

## Citizenship and experimental research

**Saul Goldenberg\***

\* Editor-in-Chief - Acta Cirúrgica Brasileira

### Citizenship

In order to hold citizenship values, one must reaffirm the faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life to the community. We should follow the ethic time-honoured medical rule ascribed to Hippocrates: *Primum non nocere* (“first, do no harm”). The phrase has been a hallowed expression for physicians of hope, intention, humility, and recognition that human acts with good intentions may have unwanted consequences. And that we shall not do anything to the human being that we would not like to have it done towards each one of us. We are used to listen to some statements in medical congresses as “ I had lots of complications in the beginning and as time went by, the greater my experience became, the lower my complications were...” . We may realize in this public confession that knowledge was increased in the expense of human life. These expressions were understood as crime, during the second World War and Nazi philosophy. Human beings are not experimentation animals and medical knowledge should not be tested upon them. Researches and technical practice must be performed in the experimental surgery laboratory and the “ learning curve” shall follow ethical principles to oneself and to the others. The use of the laboratory is directed to the full development of the human knowledge and to the strengthening of respect for human rights.

### EXPERIMENTAL

The word EXPERIMENTAL has a triple meaning:

1) **Experimental**- to gain experience, training, drill, schooling, refinement.

Before performing on humans, the operator must practice in the surgical experimentation laboratory, in order to follow the Hippocratic aphorism DO NO HARM. Surgical approach consists in the use of “ weapons”, as an arsenal to surgeons. Therefore, we have a question: where is our shooting drill field ? The experimentation lab is the perfect place to manage our weapons and the ideal location to set our learning curve before the “weapon” reaches the human beings. After this initial phase, the presence of a more experienced surgical tutor is indispensable to perform the operative therapy. We must completely assure humans subjected to surgical treatment, concerning the operative technique.

Hippocrates was the first to use the word **Technique** in 460 A.C. From the greek (Techne = Art). “The medical act shall be well done”. And Hippocrates used to add: “The physician has to be more than an artisan. He shall have knowledge.”

**ART**  
(training, schooling, PRACTICE)

**SCIENCE**  
(knowledge, learning, THEORY)

These should  
be exercised  
always  
together.

2) **Experimental** = practice of making experiments.

### RESEARCH

The search for answers and the generation of new concepts. The need to take questions and doubts from private clinic to the experimentation laboratory. Modern surgery is filled with answers and results from laboratory animals. The essential instrument to find these answers obviously is the **SCIENTIFIC METHOD**, within its **tripod**:

1. EXPERIMENTATION [opening the Nature book]
2. OBSERVATION - Data registry.
3. REASONING - far from being a searchlight that focuses a clear beam on real entities out there in the world beyond us, became a super illumination that fills our souls with transcendent light and truth.

Descartes (1596-1650) had a sense of novelty of the age in which he lived, and contempt for all past learning, and a supreme confidence in the capacity of the human intellect to solve all human problems.

“ In the subjects we propose to investigate, our inquiries should be directed, not to what others have thought, nor to what we ourselves conjecture, but to what we can clearly and perspicuously behold and with certainty deduce; for knowledge is not won in any other way.... “

Some important rules from Descartes’ Rules for the Direction of the Mind:

### DESCARTES FOUR GOLDEN RULES

1. Split every difficulty in as many parts as it is necessary

so as to better understand them.

2. Array the thoughts from the simple to the more complex.
3. Perform cautious reviews periodically
4. Nothing except the truth shall be considered evident

According to **Descartes**, the "... method consists entirely in the order and disposition of the objects towards which our mental vision must be directed if we would find out any truth. We shall comply with it exactly if we reduce involved and obscure propositions step by step to those that are simpler, and then starting with the intuitive apprehension of all those that are absolutely simple, attempt to ascend to the knowledge of all others by precisely similar steps." [in Oldroyd, 69]

### **RUNAWAY FROM SUBJECTIVE !!!**

3) **Experimental** = broadcast the acquired experience and communicate the results from the researches. It is essential to publicize the knowledge in meetings and journals

### **A NON-PUBLISHED AND NON-BROADCASTED KNOWLEDGE MEANS NO KNOWLEDGE.**

Every effort that fulfills these concepts should be supported with prestige. Congratulations to those who organize Research Forums.