

*Editorial*

## Science and Scientists

Farshad H. Shirazi

You might know the address of IJPR editorial office; it's in Vali-e-Asr Street just about two kilometers from Vanak square. Vali-e-Asr is one of the longest main streets in Tehran. Tehran is one of the biggest capitals in the world with a population of more than 14 million. The earth is home to more than six billion human beings with huge diverse ethnic backgrounds. Starting from the IJPR office to Vanak square, from the south of the city to the end of Vali-e-Asr street in the north, i.e. from almost one end of Tehran to the other, and in comparison from the north to the south pole, the census will reveal the most unique significant statistical result to the answer of this simple question: "Is science good?" The winning answer is simply "Yes!". When I was a child, the answer to the question of whether science is better than wealth, produced a similar outcome. However, I doubt that the same outcome with significant statistical power will be realized today; not because of my age, but because of our children's eyes and childhood visions!

"Science" has many reasons to prove itself as one of the most important wishes of human beings. It's the only tool for understanding nature, i.e. the most essential input and output of a rational being. Its dream is the most descent desire of any imagination; its way is the most honest life style; and its power is the ultimate sense of strength. Without any lie or misconception, science is the best adapted logic of the world for human beings, resulting from the rules of Mother Nature in its different aspects. That's why it's the truth!

Hippocrates, was surely not a crazy man sitting under a tree teaching inquiring minds; he was responding to his intense desire to volunteer to share his knowledge freely with others. Prophets of many nations were advising their people throughout the ages to learn and spread their knowledge; as they themselves were doing through out their lives; just to be a part of living with God. The Prophet Mohammad (S) ordered his followers to practice science from the cradle to the tomb, to search for it even in extreme locations, and to distribute it as a religious present (Zokat). Science was and is holly; coming and leading with love to satisfy human beings. A scientist learns because of his/her essential need for the values of humanity. Depending on their passions in science, scientists investigate their natural surroundings in order to improve the quality of the lives of their fellow human beings in the true direction. Free of any biases, they learn and teach others on their own free will; they also undertake investigations and other actions on their own accord. Driven solely by their desire to satisfy their inner instincts, scientists normally provide people with the truth, justice, health, and facilities.

As a result of an essential need, science in many aspects has always been believed to be invaluable, priceless and not marketable. In stark contrast to the behavior of scientists, traders sought to benefit from science. In a similar way, they also commercialized love, passion, beauty, health, justice, etc. "Alchemists" by attempting to change normal materials into gold, managed to portray science in a negative light. In another word: science was transformed into a business venture. The natural outcome was "price tags" for scientific activities, i.e. selling and earning from science. Instead of living with science, the false picture of living on science emerged. I understand the importance of prioritizing the needs of different people. However, the message was crystal clear: pay me to learn, pay me to teach, pay me to build, pay me to cure, pay me to defend justice, and so on.

Technology appeared on the scene and introduced the "applied science". Professional views in scientific activities replaced the classical, so called basic science and undermined the passion of understanding and knowledge. The experimental professional science accelerated modern life, however at a high cost. As a result of the "trial and error" feature of applied science, human society experienced huge successes but suffered huge losses by following the dictates of applied science in the real world. Instead of encouraging inquiring minds to seek conceptual life-saving goals, science became good enough for solving immediate daily needs. Professional applied science was embraced and supported by financial speculators.

Academia was preoccupied with old-style investigations behind the question of "to be or not to be!" However, in order to reap maximum benefit from academia, some societies tried to integrate and even transform universities into professional organizations. The unfortunate result was to change "to be or not to be" into a "rat race being", where people operate under high stress levels. Academic members of

these integrated faculties were doing business using their knowledge of the needs of their communities. Consumerism was encouraged in order to generate huge profits for these newly created faculties. "Science" was transformed into "service" and anything else was regarded as weakness in the eyes of the authorities. Instead of scientific results guiding life, the requirements and wishes of whatever life likes were directing human beings. Instead of Hippocrates sitting under a tree teaching based on his intense desire, customers' need was the attitude for teaching, and instead of students being the inquiring minds, they have also been categorized as customers!

And like with any other essential need, excesses and comfort resulted in the emergence of entertainments and hobbies. For many, instead of a need, science became an illusion. Has this not been tried before on love, passion, beauty, health, etc.? "Casuists" created the impression of entertainment by presenting wonderful conclusions with false scientific methods. Many people started enjoying scientific approaches to solve unclear and undefined mysteries. For many people, discovering a phenomena, finding a piece of protein, making a new formulation, and building a new tool was simply like kids playing bingo and solving puzzles, but in this case with more mature subjects. Learning science for many students became the way to go, as long as it's degree-able and prestigious. Unlike the previous story, the application of science was not to support the conceptual truth of life, but to promote the taste of adventure.

Nowadays, in the strange world that we live in, the use of new equipment and strategies has broadened the gray area of understanding to the extent that a well defined edge between reality and imagination has become blurred. Although objectionable, Hollywood-style financiers manipulate show business to make money in this mixed up world. Many other people, who follow this practice but are not good at show business, lose out. People enjoy sophisticated and sweet stories as long as the brain does not reject them (so the brain needs to be conditioned for this! ). Believing in such stories is attractive even if they are not true. Once in a while, society needs a new fashion, but old stories with modern styles are also welcome. However, we should never forget that the ultimate objective of this type of behavior is to promote the product to suite the market and to satisfy customers.

And now, science has become part of the market economy. So, values are defined as market needs and business grows. Academic members need to be involved in systemic bureaucratic activities, can you imagine; a systemic passion! Academic members are encouraged to present themselves and compete according to pre-defined scores, number of classes, number of publications, number of projects, number of presentations and so on (well, be sure that it does not mean to sacrifice quality for quantities). With a show of happiness and excitement, these members pretend to admire each others at carnivals and parties; this is a great boost to business! (Well, let's say meetings and congresses are not included). Customer-based activities are the yardstick of progress; so faculty members behave, talk, and produce and even evaluate products in order to please customers and to increase sales (and let's believe that this is contrary to some modern values like community medicine, student-based teaching and the like). Since many companies go bankrupt when the demand for produced goods drops, then important health-related issues like food contamination by food preservatives, drug efficacy, etc. are often neglected until a major public rejection of nuts and pistachio opens the market. New markets with novel and attractive logos are essential for money making; people are enticed to aspire to have new fashions and other trappings of wealthy life styles and presentations (unfortunately, "new fashion" but not necessarily for better departments, schools, faculties and research centers). People get used to old ideas fast and also espouse new concepts even if they are unimaginative, or remain unconcerned that the old concepts are not well addressed nor solved (And, this certainly does not indicate a new developmental shift, like from molecular research to biotechnology and then to nanotechnology, etc).

Believe it or not, rules like the ones above are working just fine! Everybody looks happy and things run smoothly. Students do not see and do not like Hippocrates sitting under a tree and talking about science, they would rather well dressed, prestigious academic members sitting behind big desks, busy with phones for their companies and businesses. You see, it looks like the answer to my well-defined childhood question is that science is good for the production of wealth!

What is the reality of the situation today, and our future tomorrow? Is that the international community earns correctly, or stands to loose a lot? Are we overemphasizing the importance of money and market based possessions? Do our young students have enough good examples and symbols to follow? Just, find "the scientists". They know the jeopardy, and may come up with meaningful and lasting solutions.

*Farshad H. Shirazi is currently working as an associate professor in pharmacology-toxicology department of Shaheed Beheshti School of Pharmacy. He can be reached at [dr\\_fshirazi@yahoo.ca](mailto:dr_fshirazi@yahoo.ca).*