



Freedom: The Pillar of Innovation and Education

By Petros Kronis

petros.kronis@gmail.com

www.kronis.tech

What drives innovation and makes it thrive? First and foremost, the freedom of spirit and action. Freedom to exchange ideas, to experiment, to fail and to invest. In most societies these freedoms are obstructed by interventions in the exchange of information, in trade, in transport and by bureaucracy.

Historically, empires have failed in the field of innovation. The Roman Empire does not have significant innovation to show in proportion to its size, compared to ancient Greece where the freedom that prevailed in the cities of Greece, led innovation to reach high levels. The democratic state of ancient Athens is a successful example of innovation that holds well today in the civilized world. It seems that healthy competition between the cities of ancient Greece played a role in the development of innovation. The same seems to be true today of competition between the United States of America, the countries of the nearly-united Europe and of those of Asia.

Innovation can be evolutionary, with successive small improvements of a product, such as that of the airplane, or revolutionary such as the use of water and steam, electricity and electronic and digital technology. The above on the occasion of the publication of the book: How innovation works, and why it flourishes in freedom, by Matt Ridley.

Before moving on to the subject of education I will give two examples of innovation ideas. One which was a failure was proposed many years ago by someone for the faster delivery of written correspondence. He proposed equipping postmen with a rocket that would be mounted on their backs, turning them into flying postmen. Eventually the email solution that conveys the message at almost the speed of light prevailed. The other example concerns the future. I will put it forward as a question: Will the tourism industry with physical transportation of people, be replaced in the future with virtual visits to parts of the world which will be digitized with such high resolution so that the visitor would think that he/she is on the spot? This may sound like a science fiction idea, but even today we can visit places like museums and libraries to admire the works and read books using our computer, without physical presence.

If freedom fuels the development of innovation, the same is true in the case of education. One of the most successful educational systems of the world, of all times, is that of ancient Greece. This educational system has really reached great heights. During that time, from a population base of a few tens of thousands of people, that educational system produced more spiritual giants than the entire population of the world of five billion people of the last century.

Children in ancient Athens received lessons in reading, writing, literature, music, gymnastics, painting and arithmetic from private teachers, who were among ordinary workers ("βάνουσοι"), who were not highly respected by the community. These teachers did not have special teaching skills and did not have any pedagogical education! But they were characterised by one great advantage. They were free to teach whatever inspired them. Their syllabus was not written by others, but included the material in which they excelled and they taught it with enthusiasm. There was neither a Ministry of Education nor a Pedagogical Institute. It is well known that a person, who performs a task, excels if his spirit is free to act as he wishes. Just as it would be unthinkable for an artist to have someone over his shoulder to instruct him how to work, the same is true for a teacher.

A comparison of the educational systems of Sparta and Athens is enlightening. In the first, children of both sexes are separated from the family from the age of six and undergo a public education with compulsory state education. Its content is the hardening of the body and the soul. To the five basic gymnastic exercises (running, jumping, athletics, javelin, discus), military exercises are added in the case of boys until the age of 30. Unlike the war-oriented state of Sparta, Athens is dominated by the liberal democratic rule of law. Although the state has gymnasiums for the training of the body, the general education in music, language, mathematics and the arts is entrusted to private tutors. Through literature, a multitude of knowledge (geographical, historical, sciences, etc.) is taught at the same time.

As in Sparta, so in Athens, pentathlon (jumping, running, discus, javelin and wrestling) is particularly popular. Games are often organized in schools, as well as in celebrations. Education continues beyond the elementary stage as a gymnastics-military education of teenagers in the "Gymnasium", a state institution with exercise areas, baths and places where spiritual education is also served. This is done for male youth from the 16th to the 20th year of age. The society of Athens is characterized by an incredibly great spiritual vigour. The whole society enjoys a very high cultural and intellectual education. The city's numerous festivities with big shows and games, especially poetry, music, dance and gymnastics, are really undertaken by the whole city.

Could the fact that in ancient Athens the cultivation of the human intellect reached unimaginable levels be related to the fact that the proportion of physical exercise in the curriculum was at a higher level than that of today? (For the importance of physical exercise, which also trains that part of the brain controlled by the sensory-motor systems, I may write in a future article). I just mention here that experiments performed with infants whose first sensory-motor exercise, that is, that of crawling on the floor, was reduced to a minimum, had the effect of adversely affecting subsequent dexterity, but also writing and reading skills.

In the educational system of ancient Athens the illiteracy rate must have been minimal. This is understood by the fact that public office was given by a random draw and those who were given the positions had to be able to read, write and have a general political training to lead and be led.

The liberal system of Athens, which had a balanced percentage of physical and mental education, finally came out victorious.

Depression overwhelms someone trying to compare today's education system with the ancient one. The first is dominated by state intervention with mandatory curricula. Inspectors enter the classrooms asking to inspect the teaching and the annual, quarterly, weekly and daily planning according to the syllabus. Today's teachers have been made to function like porters, whose job is to throw knowledge into the students' heads, like someone throwing mud on a wall, in the hope that something will stick. Most does not stick and falls down and gets lost. Students react and repel knowledge. For them, learning has become a can of information, tasteless and pointless.

The teaching method has been converted from "students hunt knowledge" to "knowledge hunts students". But as if it's not enough that school time is wasted, after school activities where the student has the opportunity to do what he/she likes and is attracted to, homework assignments converts this time into a waste. During the period that I worked for a period of ten years as a teacher in the Technical Education, entering a classroom one day, I found students discussing intensely whether the cylinder of their motorcycle engine can be turned on a lathe. The lesson was called Mechanical Technology and the topic of discussion was within the contents of the curriculum, but not within the planning of the day's lesson. But I found students hunting knowledge, which is something rare for today's school, so I tore up the day's planning, divided the class into groups, and asked the students to continue the discussion using the discussion-based Socratic teaching method. (For this method I may come back in a future article). As a result, the training examiners at the Pedagogical Institute denounced my deviation from the daily planning as an unacceptable practice.

From time to time, education reformers and wise committees dealt with measures to improve education. They mainly focused on suggestions for improving the curricula and ways of hiring teachers after examinations in order to staff the schools with the best teachers. If there is one thing we should have learned from Socrates, the wisest of the wise, is that you cannot teach anything to anyone. No matter how hard one tries, all one can do is get people to think about how to learn by their own means. Unfortunately with what has been said above neither the best curricula nor the selection of the best teachers can improve the situation.

Enlightening for us is the observation of the way animals teach. All animals including humans are mimetic beings. The mother cat, tiger, lioness, etc., do not make much effort to teach their young. They simply operate normally in the theatre of life. The little ones watch and imitate. After weaning they emerge as very capable predators. This method was used in the old days with the young practicing next to masters.

The tragic fact about the contemporary education system is that its designers failed to see what their ancestors did for education, something that was under their noses!