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## Invited Article

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### The Faculty of Science is 90 years old\*

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The first sitting of the Faculty Board of Science, as we know it today, was held on the 17th September 1915; like today it was a Friday. The Rector, Dr. Edoardo Magro was in the chair and there were three members in attendance: Professor W.F. Nixon B.Sc., Arc.Sc. (Professor of Mathematics) and two others, both future *Rectores Magnifici* of the University, Professor Roberto V. Galea L.S.&A. and Professor Themistocles Zammit C.M.G., M.D. (Professor of Chemistry). In view of the agenda for the day, the following two decisions were taken:

- (i) Henceforth there were to be two Mathematics exam papers, instead of the one as till then, in each of (a) the academic course of science, (b) the preparatory course of medicine, and (c) the preparatory course of engineering;
- (ii) Professors Temi Zammit and Robert V. Galea were elected to represent the Science Faculty on Council.

These details and others relating to the subsequent meetings of the Faculty Boards of Science can be found in a single register entitled Faculty Board of Science Minutes (1915-1956), catalogued as Vol. 444 in the University Archives (no pagination). As this register extends down to 1956 it has many an interesting detail very close to our own memory such as how, on 30 August 1950, Professor Edwin Borg Costanzi (honouring us today with his presence) makes his first appearance on the board and, forthwith, is elected to represent Faculty on Senate.

In this short presentation I have been asked by the Dean to look backward over the years to give an overview of how the various situations of Science in Malta developed to lead to that auspicious Friday 17th September 1915 that we are commemorating this morning. (The looking forward is the task of this Faculty Board.) Our Alma Mater has had a chequered career, looking back for its forked roots in the Jesuit-founded Collegium Melitense, begun in 1592, and in the School of Medicine founded by Grandmaster Nicholas Cottoner in 1676 in the Sacra Infermeria, both in Valletta. In these early precursor days, the study of the Sciences was well-nigh restricted to Mathematics, a School of which was erected in the Collegium in May 1655. Interestingly, the chair was funded by a tax on the croquet-like game of mallet,

played in the Floriana walled Mall (whence the name), by leisure- and pleasure-seeking knights. The purpose as conceived by Lascaris who founded it was purely functional and the discipline thought of as 'slave and servant' of the utilitarian sciences of navigation and artillery. One can, in some sense, say that the teaching of Mathematics flourished, on and off for about a century, until the suppression of the Jesuits and their college in April 1768.

Following the unceremonious dismissal of the Jesuits, Grandmaster Pinto took immediate steps to transform their college (now his college) into the university of his dreams. To this end, he invited from abroad some of the best men in Europe of the time, including a Florentine Servite Padre Roberto Raineri Maria Costaguti, a mathematician of some repute, to be the first rector. Attached to this *Pubblica Università di Studi* was a *Collegio d'Educazione*, a kind of Junior College. According to the statutes drawn up by Costaguti himself, a full university course lasted eight years and was divided into two parts: The first three years led to the degree of Master of Arts in subjects common to all three faculties of Theology, Jurisprudence and Medicine, whereas the last five were dedicated to these three traditionally professional courses; this basic structure survived till the very recent past. The teaching of the sciences, in preparation for the course of Medicine, found its way in the curriculum of the initial three years. Worth mentioning that Botany, an essential ingredient of the course of medicine that relied heavily then on the knowledge of herbs, was closely associated with a *Giardino di Botanica* that flourished in St Elmo's ditch where the medicinal herbs were grown.

Maltese exponents of science at this time included: (i) Dr. Giuseppe De Marco of Cospicua, trained in the Jesuit College and in Pinto's Università, who has left us various writings, including: (a) *Trattato di Trigonometria Piana*, (b) *Vulgaris Arithmetica Elementaris Theoria et Praxis*, and (c) *Breve Compendio dell'Idrostatica*. (ii) Pride of place, however, should go to Giuseppe Zahra, likewise trained at the Jesuit College, but, having clashed with the Order on political grounds during the so-called Insurrection of the Priests, he slipped out of the island to Naples where he concluded his medical training, whence he headed for St Petersburg, where he very likely came in

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contact with Euler himself, then by way of Paris and Messina, he ended up in Catania to teach Mathematics. Here as incumbent of the Chair of Geometry, he earned for himself the compliment of being *il più valido matematico che fosse in Sicilia*; he now graces our Computer Science Building with his name.

The Order's stay in Malta came to a sad end in June 1798 when Napoleon Bonaparte summarily threw it out of the island. During a short six-day stay (13-19 June), Bonaparte revolutionized all the systems in these islands, including the educational:

- (i) fifteen primary schools were to be set up for the education of Maltese children;
- (ii) sixty boys, from the richest families, were to be sent to Paris to further their studies;
- (iii) the University was to be replaced by a Central School run by eight masters, respectively in charge of: (a) arithmetic and stereometry, (b) algebra and electricity, (c) mechanics and physics, (d) geometry and astronomy, (e) navigation, (f) chemistry, (g) oriental languages, and (h) geography.

Things augured very well for the sciences, but none of these grandiose schemes saw the light of day as by 1 September the islands were up in revolt and the French made way for the British. Even before the future of Malta was settled by treaty in 1813, the practical administration of the island was already in the hands of Alexander Ball.

It is to Ball's credit that the University began to function again very soon afterwards with three main chairs for Theology (Dogma, Morals and Canon Law), one for Medicine, one for Civil Law and three for the Faculty of Arts. These were (i) Humanities and Rhetoric, (ii) Logic and Metaphysics, and (iii) Mathematics and Physics. This last chair was given to Carlo Azzopardi. The Reverend Canon Francesco Saverio Caruana, one of the leaders of the revolt and subsequently Bishop of Malta, a mathematician of note, was first rector of this refounded University (1800-1822). He also founded the school of building and design at the University. Caruana resigned in 1822 and dictatorial Governor, so-called 'King Tom', Maitland grabbed the opportunity to set up a commission to investigate the educational system at this highest institution of learning. One practical result of this enquiry was the separation of the University from the Lyceum, physically by the construction of the Doric Gate in St Paul's Street under the Greek inscription: Propylaion tes times he mathesis.

Separate Faculty Boards for the various faculties began to be held at this time. Some information on student numbers is also available: The roll of students at the University in 1833 showed a total of 300 students of which 65 attended the Arithmetic Class. Professors had an onorarium, rather than a salary, amounting to £25 per year. Important names in science that appear in the 1820s and 30s included Dr. Cleardo Naudi, *Professore di Chimica*; the teacher of Arithmetic was Sr. Gioacchino Busuttil, *Professore di Botanica*; P. Carlo Giacinto died

in 1829 to be succeeded by Dr. Stefano Zerafa. Similarly in that same year, the chair of Mathematics had been vacant for some time by the death of Dr. Giuseppe Zammit and it was being recommended that Sr Carlo Cicogani Capelli should replace him. A Dr. Giuseppe Wettinger from Cremona, described as inventor of an aerostatic balloon, appears on the scene in the 1830s.

In a report of 1836, drawn up by two British scholars, John Austin and George Cornwall Lewis, the commissioners found a University system that was to survive to the recent past in which a six-year academic course consisted of an initial three-year course in philosophy leading to three other years in one of Theology, Law or Medicine. Intake used to take place every three years with a numerus clausus of 159 for the final three years. Students paid half-a-crown a month and total intakes from these fees in 1837 came to £149 3s. 2d., which sufficed for all the staff's salaries. Recommendations for reforms by the two gentlemen were turned down and there followed a time of turmoil which saw the toppling of two rectors in as many years. The lull that followed with the lengthy rectorship of Dr. Saverio Schembri (1854-1880) was equally fruitless and a time of stagnation. Suffice it to mention that during this whole time, Council met exactly once in November 1873. For the whole of thirty-five years there were no Arts or Science degrees. The sciences reappear again in the reforms suggested by Sigismondo Savona who insisted that Theology students should have a grounding in Mathematics and Physics. This was vigorously opposed by the Church.

The Rector Annetto A. Caruana resigned in 1896 as he could not handle the warring factions within the University. He was replaced by Napoleon Tagliaferro who came armed with a new statute. Tagliaferro was an outstanding academic who contributed to several branches of learning, including Mathematics, Archaeology, the Natural Sciences and the Maltese Language. He studied at the Sorbonne and his publications include a paper of 1879 on the then topical Transcendental Functions. One of his early achievements at the University was to subdivide the Faculty of Arts, till then known as the Faculty of Literature and Science, into two separate areas of study: The Arts and the Sciences, that included Engineering, Architecture and Pharmacy. The split into three faculties of Arts, Science, Engineering and Architecture belongs to the next rectorship of Edoardo Magro (1904-1920).

The first meeting of the faculty board of Science was held 90 years ago almost to the day.

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Faculty of Science, University of Malta