of an impartial investigator. The British Universities to-day are second to none in the range and quality of their studies, equipment, and teaching. And their contribution to the "war effort" is the conclusive proof of their value. The recent and increasing emphasis on "research" reinforces this conclusion. The demand for strengthening and extending every form of research comes, primarily, from the universities and not from public opinion, because their staffs know what can and ought to be done and enlighten the community by doing so" (9).

The British universities have set the example. It is our duty and in our interest to follow it in as much and in so far as it is possible and convenient to us!

THE HOSPITALS OF THE ORDER OF ST. JOHN IN MALTA.

Some time ago (see "Scientia", XI. (1945), p. 98-99) we welcomed back from the United Kingdom Paul Cassar, B.Sc., M.D., D.P.M., and we promised to publish a lecture which he had delivered in July, 1944, to the Medical Staff of the Mill Hill Emergency Hospital in London. Our intention was to print that lecture in the first number of the current year; but we were prevented from doing so, because an important celebration had meanwhile taken place. On October 9, 1945, occurred the first centenary year of Cardinal Newman's conversion to the Catholic Faith and the outstanding event was very successfully commemorated in the Royal University of Malta. We, therefore, deemed it worthy of the occasion to offer to the University Students' Catholic Guild the first number of "Scientia" of the current year to record in full that successful commemoration; and as the offer has been accepted, we were compelled to leave the material of the first number to the next. We must apologize both to Dr. Cassar and to the readers of "Scientia" for this unavoidable delay, and though the lecture is now nearly two years old, we are sure, it has lost nothing of its importance.


THE HOSPITAL OF THE ORDER OF ST. JOHN IN MALTA.

by Paul Cassar B.Sc., M.D., D.P.M.

The Order Of St. John Of Jerusalem.

The order of St. John of Jerusalem is mainly known to history as the military and naval organisation that for centuries held the command of the Mediterranean. This is quite understandable, for during hundreds of years the order was the guardian of European civilisation in that sea and the bulwark of Christendom. But it must be borne in mind that militarism was not its original purpose.

The reason for this militarist development is due to the barbarous times in which the order was founded when some sort of armed protection was rendered necessary and inevitable if the order was to survive and fulfil the ideal of its founders — the care of the sick and wounded and the relief of the poor, whence the name of Hospitallers.

This sequence of development, first Hospitallers and then soldiers, is interesting because it distinguishes the Order of St. John from others set up more or less at the same time exclusively for military purposes, amongst which the best known being the Order of the Temple or Knights Templars who were soldiers first and then Hospitallers (1128 A.D.). It is of interest to note that this change in the institution of the Templars is entirely due to the influence of the Order of St. John, to whom incidentally their possessions were transferred when the Order of the Temple was abolished in 1312 by Pope Clement V.

The Order of St. John arose out of a body of religious men, who in the 11th century founded a hospital in Jerusalem some time before the first crusade (1088-1099) for the nursing of the sick and wounded and for affording shelter and help to the Christian Pilgrims who flocked to
the Holy Land. These monks were vowed to celibacy and poverty, and taking for their patron St. John the Baptist came to be known as Hospitallers of St. John. But as the military organisation of the Order steadily developed, a differentiation of rank and duties rapidly emerged and by 1120 three classes of Brothers were recognized:—

(1) Knights, who defended the Pilgrims and nursed the sick, and were required to be of noble birth. (2) Servant-at-arms, who helped the Knights and were not required to be of noble birth. (3) Chaplains, who administered to the spiritual needs of the Convent in the Chapels and Hospitals. As the Order was an international one, it was divided for purposes of administration into the various nationalities or "langues" that formed it. When the Knights came to Malta there were 8 of these divisions — Provence, Auvergne, France, Italy, Aragon, England, Germany and Castille. The English langue was suppressed in 1540 by Henry VIII, but it continued to have a separate existence, if in name only, until 1782 when it was united to the newly formed Bavarian langue. The combination was named the Anglo-Bavarian langue.

Each langue had its quarters known as "Auberge" presided over by the bailiff who was the head of the Langue. The bailiff held an important office in the hierarchy of the Order. The bailiff of the French Langue for instance, was the Grand Hospitaller, while that of England was called Turcopolier or Commander of Light Cavalry. Each langue had possessions and wealth in its native land, which were divided into grand priories and bailiwicks. The English langue for example, possessed a grand priory at Clerkenwell and the bailiwick, known as the bailiwick of the eagle, near Lincoln, which originally belonged to the Templars.

The heads of these priories and bailiwicks were called Knights Grand Cross and were entitled to seats in the Chapter General of the Order. This assembly was the supreme authority. It met usually every five years, whilst in the intervals the Government of the Order was in the hands of the Grand Master and the councils of which there were four:— (1) Ordinary, concerned with the day to day business of Government; (2) Secret, which was entrusted with foreign affairs. (3) Criminal, which dealt with offences against the statutes. (4) Complete, which considered appeals from the other councils.

The election of the grand master was a complicated affair. Each langue elected three knights to represent it, and this body of twenty-four chose a triumvirate, which in turn co-opted a fourth, and the fourth a fifth and so on until the number of sixteen was reached, and this body finally elected the Grand Master. This meticulous procedure was supposed to prevent intrigue and corruption, and to secure an honest choice. The powers of the Grand Master were wide — in council he had a double vote and in the case of an equal division, a casting vote; only he had the right to introduce subjects for discussion at the councils; he was commander-in-chief of the forces of the Order; and he claimed a personal share of the revenues from each Priory.

Through the generosity and piety of powerful nobles, the Knights acquired great privileges and immense wealth.

The Hospital of the Order in Malta.

Their first hospital was set up in Jerusalem in 1048. It was primitive in construction. Straw on the floor was used instead of beds, and food and shelter were easier to obtain than medical care. For over a century they carried on their humane mission until Jerusalem fell into the hands of the Moslems; and they had to repair to Acre in 1191. When Acre in turn was lost by the Christians the Knights left the Holy Land and went to Cyprus (1281) whence they passed on to Rhodes in 1310, which they lost to the Turks in 1522. They were then homeless, wandering from one Christian court to another. The Grand Master even had recourse to Henry VIII of England, but it was not until
1530 that, through the intervention of the Pope and after a short stay at Viterbo in Italy, Charles V. gave Malta to the Order. They held the Island up to 1798, when they surrendered it to Napoleon.

In spite of all these wanderings, they always considered it their first duty when settling in a new place to found a hospital. They did so at Acre, Rhodes and Viterbo; so also in any expedition against the Infidels their primary concern was the establishment of a temporary hospital for themselves and for all those who could be accommodated in it. Thus when in 1699 they went to the relief of Candia, which was being besieged by the Turks, they immediately set up a hospital which was soon over-flowing not only with the wounded but also with those suffering from the fever that broke out amongst the Christian defenders.

This loyalty to their sacred ideal gained them the admiration of both their friends and enemies. So much so that following the expulsion of the Christians from Jerusalem, the hospitaliers were allowed by the Moslems to continue unmolested their medical services for a year, or until the sick had recovered or died.

Strangely enough however, in spite of their devotion to their work, they have left us only fragmentary records about the construction and administration of their various hospitals prior to their advent to Malta. On their arrival here in 1530, the Knights found only one small hospital at the old city of Mdina (now known as the hospital of the Holy Ghost), which they adapted for temporary use. This hospital was later entirely rebuilt by Grand Master Manoel De Vilhena. As, however, the Convent had settled at Birgu (some miles away from Mdina), the inconvenience of having the hospital far from their seat of Government and residence, soon became apparent and they founded another hospital, like-wise of a temporary character at Birgu, a Convent being chosen for the purpose. Of this structure practically only the chapel remains as the building was pulled down and rebuilt in the 18th century. The chapel

now forms part of the nunnery of St. Scolastica and bears the arms of L'Isle Adam, the first Grand Master of Malta, marked with the date 1533.

The hospital was transferred to Valetta during the time of Grand Master La Cassiere (1572–1582), whilst the new city was still under construction. At first it was intended to build the hospital close to the Conventual Church of the Order (now St. John's Co-Cathedral), but the humane La Cassiere rightly thought that the ringing of bells might be disturbing to the patients and so he altered its site.

It now stands at the south-eastern side of Valetta rising within the city fortifications and overlooking the Grand Harbour. This position exposes it to the damp and hot scirocco winds which have a very depressing effect, while the nearby walls of the Fortress of St. Elmo shelter it from the more invigorating north winds. Although modern ideas of sanitation might disagree with such a situation, it must not be forgotten that at the time the hospital was built it was believed that winds coming from across the sea were harmful. For this reason too, the windows were kept shut most of the time.

The hospital was started in 1575. It was considerably remodelled in 1692, while still more important alterations and additions took place in 1712 during the time of G. M. Perellos. These comprised the pharmacy, quarters for resident medical officers, the Chapel for the reservation of the Holy Sacrament, and the erection of a new front towards Merchant Street. In 1780 some further rooms and passages were added.

The following is a brief sketch of its plan.

A quadrangle or court (90ft. by 88ft.) is surrounded by buildings on all sides. These buildings included the Pharmacy (famous for its Majolica jars which contained the herbs and drugs), the library and medical officers' quarters. A stone fountain decorated with pears — the arms of G. M. Perellos — marks the centre of the court. In one corner of the quadrangle is a flight of stairs leading up to the first
floor; another staircase descends to a corridor which crosses a second quadrangle which leads to the Great Ward. This quadrangle is larger than the first one (130ft. 6ins. by 84ft.), but is at a lower level (35ft. below it). Between these two courts there is another one of a triangular shape and surrounded by small rooms.

The hospital contained the following wards and halls:
1. A ward for Knights and ecclesiastics. Attached to it were two rooms for surgical cases (wounded).
2. A ward for the citizens and pilgrims.
3. A ward for fever cases, known as the Great Ward.
4. Another ward for dysentery and two rooms for patients suffering from stones.
5. A surgical ward (for the wounded) with two rooms attached.
6. Two wards for venereal diseases separated from the other wards.
7. Another ward for the treatment by hot baths.
8. Rooms for the insane.
9. A small hall for the dying.
10. A large hall for the sick in which two rooms were attached.

This was the lowermost ward. As the danger of escape was always present, windows in this hall were as few and as small as possible with a consequent deficient supply of air and light. But then light and air had not assumed the great importance in treatment which we now attach to them.

The great ward, reserved for fever cases, was the principal ward of the hospital. It measures 503ft. in length, 34ft. 10ins. in width and 30ft. 6ins. in height, and was one of the largest halls in Europe according to Bedford who wrote some notes on the hospital in 1881. Light and air entered it from the long row of windows and the wide balcony which overlooked the Grand Harbour. All down one side of the hall are little niches, one to every two beds, which are supposed to have been used as latrines.

In winter the walls of the Great Ward were covered with 131 large pieces of woolen tapestry to eliminate the feeling of chillness which permeated the hall. The tapestries were removed in summer and replaced by a set of 85 paintings by Mattia Preti depicting the history of the Order.

The hospital contained 370 iron beds provided with coloured canopies or curtains, and woven mattresses, and 165 beds without canopies. These were hung only during the winter and were substituted during summer by mosquito nets.

Now in the 16th century the provision of single beds, which today we take for granted, was a luxury for in most continental hospitals even up till the 18th century—the patients lay two or three in one bed. In the “Life and Work of the People of England”, published in 1931, there are engravings of the 15th and 16th centuries showing two patients in a single bed. To mention another instance, the Hotel Dieu of Paris in 1515 contained 303 beds each being six feet long and four feet wide. In each of these beds were usually placed eight, ten or twelve patients. As these could not feel comfortable in such crowded conditions, they sometimes had to relieve one another. For this purpose a bench was provided with each bed, and served as a seat for those who were waiting their turn to lie down. In times of stress the overcrowding reached a still more extreme degree and the patients had to be placed over the wooden roof of the bed, as happened in 1752 when over 4,000 sick were received into the hospital. These conditions prevailed until 1781 when Louis XVI forbade more than two sick being placed in each bed. He also ordered that the patients were to be separated by a division or compartment.

Such unhappy conditions were never seen in the Order’s hospital at Malta. Not only were single beds exclusively used, but separate wards were available for different diseases. Since the 17th century patients suffering
from slight fevers were kept apart from the victims of the
greater forms of fevers. Medical cases were separated from
surgical ones, while dysentery patients were isolated. Special
and separate rooms were provided for cases of vesical cal-
culus and syphilis respectively.

It is worthy of note that the classification of patients
according to types of diseases did not receive any serious
consideration in many of the hospitals of Europe until the
middle of the 16th century. With few exceptions, such as
Pisa and Florence, this distinction was not observed even
in the best hospitals of Italy, and the separation of medical
from surgical cases was hardly adhered to. On the contrary,
it was abolished in Tuscany by the laws of Leopold.

The Knights were also far in advance of their times
in their methods of dealing with mental cases. These
patients were cared for in special wards and under appro-
priate supervision, while on the Continent these unfortunate
beings were condemned to live more or less under prison
conditions. In England for instance, up till the 19th century,
mental patients were still being kept chained together in
damp and dismal cellars.

In 1593 G. M. Verdala erected a building (which has
since been demolished) opposite the hospital, called "La
Lingerie", which served as a store for the linen and other
articles required for the service of the hospital. Here like-
wise the bedding and clothing of the patients were washed.
Close by, was a small church and a graveyard for all those
who died in hospital. Until 1942 there stood in this burial
ground a semi-circular building originally belonging to the
hospital and in later years to the Royal University of Malta.
It was set apart for dissection and practical demonstra-
tions in anatomy.

Having considered the hospital grounds, we will now
pass on to say something of its administration. After the
G. M., the direction of the hospital was committed to the
Grand Hospitaller, which honour belonged exclusively to
the head of the French Langue. Some of their coats-of-arms
are still to be seen carved in stone in a ward on the first
floor of the hospital. The title of Grand Hospitaller to-
gether with that of Grand Marshall and of Grand Com-
mander was the highest dignity in the Order next to the
G. M. Only the Grand Hospitaller could enter the hospital
uninvited. The Grand Marshall who commanded the land
forces of the Order could enter it only after having de-
posited his staff of office at the door.

To the Grand Hospitaller belonged the rights of elect-
ing the overseer of the Infirmary, who was the actual head
and was also of the French Langue. This overseer
(Infemiere) resided in the building and had the duty of
visiting the wards morning and night to make sure that
doctors and attendants were at their posts, the food properly
served, the beds kept comfortable and neat, and the gates
closed at night.

The medical staff was made up as follows:—

1. Three resident physicians and three surgeons who
visited the patients twice daily and were required
to make note of the remedies prescribed on a
tablet that hung by the head of each bed. They
were each on duty every third month.

2. Four assistants (practicos) who helped the physi-
cians and surgeons and were on duty every other
month.

3. Six medical students (barberotti) and a barber-
surgeon or phlebotomist who was in charge of
bleeding by leeches and the application of
catatropisms.

4. Twenty regular nurses (and a special nurse for the
treatment of scurvy).

5. Knights and novices who waited on the sick.

On every day of the week each Langue had to be on
duty at the hospital, the Knights proceeding there in the
morning, the signal being a stroke from the big bell of St.
John's Cathedral. Every Friday then the G. M. himself used
to visit the hospital in procession to serve the sick with his
own hands. It has been said that the Knights cared for their patients as if they were their own masters.

The administration of the hospital was in the hands of two controllers (Prud-Hommes) appointed by the G. M. in Council. The other officials were a secretary to the controller, an officer in charge of the linen and furniture (Lingiere) and a steward in charge of the wine, oil etc. (Bottigliere), and a servant-at-arms who looked after the silverplate (Armoriere). Among the lesser employees there were two cooks, fourteen ward servants and one purveyor.

Admission to the hospital was open to citizens of every class as well as to foreigners of every nation and creed. Patients came from Italy and other countries bordering on the Mediterranean. The number of patients usually admitted into hospital varied from 350 to 530 a year. Medicine and medical assistance were provided free of charge.

In matters of food supply, the Infirmary claimed first place. Only after the wants of the hospital had been fulfilled could the corn, fruit and ice be used for the Knights' table and the consumption of the population. It reflects great credit on the Order that this rule was never disregarded, not even when the Knights and the people were on the verge of starvation. Thus during the famine that visited the Island in the time of G. M. Lascaris (1636–1657) the Knights went begging from door to door to collect the food needed for the Infirmary.

Dietetics received particular attention. The diet included milk, rice and vegetables; chicken for the very ill, and meat, eggs and potatoes for the convalescents. Food was served twice daily, at eight and four, and one of the Knights and the assistant physicians were detailed to supervise its distribution.

The food and medicine were served in silver vessels. These amounted to 250 bowls, 356 plates, 167 cups, 256 spoons etc. Forks were somewhat rare being only ten in number. At one time as much as 15,000 ounces of silver existed at the hospital. When Napoleon occupied Malta in 1798 he

seized many of these vessels and melted them down to pay his troops during the Egyptian Campaign.

Pewter (an alloy of tin and lead) was used for the slaves.

The beds were made every night and the coverings changed from time to time and in some cases daily. The bedding used by patients suspected or actually suffering from tuberculosis was burnt straight away. To appreciate the significance of this provision in the rules of the Hospital, it must be realized that these precautions were being taken long before the infectious character of this disease had been demonstrated.

It has been estimated that the upkeep of the male hospital was 80,000 scudi of gold (£5000 annually), and of the women's hospital 18,000 scudi. These amounts represented the third largest item in the Order's Budget after that of the Navy and Auberges.

The care of the souls was as important in the hospital organisation as that of the body, for the Order was first and foremost a religious institution. For this reason every opportunity of converting to the Catholic faith the Jews, Moslems and Protestants that found refuge under its roof, was seized upon. This spiritual mission assumed such great importance that, it is said, non-Catholics were not allowed to remain in the Great Ward for more than three days if they refused to receive religious instruction from the Chaplains. The religious functions were performed by a Prior, Vice-Prior (who was required to be a Maltese) and eight Chaplains (Priests of Obedience). The Greek Catholics could avail themselves of the services of their own priests. A short evening service was held daily in the Great Ward in which the patients were asked to pray for their benefactors and for the souls of the departed.

The dying were removed to the Chapel of the Viaticum adjacent to the Great Ward, and here besides the priest for absolution from past errors, was also the vice-prior to
century gave a limited number of lectures on the cadaver at Padua and Bologna. The same is true of Eustachius at Rome and Fallopius at Pisa. Even in the 18th century dissection was rather infrequent in the more progressive universities of the time. The situation in England and Scotland was just as unsatisfactory. Before the passing of the anatomy laws, in the 18th and early 19th centuries, corpses were obtained by robbing graves. More enterprising dealers resorted to murder and in 1829 William Burke was hanged in Scotland for having murdered together with William Hare some sixteen persons, the bodies of whom he had sold for dissection.

In Malta however anatomy received the attention due to it. A doctor was detailed by the hospital authorities to give daily readings in anatomy and then every Wednesday a meeting of the hospital staff used to be held to discuss cases of exceptional clinical interest. The importance of dissection had been recognised since the earliest times of the foundation of the hospital. During the time of G. M. Cottoner (1674) the study of anatomy was made obligatory for all the doctors, assistants, and medical students, who had to attend lectures every Thursday during the whole year. The chair of anatomy, which was later transferred to the University, was thus definitely established. But what is still more notable was the rule that all dead bodies of the Knights (and the number of those living in Malta was considerable) and those of the patients dying in hospital, were to be dissected by the professor of anatomy. In few other hospitals in Europe were such facilities provided for the study of anatomy, while many universities could not yet boast of a regular course in anatomy.

The study of ophthalmology too received particular care. Perhaps the most fitting compliment ever paid to the medical traditions of Malta was the trust of the first chair of ophthalmology in Europe to a Maltese surgeon trained in the hospital of the Order, under another famous Maltese surgeon Michael Angelus Grima.
He was Joseph Barth, born in Valetta in 1735, for whom the Empress Maria Theresa founded the chair of ophthalmology at the Allgemeine Krankenhaus (general hospital) of Vienna in 1765. He is the author of a work on cataract extraction and was the teacher of several famous ophthalmologists amongst whom Adam Schmidt and Beer.

But if Barth was the greatest glory of the Order’s Medical school he was also its last. A society of nobles, leading the easy life of the aristocracy of the 18th century, amidst the turmoil of the French Revolution, had become an anachronism. A band of men, half soldiers and half monks, professing to live for the defence of a religion no longer combated by the Moslems, was becoming purposeless. Besides, the Order was never a productive concern economically, and had always been a parasite living on the rents derived from property in foreign countries and on the spoils taken in the expeditions against the Moslems.

By the end of the 18th century the Moslems had become sufficiently respectable in the eyes of the Christian powers with whom commercial pacts were established. The Order was consequently prohibited by its former Allies from preying on Turkish commerce, and its coffers were becoming empty. Gradually this penury made itself felt on the Hospital, so that when in 1789 the English philanthropist Howard visited Malta he did not find that order and cleanliness for which the hospital had been renowned in the past. He pointed out that some of its regulations ignored fundamental laws of hygiene, while discrimination among various classes of patients was in evidence. For instance in his “Lazzaretos in Europe” he says that members of the Order received meals twice as large as other patients. At this time however the hospital was sharing the general decadence of the Order. Those were its last years in Malta for that institution was soon destined to collapse at the mere sight of Napoleon.

Still not everything died with its military glory. Least of all its medical heritage that has since been guarded so jealously by the little Island of Malta as to be fully deserving of being called: “The great Nurse of the Mediterranean”.

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