

Graduation Ceremony 4
Academic Oration
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JESUITS' CHURCH – VALLETTA

Malta's Industrial Heritage

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I am dedicating this oration to the memory of my late wife Maria who passed away to eternal life eight months tomorrow. She was a lovely and loving lady, loved by all who knew her. We had a beautiful relationship and I was very fortunate to have met her when I did and to have shared 34 years of our lives together. This of course makes the loss greater, but at the same time I am grateful for what I have received. There is no better wish that I can make to all the young people gathered here tonight who are married or about to wed than that they will have as happy and rewarding a relationship as the one that Maria and I had.

As for the oration, I thought of talking to you about Malta's Industrial and Technological Heritage. The International Committee for the Conservation of Industrial Heritage says that "Industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value." Apart from the obvious remains, such as buildings, machinery and infrastructure, the TICCIH also includes in this heritage, "places used for social activities related to industry such as housing, religious worship or education." UNESCO has added a number of industrial sites to its World Heritage List. "Guardians of the past, they testify to the ordeals and exploits of those who worked in them." "They embody the hope of a better life, and the ever-growing power over matter."

We are all aware of Malta's rich artistic and military heritage, not so much of its industrial heritage, but fortunately this awareness is growing. The news that the Government intends to turn the Boiler Shop at the Drydocks into a museum of Industrial Heritage is indeed good news and already a number of machines and documents, salvaged from the Drydocks before its privatisation are stored there, as are some old buses. There are many collections to be found in Malta, in public and in private hands, as well as a number of interesting sites worth preserving.

Military powers are usually at the fore-front of technology. Malta's role as a military outpost (from the arrival of the knights to the departure of the British) means that the Maltese were exposed to leading technologies throughout this period. Indeed, with the departure of the British Forces in the seventies, we lost a very good technical "school", i.e. the British Forces. Moreover, during the best part of colonial rule, Britain was a leading industrial nation, and we benefited from its role as a leader in technology.

One of Malta's most impressive sites of industrial archaeology is the underground power station at Kordin, which consists of a system of tunnels housing the power plant and associated switchgear. Started before the Second World War, it was used by the British forces to power their installations until their departure in 1979 when it was handed over

to Enemalta who kept it in operation until 1992. The power plant consists of steam boilers, turbo-generators and six diesel generators. These diesel engines are of the opposed-piston type but with a unique method of connecting the opposing pistons. Out of the 115 such engines that were built, twelve have survived worldwide including our six, but nobody seems to know about ours, including the authors of a book on opposed-piston engines published last year. When I pointed this out to the authors, they quickly acknowledged their mistake. Unfortunately some of the tunnels are now used to store asbestos, and the place is out-of-bounds. The rocky promontory of Kordin houses other interesting sites, such as the tunnels that housed the machine shop of the Dockyard during the war, other unfinished tunnels intended for the same purpose that were started during the cold war, a number of bomb stores, each of which is the size of a small theatre, and fuel tanks, still in use, all dug out of the rock. Another underground station can be found at the Marsa Power Station. This was built after the war in tunnels that were previously Naval stores. This underground power station at Marsa took over from the old one at the bottom of Crucifix Hill which still exists, albeit shorn of all its equipment and with its chimneys emasculated to insignificance. I used to like the incongruence of these red brick chimneys standing out against the bastions of Floriana.

Another fascinating site is the 1908 workshops to be found in the Conservatorio Vincenzo Bugeja, and which was set up for the training of apprentices. These workshops consist of a machine shop, made up mostly of lathes belt driven from a single-cylinder diesel engine, a woodworking shop and a smithy. All the equipment is in pristine conditions and is very well preserved.

Industrial heritage is also about people. One character in particular that fascinates me, although my information about him is very scarce, is Giuseppe Sacco Albanese, whose bust I once saw in the Mdina Cathedral Museum. Giuseppe went to America as a boy towards the end of the nineteenth century and worked with Edison, who at the time was experimenting with cinematography. In one of his first attempts, in 1890, he filmed Giuseppe monkeying about. The short clip, called Monkeyshines can actually be found on the Internet, which also credits Giuseppe as America's first film actor! Giuseppe later returned to Europe, was employed for a time with the International Electric Company in Belgium, and is reputed to have established the tramway in Nice. In 1901 in Malta, he asked Government for a concession to build some tramway lines, but the Government eventually issued a tender which he lost to a British company.

One of my favourite haunts in London is the Institution of Mechanical Engineers, just off St James Park. I have searched the library of the Institution for connections to Malta. What I found does not amount to much. An item of interest is a letter written from Malta in 1851 by Robert Stephenson, the son of George Stephenson, of "Rocket" fame and the father of English railways. Robert was on his way back to England having visited Egypt to advise on building a railway there, which he eventually did and to comment on the idea of building the Suez Canal, an idea he did not like, perhaps because it was being proposed by a Frenchman. The letter says nothing about Malta. It describes his voyage to our island and expresses Stephenson's desire to be back in England as fast as possible to fight the papists who had just regained their civil rights. However, in a separate reference, I found that Stephenson was asked to comment, during his short stay here, on the feasibility of excavating the ditch below Kingsgate to link Marsamxett to Grand Harbour.

He commented favourably on the plan originally drawn up by the Knights.

The collection of John Hili deserves a special mention. John is a passionate collector of internal combustion engines and other mechanical paraphernalia. His collection of engines numbers well over a hundred, including an 1896 Douglas engine. Besides engines, he has also collected a 1943 road roller, steam driven water pumps, boiler grates, flywheels, and pasta making dies, among others.

The production and distribution of water has always been important for us. To remind us of this, we have the Wignacourt aqueduct, the buildings to house distillers; one dating back to 1881 in Sliema, and another at the foot of Fort St Angelo. We have a number of pumping stations, some several metres underground, that house large diesel engines, no longer in use, that once drove pumps or generators to provide the electricity to drive the pumps. The engine of one such pumping station, that of Wied il-Ghasel, that villa-like building at the bottom of the hill known as T'Alla u Ommu, was recently restored and started by a group of enthusiasts with support from the Water Services Corporation, the owners of the place. Also in connection with water, one has to mention the various Chicago style wind-driven pumps dotting our countryside. There are over three hundred of such mills.

Grain has a similar importance in our history. Sites such as the Granaries and windmills are well known. Less well known are the underground mills built in the fifties, during the cold war, to ensure that in the event of war, Malta would still have the ability to mill its own grain. There are seven such mills in Malta and one in Gozo. Most have been vandalized, but the ones in Xemxija and in Xlendi have been restored, again by volunteers. One small inscription that caught my attention when I saw it read: "Mulino a Vapore" on a house in Siggiewi, but I have yet to uncover its history.

As for the industrial heritage in boat building and ship repair, I shall limit myself to a few appetisers, such as dock no 1, built in 1848, allegedly with stones taken from an ancient Mausoleum in Turkey. It is a pity that it is kept flooded. We have Dock bollards (proper bollards, not cannon) marked VR, and very large pumps of vintage stock to empty the docks. The macina is another item of interest, although I must comment that the shear legs that were recently put in place as a replica of what was once there are much smaller than what I have seen in a photograph of the original.

Very little has survived of our transport history, save some buildings, such as the railway tunnel in Valletta, the rail embankment in Attard, the stations in Birkirkara, Hamrun and Mtarfa, and the power house for the tramways in Marsa. And a number of old buses, some still plying their trade!

In 1895, Roentgen discovered X-rays, and only a few months later, in 1896, John Ellis in Malta, was taking X-ray pictures. I was fortunate enough to have held these first X-Ray pictures in my hand, thanks to Ian Ellis, a descendant of John. On the 17th November 1896, Mr Ellis wrote to the Surgeon Major General offering his services in the military hospital. I understand that these were refused. Some time later a machine was brought over from the UK. Sounds familiar! The Richard Ellis collection of photos is now in the hands of Ian Ellis, who has published some of the photos in his collection in handsome books. Ian is an engineer and I am sure one of these days, we shall see a book of photos of our industrial history.

I cannot fail to mention the making of clocks in Malta. I am not referring only to the characteristic wooden box, which is still being produced, but to the actual clockwork, from such names as the Suban brothers, Sapiano, and others. I was fascinated by the clock in the belfry of St Paul's Church in Rabat. The frame of the clock is made out of wrought iron bars, held together not by bolts, screws, rivets or welding, but by the bars being folded into each other.

I shall conclude this presentation of Malta's industrial heritage with some pleas. The first one is for the recording of the original Maltese words used by tradesmen, particularly for trades that have died or are dying out, before we lose these words forever. There is a rich heritage here and although some work has been done, I am not sure that we have covered every trade. I would also like to make a plea for the conservation of at least some of our industrial buildings, and some of the machinery; they are our "guardians of the past". We have already lost the Gasan garage in Rue D'Argens and the Mira one in Gzira, the latter an imposing building which I definitely feel did not deserve to be pulled down. Were the planners aware that these buildings were used to repair Spitfires during the war?

As I come to the end of my oration, I would like to congratulate all today's graduates for their achievements, and to remind them that this is not the end of the road of learning, but just another step forward.

At the end of the oration I gave some twenty-one years ago, my wife Maria was presented with a nice bouquet of flowers. This time round there are no flowers; there is no Maria.