to recognize each other.

My proposals are twofold, and both suggestions should be taken together. I propose, first, frequent regional conferences with unrestricted membership and of varying geographical constitution, and, second, open international congresses, to be held not more than once every 5 years, unashamedly social, with a scientific program consisting only of mature, invited reviews in large plenary or near-plenary sessions and of multiple opportunities for informal, unscripted "club" discussions. The main purpose of these full international congresses would be, in the words of Johnson, "to eat and drink and promote kindness."

Regional Conferences

It is suggested that every national society should have an opportunity to participate in a regional conference every year. Each region would be made up from such a number of national societies that the combined membership could be estimated to produce between 300 and 500 members without restriction. Many centers could accommodate so many members without undue strain on accommodations, economy, or social generosity, and it is expected that every country would act as host on some occasion—some more often than others, according to their expressed wish to the International Society. Each year each country would have an opportunity to join in a differently constituted group of national societies.

Attendance at any one of these regional conferences should be limited to members of the constituent national endocrinological societies, but the host country would retain some discretion as to the type of conference to be held and be free to invite participants from countries outside the particular region. The suggested restriction on the type of conference would consist of an obligation on the part of the national societies to accept all fresh, scientifically valid short papers offered from within the region; this could be expected to provide the desired encouragement to younger workers and, at the same time, would constitute an alternative to those national societies and journals which are too narrowly based.

The host country should encourage the use of the smallest practical number of languages; papers could be read in any one of these chosen languages, preferably with the abstract of each paper printed in one additional common language.

The fact that regional conferences would be held annually should lessen the pressure to attend any one meeting (whether national, regional, or international) and therefore decrease the urge to present work before it is fully completed.

I believe that a publisher (whether of existing periodicals or one new to the field) would readily be found to publish proceedings of one or a series of regional conferences, thus decreasing pressure on existing journals and providing an alternative outlet to some of the restrictive national journals.

Until experience suggests a better basis, the designation of regions could be based on a joint membership in national societies of approximately 1000. At present this would mean that there would be either six or seven regional conferences in any one year. It would be the duty of the international society to work out various changing combinations of countries to produce regional conferences in which every country would have the opportunity to join in each of the four intercongress years. (It may be noted that the United States, with about 1200 national members, would swamp any one region.) For the first 4 years, three zones with 400 members each might be designated as follows:

Zone A. New York, New Jersey, Connecticut, New Hampshire, Vermont, and Rhode Island.
Zone B. Ohio, Michigan Indiana, Illinois, Wisconsin, Minnesota, Iowa, Pennsylvania, Maryland, District of Columbia, Virginia, West Virginia, and Delaware.
Zone C. California, Alaska, Washington, Oregon, Colorado, Arizona, New Mexico, Utah, Texas, Arkansas, Kentucky, Kansas, Mississippi, Missouri, Louisiana, Georgia, Florida, Nebraska, Oklahoma, Alabama, Tennessee, North Carolina, and South Carolina.

(This list does not include every state, but in the present year there are no listed members in the states omitted.)

The six or seven volumes each year of regional conference proceedings should make it tolerably easy to be aware of the whole advancing front of hormone research.

International Congresses

If every country could participate each year in a regional conference of varying constitution, would there be any remaining need for a larger congress? In my opinion it may be difficult to establish a need, but such congresses would continue to be desirable.

Given the regional conferences, the congresses should not be held more often than once every 5 years, and no regional conference should be held in the calendar year of the international congress.

The international congress should be entirely open to any member of any endocrinological society which is a paid-up subscriber to the International Society, but invited speakers might, of course, be drawn from outside such membership, at the discretion of the host organizing committee. Even with a membership confined to such workers with a major interest in endocrinology, and excluding accompanying families, it can already be estimated that a membership of between 3000 and 5000 would have to be anticipated in the first and second congresses. Only a limited number of countries could accept so large a gathering; a roster of those countries able and willing to act as hosts (circumstances permitting) should be kept by the secretariat of the International Society. The host country for an international congress should not be expected to be host of a regional conference within three years of the congress.

It is suggested that such international congresses should have three main qualities or characteristics:

(i) *Reviews*. Each morning a number of thorough reviews would be given by outstanding authorities, at the invitation of the Congress Committee. If no hall (or halls, with the aid of television) will hold all the members, then the reviews should be given simultaneously, with reasonable translation facilities, in the smallest number of rooms. Probably 1½ hours would be the desirable limit for these morning sessions, there being no discussion of the main reviews.

An invitation to prepare and present such a review would be one of the highest honors in the endocrinological world, and the reviews of any one congress would be published together.

(ii) *Clubs*. In the afternoon, sections of large halls or many small rooms could be set aside for unscripted dis-

cussions of a great number of designated, comparatively narrow subjects.

If it proved impossible to surmount the hurdle of "no paper, no travel grant," then all papers (other than the reviews) could be submitted in the form of abstracts, which would then be grouped by the program committee into small batches according to subject, and a chairman, place, and hour could be designated at which the authors would be present to answer questions from each other or from any member of the congress. Such abstracts would be printed in advance, with no further public record of this part of the program.

(iii) *Social.* It is urged that most of each day should be frankly and unashamedly social in character, the organizing committee aiming by any ingenious method to give every member a daily chance of meeting any other member informally.

Not all the responsibility for this social activity should be put upon the host country; periods should be left open in which individuals and groups could reserve rooms and services for cocktail parties, receptions, meals, talks, films, and so forth, at a set scale of charges previously circulated by the congress committee. A reasonably full membership list would have to be circulated in advance of the congress, to encourage people to make up parties of those whom they particularly wish to meet.

In addition, these quinquennial congresses would have the administrative responsibilities of election of officers and members of committees of the International Society, financial accounting, and the appointment of study groups for nomenclature and similar problems.

Finance

The local costs of any regional conference would probably be modest, since 300 to 500 people can be accommodated in most university departments or colleges, and the administration should not be much more complex than that of the national society concerned.

The vast unlimited congress would be expensive, and there seems no alternative to defraying most of the cost from registration fees, but governments could be canvassed as to the extent of subsidy they might provide, and the congress location fixed accordingly.

At present, every congress and conference is an isolated struggle by the organizers, who must beg desperately, in competition with other disciplines, from all possible sources. To some extent this is inevitable. However, on the basis of six regularly anticipated regional conferences per year for four years and an international congress in the 5th year, it might be possible to persuade associations of industries in various parts of the world, educational and scientific foundations, and even government grant-making agencies, to provide regular annual subscriptions, in the first instance for 5 years, on the condition that at all other times they are left in peace by endocrinologists. If an individual company or institution, on its own initiative, wished to mount a special exhibition or make some exceptional offer on any occasion, this would be most acceptable, but would be dealt with separately.

For regional conferences and international congresses, registration fees must be realistic and should meet the local costs of the meeting.

Summary

The experimental establishment by an International Society of a coordinated group of worldwide regional conferences on an annual basis for 4 years, succeeded in the 5th year by a giant congress which is of the nature of a review and which is honestly social, is suggested as an alternative scheme to the present situation, which may be summed up as follows: the rigidity of some national societies, the haphazard expansion of regional meetings, and the cynical extravagance of huge congresses—of which the success is measured only by size, and from which both science and friendship are being squeezed out.

G. E. W. WOLSTENHOLME
Ciba Foundation, London

Skin Cancer and Sunlight

The theory that sunlight causes cancer of the skin dates back to the turn of the century. From studies made at that time and subsequently it is clear that these cancers appear predominantly on the face and other exposed areas. In order to discuss various aspects of this problem a conference was held at Airlie House, Warrenton, Virginia, 21–24 March 1964.

It is generally accepted that people most exposed to sunlight, whether because of occupation or geographical location, are more likely to develop this type of cancer. Negroes, who do not easily sunburn, experience only a small incidence of skin cancer that can be attributed to sunlight. Since 1928, when cancers were first produced with ultraviolet light in laboratory animals, it has been possible to support some of these claims with greater assurance. Experiments have shown that the radiation which causes skin cancer is the same type of radiation that produces sunburn and destructive processes in living organisms in general. The long wavelength limit (about 0.32 μ) of these effects corresponds to the long wavelength limit of absorption by proteins and nucleic acids. Radiation of wavelength shorter than this limit (ultraviolet B) constitutes only a very small fraction of sunlight. This ultraviolet B radiation varies greatly with latitude, season, and time of day, is difficult to measure, and cannot be gauged by the eye. Experiments with animals have resulted in additional information on the mechanism of carcinogenesis and have shown, among other things, the cumulative nature of carcinogenesis. Cancers are producible only by many repeated doses of ultraviolet light. Although the evidence confirms certain facts, numerous points of uncertainty still remain.

Consideration of biophysical aspects included difficulties in determining precisely the action spectrum of carcinogenesis; the relationship to the erythemal spectrum (sunburn) and the use of this spectrum as an approximation; penetration of ultraviolet light into the skin and the relative protection provided by corneum and by melanin pigment; and direct and indirect pigmentation, their action spectra, and mechanisms. In discussing pigmentation, attention was called to a population of albino Bantu, who offer a possibility to investigate effects of sunlight on Negroes without pigmentation. However, this population may not be accessible for study too much longer.

With regard to measurements of sunlight, extensive studies of the spectral character and distribution of the ultraviolet portion were reported with parallel observations of erythema and ultraviolet B. The importance of ultraviolet B scattered from the sky and differences between variation with time of day, season, and latitude for this