MEDICINA NEI SECOLI

ARTE E SCIENZA

GIORNALE DI STORIA DELLA MEDICINA

JOURNAL OF HISTORY OF MEDICINE

Fondato da / *Founded* by Luigi Stroppiana

QUADRIMESTRALE/ *EVERY FOUR MONTHS*

NUOVA SERIE / *NEW SERIES* Vol. 21 - No 1 ANNO / YEAR 2009

MEDICINA NEI SECOLI ARTE E SCIENZA, 21/1 (2009) 75-90

Journal of History of Medicine

Articoli/*Articles*

BASQUE MUSEUM OF THE HISTORY OF MEDICINE: CONSERVATION OF HERITAGE, TEACHING AND RESEARCH

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SUMMARY

The Basque Museum of the History of Medicine was founded in 1982 to preserve the historic memory of medicine in the Basque Country and conserve its scientific heritage. Its permanent exposition comprises approx. 6,000 medical objects of the 19th and 20th centuries arranged, thematically in 24 rooms devoted to different medical specialities: folk medicine, unconventional medicine, pharmacy, weights and measures, asepsis and antisepsis, microscopes, laboratory material, X-rays, obstetrics and gynaecology, surgery, anesthesia, endoscope, odontology, cardiology, ophthalmology, electrotherapy, pathological anatomy and natural sciences. Temporary exhibitions are also held. The Museum is located on the university campus (UPV/EHU) and is important in the training of students in the Faculty of Medicine and the students coming from other faculties. Teaching and research constitute two of the pillars of the Museum that are complemented with publications and the organization of conferences, lectures and other activities.

The Basque Country did not have a University of its own until very recent times. In the Middle Ages, young men who wanted to study a university career went either to Salamanca or Montpellier. Over the last centuries their universities of choice have been Salamanca, Valladolid, Alcala de Henares, Madrid, Zaragoza, Paris, Bordeaux or Toulouse.

Key words: Medical Museums – History of Medicine – 19th and 20th Centuries - Basque Country.

It was not until the 19th century that the Jesuits founded the first university in Bilbao, the "Universidad de Deusto". In 1952 the Opus Dei created the "Universidad de Navarra" in Pamplona and in 1968 the Spanish State created the first public university, the "Universidad Autonoma de Bilbao". On the death of General Franco and the restoration of democracy, this public University became officially known in the Basque and Spanish language as "Euskal Herriko Unibertsitatea / Universidad del País Vasco" (University of the Basque Country) (1980). There subsequently arose two other public universities: "Universidad Pública de Navarra / Nafarroako Unibertsitate Publikoa" and the "Université de Pau et des Pays de l'Adour", as well as "Mondragon Unibertsitatea", offering courses and diplomas of a technical nature and having connections with the Industrial Mondragon Group.

In this university context and when the University of the Basque Country was launched, there was the need for creating a museum that gathered and preserved the medical and scientific heritage of the country. The first step was the creation of the "Seminario de Historia de la Medicina Vasca / Euskal Medikuntzaren Historia Mintegia" (History Seminar of Basque Medicine) in 1979, a centre that was under the management of Jose Luis Goti, professor of the History of Medicine, in collaboration with Luis S. Granjel, professor of the History of Medicine of the University of Salamanca, Ignacio Mª Barriola and other doctors and university students. Their research on the medical and scientific past as well as their public activities (conferences, monographic courses for the doctorate, courses in medical history methodology, etc.), were held in the lecture halls ceded by the Medical School.

The seminar began to receive donations of medical objects and libraries from private collections and institutions that made it necessary to enlarge the available space in the Faculty of Medicine. Consequently, the first rooms of the Museum were open in 1982.

Fig. 1 - Building of the Central Library on the Campus of Leioa (UPV/EHU). On this floor most of the Rooms of the Museum are located.

Three years later the University yelded some 20 rooms in the building of the Central Library on the University Campus of Leioa, the Museum enlarging to 24 rooms at present.

In 1994 the Museum became a foundation with the name of "Medikuntza eta Zientzia Historiaren Museoaren Fundazioa / Fundación Museo Vasco de Histoira de la Medicina y de la Ciencia" (Basque Museum Foundation of the History of Medicine and Science)". In 1996, a guide of the Museum was published[1]. The Foundation is presided over by the President of the University, the Deputy of Culture of Biscay, university authorities and the presidents of the Academy of Medical Science of Bilbao, Eusko Ikaskuntza (Society of Basque Studies) and Real Sociedad Bascongada de Amigos del País (Bascongada Royal Society of Friends of the Country). The Governing Council appointed as its first director and founder, Professor Jose Luis Goti, and, at his demise in 1998,

Fig. 2 - The Seminar during an Academic Ceremony

Professor Anton Erkoreka became the current director of the institution.

Permanent Exposition

The Museum has an area of 1,500 m□comprising 24 rooms, in which around 6,000 medical objects that make up the collection are displayed. The oldest collection goes back to the 18th century, though the bulk of the permanent collection are pieces from the second half of the 19th century and especially from the 20th century. It concerns, therefore, a specialized museum of our Contemporary Period, though in English speaking countries it is considered as the Modern Age.
The Museum Collection is ordered thematically in such a way that each room contains objects linked to a medical subject or speciality. The first room is for Seminars; it contains a library specialized in the

Fig. 3 - Barandiaran Room, devoted to Folk Medicine and Unconventional Medicines.

History of Medicine. Here lectures, conferences and seminars are delivered; and academic events are organized, as there is a seating capacity for 50 persons. This room is the most frequented of the Museum and also contains some significant medical objects, basically microscopes and surgical instruments of the 19th century.

The Barandiaran Room is dedicated to the illustrious anthropologist and prehistorian, who was behind the creation of the Museum and collaborated in a selfless way delivering conferences and designing his own logotype. It is dedicated to folk medicine and parcelled out in three sections devoted to domestic medicine, religious medicine, and superstitious medicine (witchcraft and evil eye). Unconventional medicine has a section of its own displaying objects related to phrenology, acupuncture, cupping glass and thermal medicine.

A visit to the rooms located in the Central Library of the University Campus begins with the Pharmacy. This section contains a good collection of pharmacy pots ("botamenes") and around 1000 flasks with natural, chemical and "oficinal" products, that were used in the old pharmacy of Basurto Hospital and in other private pharmacies in the first half of the 20th century. Moreover, from the work tables and lab benches for producing the medicines, the exhibits are complemented with mortars, stills, coils ("serpentines"), and a compressor machine for the manufacture of pills devised by J. Bonals (Barcelona, 1960-70). The visit is complemented with a room of weights and measures (with 20 precision scales), balances of torsion, and the classical "romanas".

A cursory visit for the "*Fabrica*" of Vesalius and Harvey's *De motu cordis* takes us to the microbial theory of Pasteur explained in the

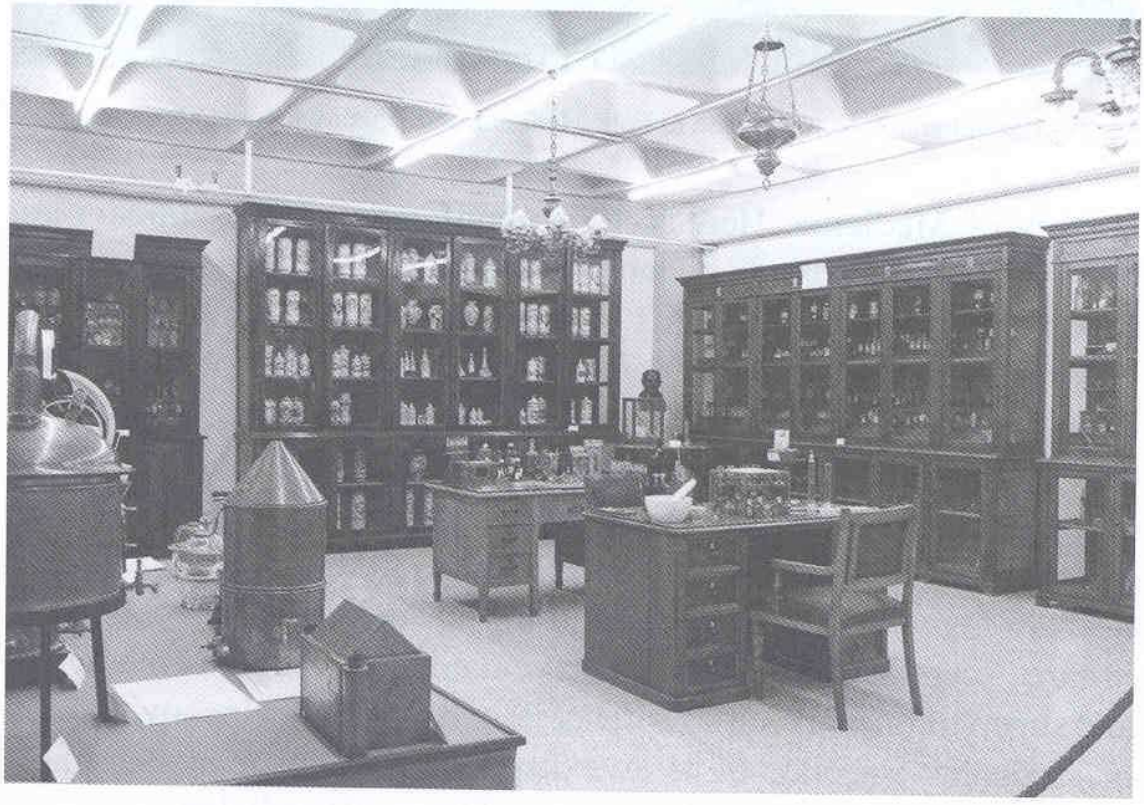

Fig. 4 - Pharmacy Room

Asepsis and Antisepsis Room, a place replete with apparatus for sterilizing or incinerating materials (such as autoclaves, stores, ovens, water baths etc.). The Microscopy Room gathers together around 50 microscopes that make up the Museum collection, as well as spectroscopes and trichinoscopes. Most of them from the 19th and 20th centuries, and from French or German fabrication. The latest acquisitions are electronic microscopes of the second or third generation that occupy a large area in the exhibition room.

The Clinical Laboratory Room, normally closed to the public, includes instruments for clinical analysis (such as calorimeters, hemometers, urometers, polarimeters, centrifuges, microtomes, etc.). The Radiology and Radiotherapy Room is the focal point of this part of the Museum with Roentgen tubes, X-Ray portable apparatus, radiodiagnostic apparatus, radiotherapy, and dental radiology from the first half of the 20th century. Most recently, we have added

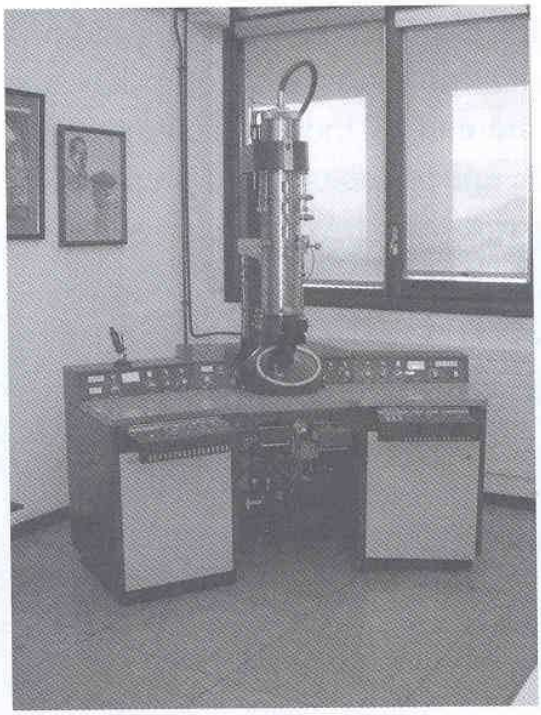

Fig. 5 - Electronic Microscope, Philips make (made in Holland, circa 1970)

to the collection several echographs of diverse models and fabrication. The room is completed with stretchers, armchairs, wooden chairs for surgical operations, and other objects.

The Obstetrics and Gynaecology Room conserves the objects that comprise the temporary exhibition held in 1999 concerning this topic. Here, we have maintained the order and distribution shown in the catalogue. The Surgery Room stores the surgical equipment donated to the Museum by half a dozen surgeons and orthopedic surgeons who were in practice in the second of the 20th century. Between both rooms, we have recently habilitated another room for anaesthesia and resuscitation material.

The Endoscopy Room displays specula, ophthalmoscopes, otoscopes, broncoscopes, rectoscopes or gastroscopes (rigid, semi-rigid and flexibles). A good number of them date from the beginning of the 20th century. The Dentistry Offices that are conserved in the adjacent room (containing chairs, tables, a mechanical winch, probe and extraction material, instruments and prosthesis), are of the same period. The Ophthalmologic Room has a splendid collection of scalpels from the end of the 19th century: slit lamps, refractometers, campimeters, spherometers, and preparations. The Cardiology

Fig. 6 - Delivery Chair (18th century)

Room displays a clinic of this speciality from the beginning of the 20th century with interesting objects, such as the electrocardiograph designed by the engineer G. Boulitte (Paris, *circa* 1918).
A neurologist of Cajal's School gave the name to the Achucarro Room that conserves his notebooks, jottings and personal objects. In this Pathological Anatomy Room macroscopic and microscopic preparations are conserved. The 400 flasks with pathological organs (cancer, tuberculosis, syphilis, etc) and some foetuses are also worthy of mention. The Natural Science Room exhibits fossilized bones of dinosaurs that were extracted from a site in Laño (Alava), as well as other fossils and minerals. This room is dedicated to Aranzadi, an anthropologist of the first half of the 20th century, of whose important documentation is conserved. The Elhuyar Room stores the objects that make up the temporary exhibition concerning electrotherapy, as well as material coming from the Engineering School of Bilbao (Escuela Técnica Superior de Ingeniería de Bilbao). Room Cid is the last room to have been recently habilitated as a Research Room. In the near future this room will house an important medical history library. We close this rapid review of the collections of the Museum with a mural painted by Dr. Lázaro that summarises the History of the Basque Medicine; it includes images of the St. James pilgrimage route, hospitals, institutions, and important doctors of this Country.
Due to our precarious financial situation and because we are interested in the preservation of our collections, we are returning to the "double order" of the Museum that Goethe advocated in his article *Kunst und Altertum* (1821), and that Ruskin, Eastlake, Agassiz or Bode defended at the beginning of the 20th century. In this sense, the Barriola Room, one of our display areas, is normally closed to the public. In this room some valuable objects are conserved, such as an operating theatre of the first decades of the 20th century, an extracorporeal circulation unit, an oxygenator bomb of Reanink trademark (Bilbao, 1960), in line with the apparatus developed by Dodrill,

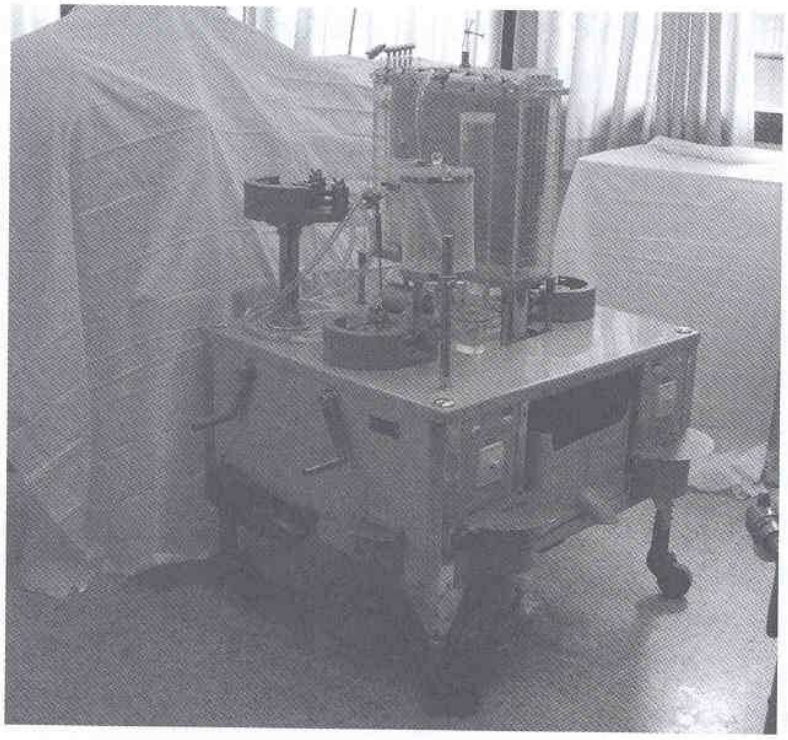

Fig. 7 - Extracorporeal Circulation Unit for open heart surgery operations (1960).

Gibbon and others, an iron lung (*circa* 1960), an electromagnet for extracting metal splinters from the cornea, and other objects of considerable size.

Temporary Exhibitions

The opening of the Guggenheim Museum in Bilbao meant a revolution in the world of museums, introducing new ways of presenting collections and attracting the public. One of the innovations was the continuity of the organization of Temporary Exhibitions, so that the museums could always offer something new apart from the Permanent Exposition. As for ourselves, there is no priority to attract great numbers of visitors as we would be unable to cope through lack of staff and means. However, the holding of Temporary Exhibitions enables us to revalue and give them coherence. With the Museums

new policy set forth from 1998 onwards, we decided to make good use of our collections, gathering together the scattered objects and organizing Temporary Exhibitions that could be later transformed in a Permanent Exhibition, and creating —whenever possible — new rooms. For the most part, it has been our intention to publish a catalogue in Basque, Spanish and English that would conserve the research and work carried out by, and in, the Museum.

In the initial stages of the life of the Museum, four monographic exhibitions devoted to "Antique Microscopes", "Basque Medical Historic Iconography", "Bizkaia 1789-1814", and "The Museum looking ahead" were undertaken. Over the past years, we have organized five temporary exhibitions with the following titles: "Obstetrics and Gynaecology Through History"[2], "Medical Hydrology in Navarre. An Iconographic Exhibition", "Electrotherapy"[3], "Laboratory, the Back Room of Science"[4] and "*Stultifera Navis. The Ship of Fools*"[5]. We have also organized two virtual Exhibitions and collaborated with 16 other temporary exhibitions organized by other Museums or Institutions.

Library and Archive

The Library comprises 9,000 documents (monographs and periodic publications) allocated in three collections: History of Medicine and Science; medical specialities; topics of a general and local nature. The collections concerning medical subjects that make up the bulk of the library are at the moment in the process of being catalogued. Most of the works are of the 19th and 20th centuries including nearly all the medical monographs published in Spanish during this period. There is also a good number of books published in French, German and English as well as series, collections and interesting encyclopaedias — for example, the 38 volumes of the *Diccionario de Ciencias Médicas por una sociedad de los más célebres profesores de Europa* (1821-1827); the 100 volumes of the *Dictionnaire encyclopédique*

Fig. 8 - Participants in the Journées transpyrénéennes d'histoire de la médecine organized by the Société Française d'Histoire de la Médecine (May 2007) in front of the mural located at the Entrance to the Museum

des sciences médicales of Dechambre (1864-1889), or 13 volumes of the *Diccionario Enciclopédico de Medicina y Cirugía Prácticas* of Eulenburg (1885-1890). The Archive has been created very recently and is mainly supported by donations from doctors and professors.

Teaching and Research

The Museum is located on the University Campus far away from the city of Bilbao, which is a limiting factor regarding visitors. But what is an obstacle concerning its viability and projection outside, is an advantage concerning the academic life of the university in general. Teaching and Research are two of the main characteristics of our Museum.

As Director of the Museum and professor of the History of Medicine, a part of the teaching and all the practicals of my students are carried out in the museum. This fact entails a constant coming and going of students during the academic year. Several professors from the Medical Faculty, and some from the Nursing School, Anthropology, Management of Historic Heritage and Health Documentation and more sporadically from Fine Arts, Science Faculty and School of Journalism, send their

students to in Museum for practices or to consult information in our library. The subjects which are partially or completely delivered in the Museum are: "History, Theory and Method in Medicine" (60 hours), "The History of Basque Medicine" (40 hours), "Medical Museology" (50 hours), "Medical Terminology and Documentation" (50 hours) and "Bioethics throughout History" (50 hours). The courses most apt to be taught in the Museum are those of "free election" and the "optionals" as they are delivered to small groups of students comprising 6 to 25 students, suitable for seminars in which there is a direct participation of the students, and in which their practical applications have a priority. As for the main courses, there is considerable overcrowding in the lecture rooms (50-100 students) making direct partecipation very difficult.
The guided visits for groups is another important activity of the Museum, as well as 60 to 100 consultations from researchers carried out each year mainly from our bibliographic collections. In the quarter of a century

Fig. 9 - Students of the "History of Basque Medicine" (2006-2007 academic course)

of its existence, the Museum has delivered more than 200 conferences and various doctoral courses. In the Museum's library some 40 doctoral theses and minor theses have been deposited by researchers connected with the Museum. They deal with diverse subject: health institutions, doctors, epidemics, local history, folk medicine, sources, literature, etc...

Publications

The Museum has published around one hundred books throughout its history. Apart from Guides and Reports in accord with this class of institution, the titles published reflect the work of the researchers associated with this institution and make up an indispensable contribution regarding the knowledge of the History of Medicine in the Basque Country. Four volumes gathering existing bibliographic material brought up to date were initially published[6]. Other issues have been: medical printing, hydrologic literature, medical journalism, naval medicine, medical biographies culminating in a Biographical Dictionary[7], hospitals, thermal medicine, folk medicine, the records of Congress devoted to medicine in the 18th century[8], epidemics of the 18th[9] and 20th[10] centuries or classical texts of great interest, such as the first monographs published in the 16th century treating of exanthemic typhus[11]. From the period 1981-1993 we have also published eight issues of the journal entitled *Cuadernos de Historia de la Medicina Vasca* (Notebooks of the History of Basque Medicine).

The last publication of our Museum deserves a special mention, for it is a unique and exceptional piece of work concerning Medical Museology[12]. It deals with the two volumes that bring together the works of Professor Felip Cid, museologist and founder of the *Museu d'Història de la Medicina de Catalunya* and vicepresident — for several years — of the *Association Européenne des Musées d'Histoire des Sciences Médicales / European Association of Museums of History of Medical Sciences*. As he says in the prologue, it takes into account the apprenticeship "undertaken in a task submerged in

a world of heterogeneous objects, fascinating and diverse in nature. To attempt to cover its totality is a vain pretension however much one sides to the contrary". Volume 1 reviews the history of medical museology while volume 2 is restricted to and makes a theoretical study of the "medical object" to then turn to the exhibition of collections and their intrinsic character.

I conclude by insisting that our concept of the Museum of History of Medicine is indissolubly linked with university teaching and research. In our country, a Museum of the History of Medicine would not be feasible without its association with the university and teaching vocation. In general our medical history museums are extremely specialized and steeped in culture, have a rich treasure of heritage but cannot and should not compete with the national galleries and museums of Europe. These museums of painting and sculpture attract crowds of visitors which, combined with the media, go a long way to supporting these institutions.

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