

# RELICS OF PHRENOLOGY IN MALTA

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## Introduction

Since the days of the classical Greek philosophers, it was speculated that the mind was made up of such mental or moral "faculties" or innate powers as sensation, imagination, reason and memory. In medieval times these 'faculties' were thought to be localised in the hollow ventricles of the brain. In 1792 Franz Joseph Gall (1758-1828) elaborated the concept of "faculties" in his work which he published with J.C. Spurzheim in 1810-1819 (Gall, 1810-19). He suggested that there was a larger number of "faculties" than those propounded by ancient philosophers and that the seats of these "faculties" were, not in the ven-

tricles, but in the cortex. In fact, according to him, each trait of character corresponded to an "organ" in the cerebral cortex. The size of these "organs" varied in accordance with the extent of development of the trait or "faculty" it subserved. He furthermore inferred that the hemispheres of the brain were duplicate bodies performing the same functions "like the two eyes" or the two nostrils.

His next assumption was that the skull was an exact cast of the underlying cortex and that, therefore, prominent "organs" in the cortex produced a corresponding prominence or bump on the outside of the cranium. As some of the "organs" were thought to be situated on that part of the undersurface of the brain

touching the orbital plate, he assumed that he could gauge their size from the conformation of the eyes and eyelids. The cerebellum was believed to be the seat of the sexual functions. Gall, therefore, claimed that by examining or delineating the conformation of the skull of an individual and noting its prominences, he could determine which "faculties" or character traits predominated in that individual. Gall's theory was given the name of "phrenology" by his pupil and collaborator Johann Caspar Spurzheim (1756-1832) (Young, 1970; Clarke & Dewhurst, 1972).

### Gall's Methods of Investigation

When Gall came across an animal or human being with a pronounced talent or personality trait, he examined the form of the head or the subject for a cranial prominence, collecting as many such correlations as he could find. When, on the other hand, he met an individual with a striking head prominence, he interviewed him to find out the trait or propensity that correlated with the cranial bump. To obtain these data he examined subjects in prisons, hospitals, schools and elsewhere. He also amassed a collection of hundreds of skulls and casts which are still extant in the *Musee de l'Homme* at Paris. Busts and portraits of famous murderers and prominent people were also examined. By these anecdotal methods he "discovered" twenty-seven fundamental "faculties" or character-traits each of which depended upon a separate "organ" located in the cortex and corresponding to a distinct region on the surface of the skull. Amongst the traits listed by Gall are friendship, caution, tendency to murder, sense of colour, and wisdom. His followers added other "faculties" and "organs."

Charts of the cranium were used for teaching purposes as well as human skulls with the regions outlined and labelled or numbered on them. Porcelain heads with similarly marked areas were offered for sale from 1821 to as late as 1916 (Young, 1970; Crellin, 1969; Clarke & Dewhurst, 1972; Ackerknecht, 1965).

### Criticism

Gall was opposed by the neurophysiologists Pierre Flourens (1794—1867), Johannes Muller (1801-1858) and others. His theory and cranioscopic method of investigation had fallen into disrepute in Europe by the 1840's; but critics were still endeavouring, in 1871, to stress that phrenology did not correspond with the facts while as late as 1894 adherents of phrenology were making strong efforts to vindicate it as a science. In fact Gall's ideas survived as recently as 1967 when the British Phrenological Society was liquidated (Clarke & Dewhurst, 1972).

Gall's failings were due to the faulty methods of investigation which he employed. Thus in postulating that there were "organs" in the cortex and that the skull was a cast of these "organs," he did not follow up his assumptions with a study of the brain to establish, anatomically and physiologically, the proof of his inductive postulates; he also neglected to make use of experimental ablations of the brain and of clinico-pathological correlations in his search for evidence of a localisation inferred only on psychological grounds (Young, 1970).

### Redeeming Features

In spite of his errors, Gall has played an important role in the history of neurology and must be credited with the following valid contributions:—

(a) He separated the study of psychology and of the mind-brain relationship from the domain of philosophy and transferred it to the realm of the biologist and the psychologist thus giving it a scientific basis;

(b) he recognised the fact that animals and human beings have much in common in brain structure and patterns of behaviour. To appreciate the significance of this observation it must be recalled that Gall was writing in the pre-Darwinian era before the concept of evolution had been enunciated and accepted;

(c) his idea of cortical localisation, after being dissociated from the excesses of his followers, eventually led to the dis-

covery by other workers, such as Paul Broca (1824-1880) and David Ferrier (1843-1928), of the motor and sensory areas of the cortex thus opening up the larger field of modern brain research initiated by G.T. Fritsch (1838-1927) and E. Hitzig (1838-1907) in 1870;

(d) he anticipated Broca's work by more than sixty years by noting that a localised injury to the left hemisphere of the brain interfered with the power of speech (BMJ, 1924).

(e) he demonstrated the decussation of the pyramids and noted the connexions of the optic tract to the quadrigeminal and geniculate bodies (BMJ, 1924);

(f) he recorded a large number of observations on the behaviour of animals thus being one of the earliest pioneers of the systematic study of animal psychology (Young, 1970).

#### Phrenology's Impact on Malta

Apart from Johann Caspar Spurzheim already mentioned, Gall had two other staunch followers — George Combe (1788-1858) in Scotland and F.J.V. Broussais (1772-1838) in France. The latter, besides being one of the founders of the *Société de Phrenologie* in 1832, was also a pioneer of modern pathological anatomy.

The Malta Public Library acquired two works by Gall, the *Anatomie et physiologie*, already alluded to, and *Sur les fonctions du cerveau et sur celles de ses parties* (Paris, 1825, six volumes); however, it was through the influence of Combe and Broussais that phrenology made an impact on the Maltese medical profession. The earliest mention of phrenology in Malta, which I have traced so far, occurs in *Lo spettatore imparziale* of the 23rd May 1838 directed by the Rev. Canon Fortunato Panzavecchia who was one of the promoters of the teaching of Maltese history in our schools. On page 27 in the column dealing with scientific and literary news he wrote (translated from Italian):— "Phrenology — a word never heard in our old schools — is making rapid progress on the continent. Not very long ago M.S. Combe (sic), one of those who have most distinguished themselves in these studies,

gave a series of talks on phrenology at the Literary Institute of Bath. They were so well received that M.S. Combe was presented with an address at a luncheon held in his honour at which toasts were drunk to the memory of Gall and Spurzheim, two great luminaries of a science that is somewhat inconvenient also to the dead." The reference to the "inconvenience" to the dead is an allusion to the fact that phrenologists claimed to be able to read one's character even after one's demise from a cast of one's head or the configuration of one's skull.

In the September issue of the medical journal *L'ape melitense* of 1838 Dr. G.C. Schinas, Professor of Medicine at our University, summarised an article by Broussais which had appeared in a French phrenological publication. In the October number he reproduced an extract from a paper by J. Florens, lawyer at the French Royal Court, advocating the application of phrenology to the study of criminals; and in the December issue he published a report of the findings of a phrenological examination of the skull of the distinguished French statesman Prince Charles Talleyrand-Perigord (1754-1838) (*L'ape melitense*, 1838). Schinas promised to publish summaries of the works of Combe and Broussais as he considered phrenology to be "one of the most important studies of the day." *L'ape's* life, however, lasted only four months and Schina's intention was not carried into effect.

In 1839 Dr. G. Clinquant and Dr. N. Ziongo began the publication of an Italian translation of a course of lectures on phrenology by Broussais which the French physician had organised in 1836 and which was attended by more than one thousand students (Ackerknecht, 1967). Dr. G. Clinquant (1812-1868) enjoyed the esteem of his contemporaries for his "extensive literary and scientific knowledge." He occupied the post of Superintendent of the Villa Franconi Lunatic Asylum in 1850-51 and later wrote a work on ophthalmoscopy which remained unpublished and which cannot now be traced (*Portafoglio*, 1868; Cassar, 1948). Less is known about Dr. Nicola Ziongo. He studied medicine and

surgery at Malta University and passed the qualifying examination on 3rd July 1838 (*Collegio medico*, 1836-38). He distinguished himself during the cholera epidemic of 1850 for his zeal in caring for the sick, having stayed "day and night" at a pharmacy in Valletta, to be at the beck and call of whoever needed his services (*L'avvenire*, 1850).

The efforts of Cliquant and Ziongo were not, however, sustained and they published only one pamphlet containing the first three lectures delivered by Broussais between the 11th and the 15th April 1836 (Clinquant & Ziongo, 1839). This work is dedicated by the translators to Professor G.C. Schinas as a token of the "eternal gratitude" of "two of his students". Schinas himself in June 1841 had expressed the intention of translating into Italian the *System of Phrenology* by George Combe published in Edinburgh in 1825 (*The Malta Times*, 1841) but he does not seem to have carried out his wish as no manuscript or publication by him on this theme has been met with. George Combe wrote other works on phrenology among which the *Elements of Phrenology* a copy of which is at the Malta Public Library (Seventh Edition, 1850).

Between 1841 and 1843 Dr. Nicola Zammit, Professor of Philosophy at the university, delivered a series of lectures on the philosophical aspects of phrenology to the *Società medica d'incoraggiamento*. In his opinion phrenology provided a sound basis for philosophy by postulating the existence of brain organs for the various "psychological faculties" (*Il filologo*, 1841; *Storia società medica*, 1845). In 1842 in conjunction with Dr. Thomas Chetcuti he stressed the relevance of the "enlightenment and help afforded by phrenology" to the teaching of psychology and moral philosophy (Chetcuti & Zammit, 1842) while on various occasions Dr. Chetcuti himself quoted Gall's and Spurzheim's work on brain pathology in his lectures on mental disorder (Chetcuti, 1841).

The editor of the *Malta Times*, Mr. James Richardson, claimed, in June 1841, a share in the priority of introducing

phrenology to the notice of the Maltese public. His aim was to induce the Maltese "to think on subjects relating to the mind" and he asserted that he was the first person who tried "to instruct them by the good method of public lectures" but although initially he was "lauded to the skies," the press eventually turned against him (*The Malta Times*, 1841). In fact he delivered a number of bi-weekly lectures on phrenology in March-April 1839 at the Manoel Theatre "by kind permission of the Government." Among the topics dealt with was the "anatomy of the brain," "the brain organ of mind" and the "different forms of heads of the human species." At the opening lecture he was honoured by the presence of His Excellency the British Governor of Malta, Major General Sir Henry F. Bouverie, and the Admiral of the Mediterranean Fleet, Lord Denbigh and his wife.

In announcing his course of lectures in the press, Mr. Richardson appealed to the public "for the loan of any busts, craniums and drawings of heads of such remarkable characters as will illustrate his lectures." Among the material loaned to him was "a bust of Cleopatra brought from an ancient temple in Egypt" which though it could not be guaranteed that it had "an origin so remote as the era of Julius Caesar," was "by the openness of its forehead highly illustrative of superior intellect."

Attendance at the first lecture was small but offered sufficient encouragement to proceed with the course. More seats were occupied in subsequent lectures but it seems that the audience regarded the lecturer and his theme more as a form of amusement than of instruction. A few attempts were made to cast ridicule on phrenology; thus during question time, a foreign member of the audience remarked "that though his organ of locality was very developed he could not distinguish *Strada Reale* (Kingsway) from *Strada Mercanti* (Merchants Street), yet he had been eight months in Malta." To this the lecturer retorted that a man might have a good organ but make a bad use of it as one who had good eyes and

made a very bad use of them (*The Harlequin*, 1839). It was alleged that Richardson was paid for his lectures from University funds and the government was criticised for spending money on such a venture "which could have been better used for the establishment of another (elementary) school in the countryside" (*Il portafoglio*, 1839 a).

Richardson was badly received by his audience at his last lecture on the 4th April when he was greeted with "whistles and the throwing of pennies on to the stage." Very probably this hostile reaction was not provoked by opposition to his phrenological theories but by the circumstance that, as editor of *The Harlequin*, he had become very unpopular on account of his support of Protestantism vis-a-vis Catholicism which was the official religion of Malta. Indeed the following day he was arraigned in the Criminal Court and condemned to six months imprisonment for his attacks against the Catholic Church (*Il portafoglio*, 1839 b). Richardson eventually left Malta and in 1845 travelled in various parts of Libya. The outcome of his journeys was the Central African Mission of 1850 set up with the object of opening up regular communications between the Mediterranean and the River Niger. He died during his explorations in North Africa in 1850 (Wright, 1969).

The *Malta Times* again brought phrenology to the attention of the Maltese lay public in June 1843 by reproducing an article from a British newspaper describing the behaviour of a boy while in the hypnotic state. When the boy's "organ of acquisitiveness" was touched by the hypnotist, the boy snatched up a number of objects in his vicinity and placed them in his pocket but when the operator's finger was placed on the "organ of conscientiousness" the boy restored the articles to their original place. On touching the "organ of veneration," the boy bent backwards and clasped his hands in an attitude of prayer. When the "music organ" was fingered he whistled a tune and when the "organ of destructiveness" was touched, he clenched his fist and aimed a blow at a bystander. "The uncom-

mon success" which attended these demonstrations had the effect of "confirming all who were present in the truth of both sciences, if doubts had previously lingered in the minds of any" (*The Malta Times* 1843). We have no means of knowing whether Maltese readers were as convincingly impressed by this report as the British public but there is no doubt that phrenology was still claiming attention in Malta by 1848, though it was being

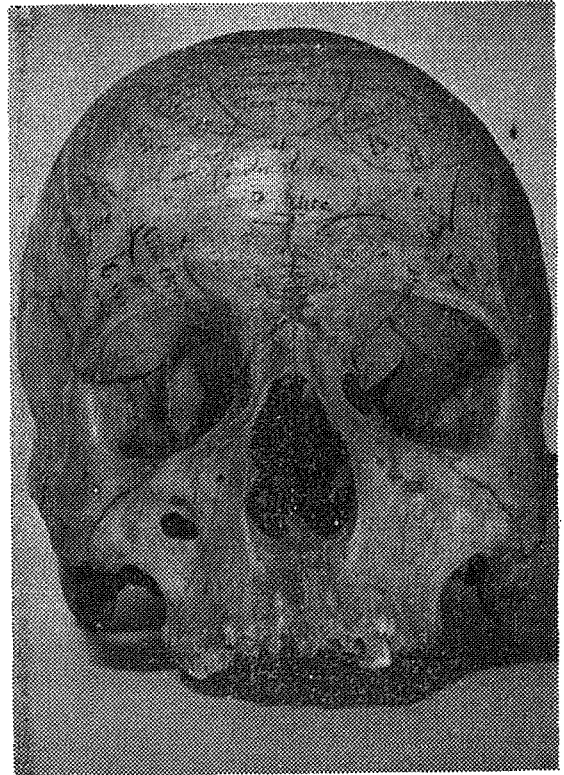


Fig. 1: Frontal aspect

- Middle areas from below upwards:—  
 Educabilité & Réalité (Educability & Reality).  
 Bienveillance & Compassion (Kindness & Compassion)  
 Religiosité (Religiosity)
- Lateral areas from below upwards:—  
 Localité (Sense of space and place)  
 Cronique (Sense of time)  
 Ordre (Sense of orderliness)  
 Bel esprit (Sense of satire)  
 Métaphysique (Metaphysics)

realised that it had not yet reached "that degree of perfection as to offer a sound foundation..... on which to base a classification of mental disorder" (*Storia soc. Med.* 1845). It had not yet lost its hold on Maltese medical men as late as 1862 when Dr. Gaetano La Ferla was appointed Corresponding Member of the *Società frenopatica italiana* (Ms 491) which had been founded on the 2nd June of the previous year by the Italian psychiatrist Dr. G.B. Miraglia (1814-85).

Phrenology wilted from the Maltese scene in subsequent years except for a very faint echo in the late twenties of the present century when the following advertisement appeared in the *Daily Malta Chronicle*, on the 3rd January 1927 (p. 12):—

#### PHRENOLOGY

What are your weaknesses?

Your accomplishments, talents, etc.?

Consult

Madame Bassie

(late of North Cliffs, Blackpool, England).

Readings Daily

Hours 10 a.m. to 1 p.m.; 3 p.m. to 8 p.m.  
or by appointment.

Private Parties attended

18 Strada Mezzodi, 2nd Flat, Valletta.

Apart from the literary evidence, two other relics of the phrenological period in Malta (1838-62) have survived. These are two human skulls with the locations of the various "organs" mapped out and labelled on their external surfaces. Not many genuine phrenological crania are known to exist in Europe. A few, previously in the possession of the disbanded British Phrenological Society, are now in the Sub Department of the History of Medicine of University College, London and a specimen is preserved in the *Istituto di Anatomia Umana Normale dell'Università di Roma* (Ackerknecht, 1975; Bynum, 1975; Clarke, 1975; Calcagni, 1974).

The Malta skulls are held by the Department of Dentistry St. Luke's Hospital, Medical School and by the St. John Ambulance Association, St. James

Cavalier, respectively. There are slight variations in the arrangement of the boundaries of the several areas on the two skulls though the general pattern is basically the same. In the St. John Ambulance Association cranium the dividing lines are more neatly drawn while parts of the frontal and squamous sections of the temporal bones are

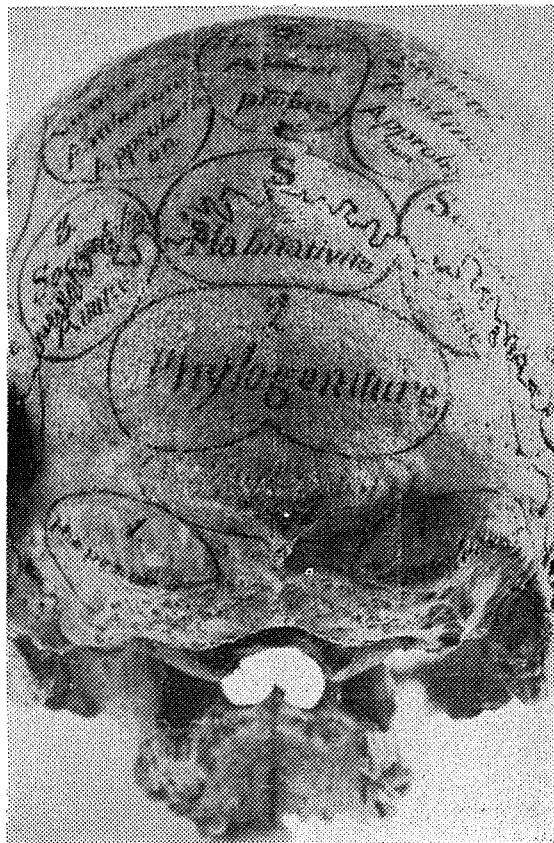


Fig. 2: Occipital aspect

**Middle areas from below upwards:—**

**Phylogeniture (Love of offspring)**

**Habitativité (Sense of habitation)**

**Hauteur & amour propre (Self-pride & haughtiness)**

**Lateral areas from below upwards:—**

**Reproduction (Instinct of reproduction)**

**Sociabilité & Amitié (Sociability &**

**Friendship)**

**Vanité, Ambition & Approbation (Vanity, ambition & love of glory)**

coloured blue (Figures 5 & 8); and the occipital bone is tinted reddish brown (Figure 9). Other notable features of this skull is a marked bulge on the left side of the occipital region (Figures 7 & 8) and the word *langage* (language) written on the roofs of the orbits which are coloured white (Figure 6).

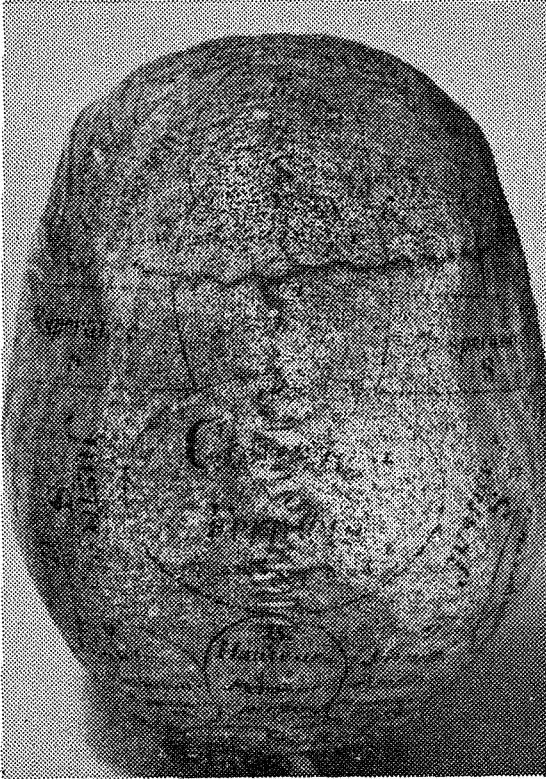


Fig. 3: Vault

Middle areas from below upwards:—

- Hauteur & amour propre (Self-pride & haughtiness)
- Constance & Fermietè (Constancy & firmness of purpose)
- Religiositè (Religiosity)
- Compassion & Bienveillance (Compassion & kindness)

Lateral areas from below upwards:—

- Vanitè, Ambition & Approbation (Vanity, ambition & love of glory)
- Justice (Sense of justice)
- Esperance (Hope)
- Musique (Sense of music)

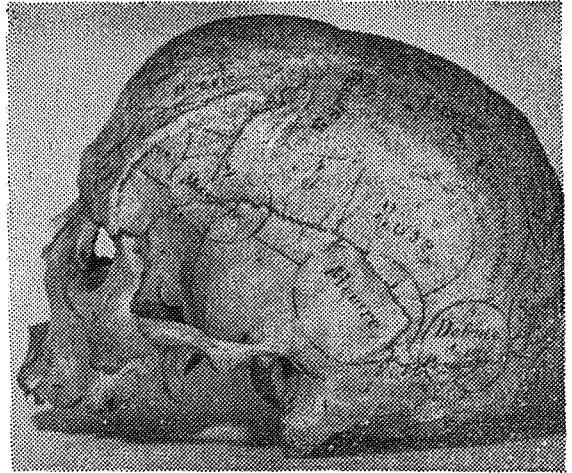


Fig. 4: Lateral aspect

Left to right from below:

- Musique (Sense of music)
- Mecanique (Sense of mechanics)
- Meutre (Tendency to murder)
- Defence de soi, Pugnacitè (Self-defence, pugnacity)
- Acquisivitè (Sense of ownership)
- Ruse (Cunning)
- Circonspection (Caution)
- Poesie (Poetical talent)
- Esperance (Hope)
- Justice (Sense of justice)

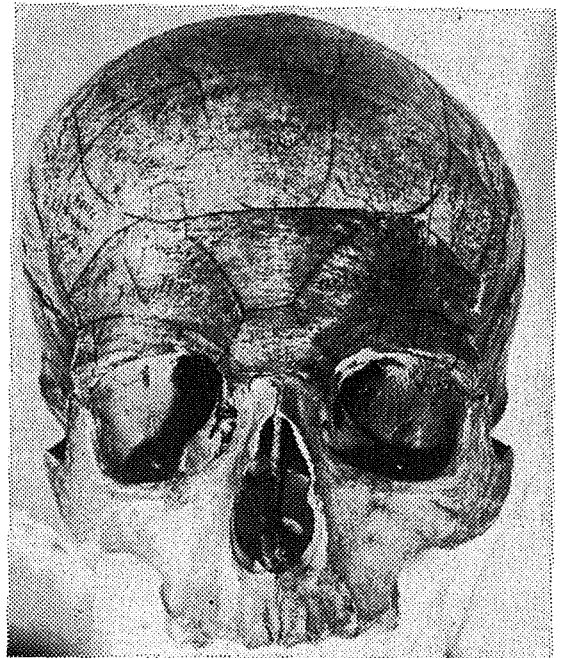
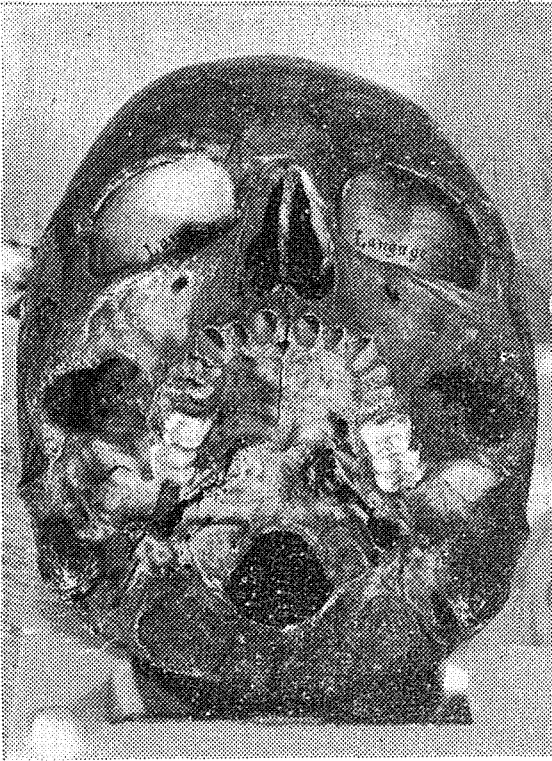
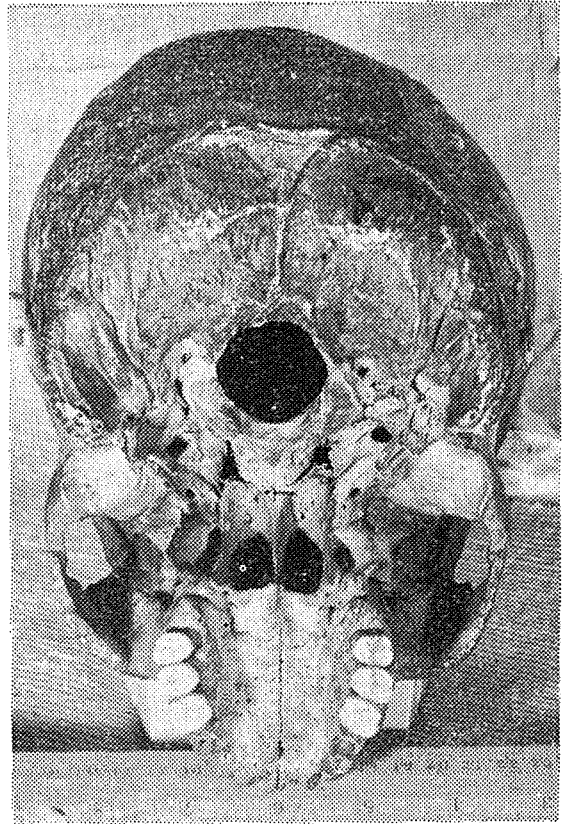


Fig. 5: Skull held by St. John's Ambulance Brigade.

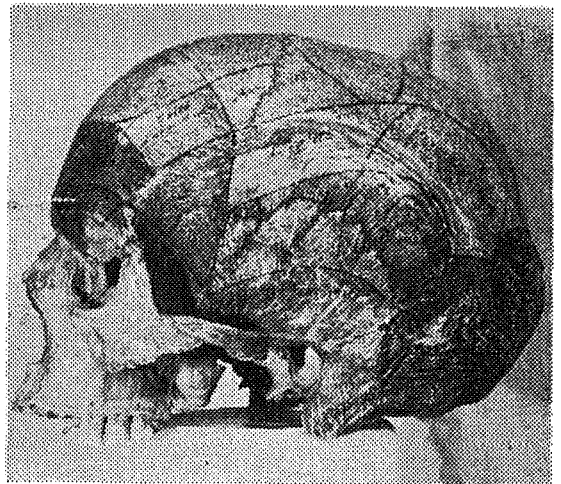


**Fig. 6: Skull held by St. John's Ambulance Brigade.**



**Fig. 7: Skull held by St. John's Ambulance Brigade.**

These skulls bear no indication as to previous ownership and no markings referring to inventories or catalogues, so that their provenance cannot be traced. They would have been prepared by individual phrenologists (Hedderly, 1975) and used for didactic purposes and/or as models for character readings. Whatever their origin and scope they offer proof that members of the Maltese medical profession were occupying themselves with neuropathology at the very time of its birth and that, like their European and American contemporaries, they were groping to establish a correlation of psychological phenomena with anatomical features and pathological changes in brain structure — an orientation from which eventually developed the present specialty of neurology.



**Fig. 8: Skull held by St. John's Ambulance Brigade.**





Fig. 9: Skull held by St. John's Ambulance Brigade.

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