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Finally, in the first issue of *Circulation*, January, 1950, Marvin wrote:

*Circulation*, then, is addressed to all those interested in the cardiovascular system in health and disease—the research scientist, the specialist, the practicing physician. Its intention is to include articles in the basic sciences relating to this field and papers representing the finest type of clinical research, as well as those which are mainly “practical” in their application. The journal would fail in one of its most important functions if it did not encourage publication of articles in basic fields. It is the firm purpose of the Editor, the Editorial Board and the Publisher to avoid making it on the one hand a journal so exalted in its aims that only a handful of scientists could read it intelligently and, on the other hand, a purely clinical journal which would have little interest for the investigators who are advancing the boundaries of our knowledge so rapidly.

Were one to hazard the judgment that scientific journals are soon to be archaic as a means of communicating thought and storing knowledge, may the future medical historian and archivist, discovering *Circulation*, exultingly exclaim: “This is the finest fossil of them all.”

HOWARD B. BURCHELL, M.D.

References


To sum up, experimental medicine, which is a synonym for scientific medicine, can be established only by spreading the scientific spirit more and more among physicians. In my opinion, the one thing to do, to reach this goal, is to give our young men solid instruction in experimental physiology. I do not mean to say that physiology is the whole of medicine; I have explained myself elsewhere on this point, but I do mean to say that experimental physiology is the most scientific part of medicine, and that in studying it, young physicians will acquire scientific habits which they will later carry into pathological and therapeutic investigation. The wish that I am expressing here roughly corresponds to Laplace’s idea: when he was asked why, since medicine was not a science, he had proposed admitting physicians to the Academy of Sciences; he answered, “This is why: to get them among men of science.”—CLAUDE BERNARD: *An Introduction to the Study of Experimental Medicine*. New York, The Macmillan Company, 1927, p. 205. Centenary of First Publication, 1865.
to accept or reject, and the uniformly excellent quality of the publications during the past decade attest to the accuracy of his judgment.

It is a great comfort to his many friends and associates that, although the termination of arbitrary periods of service has necessitated his retirement from several important positions, he will continue to be actively engaged in other endeavors, particularly as Special Consultant to the Dean of the Faculty of Medicine of Harvard University.

Sir John Parkinson on Specialism and Research

As a cardiologist, my personal attitude towards further specialization can be simply stated. Each individual should be allowed to make his own choice, as he did when he chose the profession itself. Naturally he will seek and consider advice from his teachers though he is no longer at school. He may misjudge his own ability or the scope for his particular endeavour, but he has a right to choose the road he will take. A wise man—and that could mean a young man—should recognize his limitations, but he must follow his bent. The public is aware that cardiovascular disease is predominant in human mortality. Medicine has always been influenced by public opinion, and patients will surely claim the services not only of general cardiologists but also of special cardiologists who have exceptional experience in one variety of circulatory disease. . . .

. . . But must every ambitious graduate be forced by custom or authority to prosecute research in order to obtain a university post or to succeed as a practising cardiologist? Research ability used to be regarded as a rare gift, something of a phenomenon. . . . That is not the attitude today, though one must admit that it is largely the expansion of organized research that has transformed medical practice. My question concerns the universality of the capacity for research; and I almost believe that the true investigator, great or small, is born not made. That famous literary physician, Sir Thomas Browne, wrote: "Every man is not a proper Champion for Truth, nor fit to take up the Gauntlet in the cause of Verity." Here is a matter of policy and procedure in our profession which will have to be decided. In my view we encourage good men, inapt at original research, to sacrifice their time and energy upon it when they should be perfecting themselves as bedside physicians.—SIR JOHN PARKINSON: Circulation 11: 677, 1955.
Editorial

Venous Return

Physicians have long been interested in the forces that operate to return the blood to the heart including the role of respiration. The cardiologist is a close observer of the neck veins and accustomed to see them collapse in inspiration in the usual recumbent subject but distend in certain patients with varied disease states, and in particular, those of the pericardium. His knowledge of events in the inferior vena cava has been largely inferential, and in a given patient he has been wont to conjecture at what rate of intrathoracic pressure decrease the venae cavae might collapse and obstruct inflow. The studies by Nakhjavan and associates in this issue are informative though clearly all the answers are not yet available.

This preamble is only to bring to the attention of the readers of Circulation a recent communication by C. S. Breathnach, entitled "Sir David Barry's Experiments on Venous Return." Barry's experiments reported 140 years ago were decisive in demonstrating that blood flow toward the heart occurred in inspiration, but his rash extrapolated conclusions did not escape sarcastic comment from his scientific contemporaries. In another paper in this issue Comroe lists as one of the main functions of the pulmonary circulation that of a reservoir of blood for left ventricular filling. Barry also claimed such function for the pulmonary veins; reservoirs "from which the left heart can be supplied during the period when the lungs are the least pervious." Breathnach's paper and the references following it give a historic frame of reference in which the report of Nakhjavan and associates may be further enjoyed.

Howard B. Burchell, M.D.

Reference


I think I have shown that the empirical method is the necessary vestibule of science. We could never abandon this method, tested by the experience of ages. It will always be of use to control and counterbalance scientific speculations.

But there is a side on which theoretical views may and must be rightly introduced into pathology. Perfected by the employment of new methods, clinical observation will ally itself with the general sciences, and approach nearer and nearer physiology, so as to give birth to a really rational system of medicine—J. M. Charcot, Clinical Lectures on Senile and Chronic Diseases. Philadelphia, The New Sydenham Society, 1881, p. 20.


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**Vive la Science!**

If you would die faggled to death like a crow with the king birds after him—be a school-master; if you would wax thin and savage, like a half-fed spider—be a lawyer; if you would go off like an opium-eater in love with your starving delusions—be a doctor.


Warnings to the Young Auscultator

I would, therefore, make the following remarks, as warnings to the young auscultator. First. Be careful about inferring too much from physical signs alone. Second. Do not risk your reputation by too nice a diagnosis. Third. If you make an error, comfort yourself with the belief, that, perhaps, part of the difficulty lies inherent in the subject, and not wholly in your blundering ear and judgment. Fourth. If you make many errors, still be hopeful, at thinking how much more clear-sighted you are than those who have gone before you. Believe that auscultation teaches very much although it may be imperfect. Learn humility; but do not despair of becoming more accurate in the future. Fifth above all, do not, from the physical signs alone, imagine that you have found out a severe organic disease of the heart, when perhaps, nothing but a functional derangement really exists, that will mock your fatal prognosis.—Henry I. Bowditch. The Young Stethoscopist. New York, Hafner Publishing Company, 1964, p. 157. (Original publication, 1846)
NOREPINEPHRINE STORES OF PAPILLARY MUSCLE


Now the absence of the scientific habit of mind is a serious hindrance, because it favors belief in occult forces, rejects determinism in vital phenomena, and leads to the notion that the phenomena of living beings are governed by mysterious, vital forces which are continually invoked. When an obscure or inexplicable phenomenon presents itself, instead of saying “I do not know,” as every scientific man should do, physicians are in the habit of saying, “This is life”; apparently without the least idea that they are explaining darkness by still greater darkness.—Claude Bernard: An Introduction to the Study of Experimental Medicine. New York, The Macmillan Company, 1927, p. 201. Centenary of First Publication, 1865.


23. GREGG, D. E., AND SHIPLEY, R. E.: Augmentation of left coronary inflow with elevation of left ventricular pressure and observations on the mechanisms for increased coronary inflow with increased cardiac load. Am. J. Physiol. 142: 44, 1944.


One wonders whether the rare ability to be completely attentive to, and to profit by, nature’s slightest deviation from the conduct expected of her is not the secret of the best research minds and one that explains why some men turn to most remarkably good advantage seemingly trivial accidents. Behind such attention lies an unremitting sensitivity, analogous, I suspect, to that strange experience we all have of encountering a new word two or three times within the first week after we have learned it.—ALAN GREGG: The Furtherance of Medical Research. New Haven, Yale University Press, 1941, p. 98.

The baneful features of controversy develop chiefly, I believe, from the use of language which expresses emotional attitudes rather than intellectual considerations. If differences between investigators are discussed strictly on the intellectual level there is no reason for the development of a sense of injury, no reason for later enmity. Properly conducted, a polemic may leave both the original investigator and his critic with the conviction that they have been concerned with the advancement of science. The desire for conquest, the impulse to engage in triumphal exaltation is absent. Also the emphasis on observed facts may lead to further work of a more refined character, and thus to new and unanticipated discoveries.—WALTER BRADFORD CANNON: The Way of an Investigator: A Scientist's Experiences in Medical Research. New York, W. W. Norton & Company, Inc., 1945, p. 100.

An Eighteenth Century Cleric's Denunciation of the Medical Profession

Men of learning began to set aside experience; to build physic upon hypothesis; to form theories of diseases and their cure, and to substitute these in the place of experiments. . . . Medical books were immensely multiplied; till at length physic became an abstruse science, quite out of the reach of ordinary men.

Physicians now began to be had in admiration, as persons who were something more than human. And profit attended their employ as well as honour; so that they had now two weighty reasons for keeping the bulk of mankind at a distance, that they might not pry into the mysteries of the profession. To this end, they increased those difficulties by design, which began in a manner by accident. They filled their writings with abundance of technical terms, utterly unintelligible to plain men. . . . Those who understood only how to restore the sick to health, they branded with the name of Empirics.—John Wesley. Primitive Physic. London, The Epworth Press, 1960, p. 26.
ASSESSMENT OF DIGITAL CLUBBING

Summary
A method is described for the production of accurate casts of the digits using an alginate impression material. The use of such casts is illustrated with respect to changes in the degree of digital clubbing in tetrad of Fallot following total surgical correction.

Acknowledgment
The authors are grateful to Dr. Jack Budowsky for help in selecting the best material for making the casts and to Dr. James R. Malm and Dr. Frederick O. Bowman for referring their patients for study.

References

One Man's Opinion
When I consider how long and arduous is the task of making the truth an effective living reality even to just one human patient, who has been driven by his own suffering to seek the truth about himself and his life, then I must confess that the difficulties sometimes seem insurmountable which confront any effort to use art and literature and music as a vehicle for making truth meaningful to many. In such moments of discouragement even the best of poetry and fiction seems a watering down and disguising of truth so as to make it palatable, as though truth were too strong a drink for human palates. If this is true, then it may be fair to say that literature and art weaken the truth to enable many people to accept some fragments of it; whereas psychoanalysis attempts to strengthen one individual to the point at which he will be able to face and accept the whole truth. Yet no form of art or education has found out how to increase the receptive strength of Man in general. Perhaps this is the ultimate challenge which is faced today by education and by all cultural processes.—Lawrence S. Kubie. Neurotic Distortion of the Creative Process. Lawrence, Kansas, University of Kansas Press, 1958, p. 9.


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**A Thought Twister**

... In rational problem solving, goals will change not only in detail but in a more fundamental sense through experience with a succession of means-ends and ends-means adjustments. ... In an important sense a rational problem solver wants what he can get and does not try to get what he wants except after identifying what he wants by examining what he can get.—Albert O. Hirschman and Charles E. Lindblom. *Economic Development, Research and Development, Policy Making: Some Converging Views*. In: *Behavioral Science 7*: 218, 1962.