Paradox of Progress

Sophisticated laboratory methods provide contemporary clinicians with unprecedented diagnostic information, but in so doing, risk de-emphasizing the physical examination upon which previous generations were much more dependent and therefore more adept.
The face is the soul of the body.

Wittgenstein
Jawlensky 1912
Munich

c. 560-550 B.C. Athens,
Akropolis Museum
1) **General Appearance**
Charles Dickens observed disease with the eye of an expert clinician, and C. Sidney Burwell writes with the expertise of a novelist. In describing a 51-year-old obese business executive who was hospitalized because of somnolence, Burwell wrote:
“The patient was accustomed to playing poker once a week, and on the crucial occasion he was dealt a hand of three aces and two kings. According to Hoyle, this hand is called a ‘full house.’ Because he had dropped off to sleep, he failed to take advantage of this opportunity. A few days later, he entered the Peter Bent Brigham Hospital.”

*The Pickwickian Syndrome*

C. Sidney Burwell,
For male patient, feel the left hand pulse first.

25. For female patient, feel the right hand pulse first.
The Arterial Pulse
Paradox of Progress

With careful practice, the trained finger can become a most sensitive instrument in the examination of the pulse.

Sir James Mackenzie 1908
Sphygmographe de Marey 1860

"Le but que nous avons poursuivi, dit Marey, dans la construction de notre sphygmographe, est le suivant : enregistrer les pulsations d'une artère, non seulement pour leur fréquence, leur régularité relative, mais totale à chacune d'elles. Ces résultats sont obtenus par aucun autre moyen..."
"...with each movement of the heart, when there is the delivery of a quantity of blood from the veins to the arteries, a pulse takes place and can be heard within the chest."

De Mortu Cordis (1628)
Direct Auscultation--
Progress
A Game Played by Urchins
Further Progress
Paradox of Progress
Thoracic Percussion

Inventum Novum Ex Percussione Thoracis Humani, Auenbrugger, 1761
Eighteenth Century

“I here present the reader with a new sign which I have discovered for detecting disease of the chest. This consists in percussion of the human thorax, whereby, according to the character of the particular sounds thence elicited, an opinion is formed of the internal state of that cavity.”

Auenbrugger
Laennec’s discovery of the stethoscope and Auenbrugger’s discovery of percussion advanced physical diagnosis beyond anything previously imagined.
The Power of Touch in Clinical Medicine
The therapeutic value of physical contact between physician and patient.
Throughout history, the appearance and disappearance of disease was believed to result from the actions of the gods in direct response to human behavior.
Hippocrates (460-377 BC) replaced supernatural temple medicine in ancient Greece with rational medicine, a change that coincided with the Golden Age of Athens and the rational world view of pre-Socratic philosophers.
The Nature of Human Illness

Old diseases vanish

New diseases appear
Goethe’s Autobiography 1846-47

Smallpox

“The illness raged through whole families killing or disfiguring many children. Now the disease struck our house too, and attacked with virulence. My whole body was dotted with pocks, and my face was so completely covered with them that I lay blind for several days, suffering greatly. Every possible way to alleviate my condition was tried, and I was promised whatever my heart desired if I would only lie still and not make things worse with rubbing and scratching...
**Disease Versus Disease**

*One Infectious Disease Prevents Another*

Vaccinia (cowpox) prevents variola (smallpox)

Vaccination is probably the most significant medical advance of the last two centuries. Before vaccination, smallpox killed 1 of every 10 people in Europe.
Lady Mary Montague 1718

Smallpox

It was well known that one only got smallpox once. In the Islamic world it was the habit to "engraft" people with the dried smallpox pustule because this provided protection.

Lady Mary Montague, wife of the British ambassador to Constantinople, learned of this practice called variolation or inoculation, and introduced it to Britain after first having her own children treated.
Edward Jenner 1749-1823

“... what renders the cow-pox virus so extremely singular, is that the person who has been thus affected is forever after secure from the infection of the smallpox; neither exposure to the viriolous effluvia, nor the insertion of the matter into the skin, producing this distemper.”
Progress
Eradication of Smallpox
May 8, 1980

The Thirty Third World Health Assembly “declares solemnly that the world and all its peoples have won freedom from smallpox.” (Resolution 33.3, Geneva, Switzerland)
Acquired immunodeficiency syndrome (AIDS), caused by the diabolically unique human immunodeficiency virus (HIV-I), has profoundly changed contemporary society and medical practice. Old infectious diseases have reappeared—smallpox, tuberculosis.
There have been no naturally occurring cases of smallpox anywhere in the world since 1977. A high- or moderate-risk case of smallpox is a public health and medical emergency.

**Report ALL HIGH- and MODERATE-RISK CASES immediately (without waiting for lab results) to:**
1918 Influenza Virus

patients in an emergency hospital at Fort Riley, Kan., in 1918. As many as 50 million died worldwide.
Drug Resistant Tuberculosis

Of the 9.5 million new cases of tuberculosis worldwide every year, about 435,000 are resistant to standard medications.
A Paradox of Progress

“The vital spirit is engendered by the mingling of inspired air with the more subtle portion of the blood which the right ventricle of the heart communicates to the left.” Michael Servetus

The date of Servitus’ birth is disputed, but the date of his death is beyond doubt because the vital spirit was considered heresy by the Calvinists who burned Servitus at the stake in 1553.
Ignac Phillip Semmilleis, 19th Century
Jealousy, Stupidity, Ingratitude: A Paradox of Progress

Ignac Semmelweis’s discovery of the etiology and prevention of puerperal sepsis (1847), his agonizing travail to achieve acceptance of his doctrine followed by his madness and tragic death, is one of the most poignant stories in the history of medicine.
Progress

Syphilology was once an important medical subspecialty. Before the advent of penicillin, heavy metals were one of the most important methods of treatment. In the nineteen fifties, a major textbook of Syphilology and Dermatology stated in its Frontpiece, “One night with Venus and the rest of your life with Mercury.”
Paradox of Progress

Sexually Transmitted Diseases

Treatment vs
The world’s most ancient profession
Human Illness

Natural Occurrence

or

Self-imposed Affliction?
“A custom loathsome to the eye, hateful to the nose, harmful to the brain and dangerous to the lungs.”

1604, James I
King of England
Virginia Slims
Equality for Women--Progress ??

Equal cancer
Equal emphysema
Equal heart disease
$1 BILLION IN ADVERTISING TO PRODUCE
$14 BILLION IN ILLNESS & DEATH
Guide To Coronary Collapse

Go to the office evenings, Saturdays, Sundays, and holidays.

Take your briefcase home each evening. This provides opportunity to review the troubles of the day.

Accept all invitations to meetings and banquets, and membership on all boards, committees and commissions.

Do not eat a restful, relaxing meal. Always plan a conference for the noon hour.
Golf, bowling, hunting, billiards, and gardening are a waste of time and should be avoided.

Never take all the vacation time to which you are entitled.

Avoid physicians, but if you do go, ignore their advice.

Never delegate responsibility. Carry the entire load yourself.

Give a lot of thought to world situation.

In a word, worry about all things at all times. You alone are responsible for the future of mankind.
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Before World War II, congenital malformations of the heart were regarded as *hopeless futilities*, an appropriate occupation for the few women in medicine. Maude Abbott was advised to occupy herself with the collection of uncatalogued specimens at McGill, and Helen Taussig was advised to occupy herself with the *hopeless futilities* in the children’s clinic at Johns Hopkins. Congenital heart disease in adults was not even a theoretical consideration.
Immense technical resources are at our disposal, permitting remarkable anatomic and physiologic diagnoses and astonishing surgical feats. However, cures in the literal sense are few and far between. A paradox of progress is a new population of patients—adults with congenital heart disease. In developed countries, about 85% of infants with CHD become adults who require medical care.
Adult Congenital Heart Disease
Pediatric cardiology evolved after the Second World War because advances in diagnostic methods and in surgical management of CHD created an air of optimism in infants who had been considered hopeless futilities. The early years of this fledgling specialty were not easy because traditional biases weighed against innovation.
Congenital heart disease in adults evolved because the success of pediatric cardiologists and pediatric cardiac surgeons profoundly changed survival patterns. The early years of this fledgling specialty were not easy because entrenched biases weighed heavily against innovation.
When those of you who are destined to lead look ahead, you will often confront regressive opposition. And when you look back, there may be no one following. But vigor can be derived from opposition, and remember !!!
When we think of the world’s future, we always mean the destination it will reach if it keeps going in the direction we can see it going in now; it does not occur to us that its path is not a straight line but a curve, constantly changing direction.

Ludwig Wittgenstein