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CARL F. SCHMIDT
strongly suggests myocardial involvement, but
the electrocardiogram is not specific. Signs
and symptoms referable to the heart are un-
usual as a first manifestation of systemic
lupus erythematosus, and in patients receiv-
ing suppressive chemotherapy they do not
further worsen the prognosis. Systolic mu-
murs cannot be interpreted as conclusive
evidence of Libman-Sacks valvulitis.

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for his advice and criticism in the preparation of
this paper.

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Galvani and the Electrophysiology of Muscular Contraction
Luigi Galvani was born on September 9, 1737, in a house which may still be seen
on Via Mareoni, 25, in the center of Bologna, into a family which had produced several
illustrious men. Upon the completion of his collegiate studies he attended medical classes
with some famous teachers of his time: Jacopo Bartolomeo Becarri and Domenico
Maria Gusmano Galeazzi. He obtained his degree in medicine and philosophy on July
15, 1759 and on May 13, 1761 he was appointed allunno (student) at the Academy of
Sciences of the Istituto. He practiced medicine and surgery in Bologna hospitals soon
after but also found time for anatomical research. He was appointed lecturer de Rebus
medicis at the Archiginnasio he had attended, and on April 28, 1763 was made honorary
lecturer. In the years which followed he taught surgery and theoretical anatomy. On
June 22, 1768 he became a Lectura stipendaria (paid lecturer) and taught medical
practice. He became Galeazzi’s adjunct in anatomy on December 12, 1775, under whom
he taught practical anatomy. He held that office until the year of his death.

On February 26, 1782, that same Senate appointed him Professor of Obstetric Arts
at the Istituto, a title which he held for sixteen years. In addition to these duties, he
taught classes in his home on pathological anatomy and was thus kept busy teaching,
investigating, and practicing medicine and obstetrics.

His moral greatness was in complete harmony with his intellectual stature. Contem-
porary writers and first biographers describe Galvani as an honest, mild, modest man,
polite, charitable to the unfortunate and always a noble and generous friend. Even in
trying moments he showed unshakable strength of character.—Giulio Pupilio. Com-
mentary on the Effect of Electricity on Muscular Motion. By Luigi Galvani. Translated
by Robert Montraville Green, M.D. Cambridge, Massachusetts, Elizabeth Licht, Pub-
isher, 1953, p. xvii.


Harvey's monumental discovery was given to the world in 1628 but was very slow in winning adherents, particularly in England. Sydenham himself does not once refer to Harvey, although their lives overlapped, and they lived in the same city for a number of years. This attitude of Sydenham is at first sight difficult to understand, but certain facts help us to solve the riddle. Sydenham had no patience with theories and saw little in the speculations founded on the new physiology but carried to an excess not contemplated by Harvey.—DAVID RIESMAN, M.D., Thomas Sydenham, Clinician. New York, Paul B. Hoeber, Inc., 1926, p. 16.
ROSENBAUM, PELLEGRINO, TRECIOKAS

The master word in medicine is work . . . Though a little one, it looms large in meaning. It is the open sesame to every portal, the great equalizer in the world, the true philosophers' stone which transmutes all the base metal of humanity into gold.—SIR WILLIAM OSLER. Aphorisms From His Bedside Teachings and Writings. Edited by William Bennett Bean, M.D. New York, Henry Schuman, Inc., 1950, p. 70.

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We are grateful to Professor Sir George Pickering for constant help and encouragement, and to Dr. A. H. T. Robb-Smith and the staff of the Pathology Department, the Radcliffe Infirmary, for access to the necropsy material.

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References

Error
As an experienced investigator I have seen not a few instances during my career that have revealed the possibilities of mistakes even after the most careful precautions have been taken. All venturesome scientists are aware of the many chances of going astray as they enter a new field. Michael Faraday, a prince of experimenters, testified “that I may be largely wrong I am free to admit—who can be right altogether in physical science which is essentially progressive and corrective?” If Faraday could feel thus toward experimentation in the realm of physics, how much readier to acknowledge the possibility of error should be an investigator who labors in the more complex and difficult realm of biology.—WALTER B. CANNON, M.D. The Way of An Investigator. New York., W. W. Norton & Company, Inc., 1945, p. 97.


Religio Medici

To wiser desires it is satisfaction enough to deserve, though not enjoy, the favours of Fortune: let Providence provide for Fools. 'Tis not partiality, but equity in GOD, Who deals with us but as our natural Parents: those that are able of Body and Mind He leaves to their deserts; to those of weaker merits He imparts a larger portion, and pieces out the defect of one by the excess of the other. Thus have we no just quarrel with Nature for leaving us naked; or to envy the Horns, Hoofs, Skins and Furs of other Creatures, being provided with Reason, that can supply them all.—Sir Thomas Browne, Religio Medici. Edited by W. A. Greenhill, M.D. London, MacMillan and Co., Ltd., 1950, p. 32.


The nature of our mind leads us to seek the essence or the why of things. Thus we aim beyond the goal that it is given us to reach; for experience soon teaches us that we cannot get beyond the how, i.e., beyond the immediate cause or the necessary conditions of phenomena. In this respect the limits of our knowledge are the same in biological as in physico-chemical sciences.

When, by successive analyses, we find the immediate cause determining the circumstances in which a phenomenon presents itself, we reach a scientific goal beyond which we cannot pass. When we know that water, with all its properties, results from combining oxygen and hydrogen in certain proportions, we know everything we can know about it; and that corresponds to the how and not to the why of things. We know how water can be made; but why does the combination of one volume of oxygen with two volumes of hydrogen produce water? We have no idea. In medicine it is equally absurd to concern one’s self with the question “why.” Yet physicians ask it often. It was probably to make fun of this tendency, which results from lack of the sense of limits to our learning, that Moliere put the following answer into the mouth of his candidate for the medical degree. Asked why opium puts people to sleep, he answered: “Quia est in eo virtus dormitiva, ejus est natura sensus assoupire.” This answer seems ludicrous and absurd; yet no other anwer could be made. In the same way, if we wished to answer the question: “Why does hydrogen, in combining with oxygen, produce water?” We should have to answer: “Because hydrogen has the quality of being able to beget water.” Only the question “why,” then, is really absurd, because it necessarily involves a naive or ridiculous answer. So we had better recognize that we do not know; and that the limits of our knowledge are precisely here.—Claude Bernard, An Introduction to the Study of Experimental Medicine. New York, The Macmillan Company, 1927, p. 80.
showed inverted P2 and P3 with bradycardia. Partial transposition of the abdominal viscera was suspected.

Autopsy revealed partial situs inversus, transposition of the atria, a truncus arteriosus giving off the pulmonary trunk, a diminutive right ventricle, high ventricular septal defect, and two atrial septal defects. This is believed to be the only case so far described with such a combination of anomalies.

References

The Receding Horizon

Let us approach the problems before us in a humble spirit, recognizing the temporal nature of our deductions, remaining aware of the areas of unenlightenment, and leaving room for doubt. The greatest lesson that science has taught is how much more there is to learn.—Carl J. Wiggers. Introductory Remarks. Cardiovascular Effects of Nicotine and Smoking. Part I. The Absorption and Fate of Nicotine. Ann. New York Acad. Se. 90: 6, 1960.
hypertension or pulmonary valve stenosis with post-stenotic dilation of the pulmonary artery may be simulated, both radiologically and electrocardiographically.

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References

History and Science

Let us agree that the research scientist qua investigator has no need of history beyond the knowledge of the immediate background of the field in which he is heavily engaged. (He must make himself familiar with what is often called the literature of the subject, but rarely will he read anything written more than fifty years earlier.) It is as a person who must function outside the laboratory that the scientist has need of an understanding of history.—James B. Conant. History in the Education of Scientists. American Scientist 48: 533, 1960.


