the Philosophical Society had a "cabinet," but to base any claim for priority on this verbal distinction-without-a-difference would completely lack historical or scientific justification. For the men of that time "museum" and "cabinet" were synonyms as used in this connection and the collections in Charleston and in Philadelphia had the same status: both were devoted to the public good but both were society collections. Reverting to definitions, if a society collection arranged and displayed for members and authorized visitors is a museum, both of these were museums and that in Philadelphia was certainly older. If an exhibition must be more public to be called a museum, then neither of these was a museum despite the fact that the collection in Charleston was called such in a sense different from this.

An exhibition in Charleston, no longer sponsored by the Library Society but by the Literary and Philosophical Society of South Carolina, was opened to the public, on payment of a fee, in 1824, in conscious imitation of Peale's Philadelphia Museum, then 39 years old.

The descent of the present Charleston Museum from the museum of the Library Society of Charles-Town is based on the transfer of specimens from one institution to another, without continuity of organization, personnel, name or establishment. The Literary and Philosophical Society of South Carolina started a museum in 1814, and the collections of the Library Society were presented to this in 1815. It was this second of the museums in Charleston that was opened to the public in 1824 under the name, The Museum of South Carolina. The attempt to raise money for a building was unsuccessful, and in 1827 the collections were deposited in the Medical College of the State of South Carolina. In 1850 still another museum was established, this time by the College of Charleston. Along with various other collections, this museum acquired by gift the Literary and Philosophical Society Collection, which still included some specimens that had belonged to the older Library Society. In 1907 the museum of the College of Charleston acquired its own building and in 1915 it was incorporated as the Charleston Museum. (Dates and data from Rea, corroborated by others. See first footnote.)

Thus the present Charleston Museum has existed as an entity since 1850 and has had its present name and organization since 1915. It possesses specimens that were added (in 1798 and later) to a collection begun, or proposed, in 1773. If this possession be considered as involving some sort of continuity for the institution, then priority by similar but more direct continuity must be granted to the Philadelphia Academy (which is a museum and not an academy in the more common sense) as depository for a collection begun in 1770 or earlier.

Many other early American collections and museums are worthy of remembrance and discussion. Some were first in one respect and some in another. Which, if any, can be truly called *the* first or *the* oldest is left to the discretion of the reader and of historians.

COOPERATION WITH THE FILM INDUSTRIES IN THE STUDY OF PRIMITIVE MUSIC

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ACOUSTICAL engineering, playing into the hands of the theater, has made great progress within the last few years revolutionizing the means of communication, enriching the resources of the art of public entertainment and changing the economies, interests and tastes of the public. The acoustical engineer has dealt primarily with the physical instrument and its environment; the theater has dealt primarily with the problem of merchandizing amusement. But each has an equally large field of approach quite untouched. The acoustical engineer must reach out into the psychological and phonetical analysis of human hearing and feeling as they function in music and speech, and the theater must take cognizance of the educational value and the factual basis of its informational films.

The informational value of amusement through tone films has increased the educational power of the theater to an extraordinary degree. But in so doing the producers have failed to recognize the sanctions and canons which are demanded by a scientific approach to music, speech and pictures. They have engaged entertainment experts to select and organize for pictures in the field. In so far as the interests of music are concerned, the time has now come to consider the factual side of the picture at the source by having scientific experts associated with the entertainment experts. Let me outline briefly a proposal which I made to the motion picture academy in Hollywood at the time the film Trader Horn appeared, asking for recognition of faithfulness in fact and educational utility of informational films.

To illustrate my point of view in a concrete case,

let us consider the planning of a specific project for penetration into a primitive community. Let us say that one of the standard producers is undertaking to make a film to represent the primitive culture of a relatively pure strain of savage people in one of the South Sea islands.[1] In the interest of securing correct and effective representation of the resources, characteristics and uses of music and allied dance and speech in this primitive group, the producers should send a competent musical anthropologist to the locality a year or two in advance of the actual photographing. Among the qualifications and functions of such an expert for the study of primitive music would be the following:

(1) He must go well prepared in the psychology of music, the history and theory of music and the anthropological and ethnological literature bearing on primitive music and allied arts, such as the dance, drama, speech and magic, in order that he may have in command a well-organized matrix of facts and theories into which he is to set new facts and classify his observations.

(2) He will cultivate the acquaintance and good-will of the primitives in such a way as to be admitted to the dwellings, the ceremonials and all outstanding types of activity in which there may be some semblance of a function in music. In so doing, he should be able to select unobtrusively the outstanding performers for the demonstration of scientific aspects of this project and at the same time prepare for the cameraman by identifying interested groups which might function willingly and faithfully upon his appearance. Primitive communities are conservative, but they are interested in all forms of magic. It should be the function of the scientist to utilize this interest in cultivating responses which shall reveal the true life of the people. For this purpose such devices as the phonograph, the camera and moving pictures may be employed to create a receptive atmosphere for the incoming film organizers. While the scientist is initiated into the life of the tribe or community by his two years of residence, he will lead a sort of heroic life by introducing into their play life a pattern which is in harmony with their culture level and will lead to self-forgetfulness and revealing self-expression in all performances.

(3) Through such patronage of the industry for an adequate period of intensive study of the musical life of the community, the scientist should be able to discover and isolate characteristic features of a purely scientific interest and rehearse these in significant forms through his play life with the people so that at the time of the arrival of the photographers he will have a purely scientific program set up in the form of a series of short specific acts which may later be taken purely for a scientific purpose and will constitute a well-designed scientific collection which is made during his residence. Producers have assured me that they would be delighted to take these pictures without cost to the scientific interests in recognition of the service rendered and donate them to appropriate collections unretouched and freely available for scientific study by home experts. In his critical and constructive study, the scientist should exercise insight into the various types of affiliates with music; such as dance, speech and mimicry, and try to reveal the ethical and esthetical significance of the entire setting at the culture level of this particular group. The sound films will, of course, be accompanied by moving pictures revealing the actual behavior and environment in which the performance took place.

(4) In the meantime because of his personal fitness and training, the collector will have paved the way for the organization of amusement features which will give effective cues and provide trained actors for the exhibition films. This in itself would be an adequate service for which the producers would be glad to cover the expenses of the scientist. Naturally he would serve as a consultant in the organization of the amusement features in such a way as to give them a sound educational tone and validity. This well done would give scientific and educational value to the pictures in the theater. It should in no way interfere with the entertainment value of the picture because patrons of the movies would be quick to discover that in such cases truth may be stranger than fiction.

(5) It is conceivable that the purely scientific pictures authorized by the sponsoring scientists might even find a place as shorts in the standard theater films. The adoption of that policy might prove an innovation now that education in popular science is so general in this country.

(6) The right to advertise the backing of scientists in moving pictures has justly been the bugbear and drawback in enterprises of this kind. But this is due to the failure to develop and follow a reasonable policy of cooperation. Both parties can now take a long stride forward in solving this problem. The two interests are now so closely dovetailed that some satisfactory way of cooperating must be found. To be effective, any such plan must operate in the selection and sponsoring of the scientist and must be defined specifically in his contract. Scientists and educators should realize that it is an obligation and is as much to their profit as it is to the profit of the industry.

[1] The same principle would apply to the filming of racial characteristics of music or racial life in general, not necessarily primitive, such as the music of the American Negro or Indian or any clean-cut national type of folk music.

(7) The first steps in the scientific work on such a collection in the field of primitive music would naturally be (a) to take the films into the laboratory and rephotograph them in suitable form for construction of performance scores[2] for which we now have adequate techniques and patterns; (b) these performance scores should then be published in order that they may be permanently preserved as a graphic representation of all the findings; and (c) the collector should publish with the performance score his technical field notes.

(8) To implement the scientific use of the collection, it is essential that the various musicological, psychological and anthropological organizations for research should cooperate with their representative, not only in the recognition of him as the authentic collector, but in the organizing of research staffs for the purpose of utilizing the collection in the various scientific interests. It is therefore desirable that the prospective collector should, before he goes, acquaint himself with the ways and means of promoting research in this field through the various professional research agencies. A one-man collection of that type could serve as sufficient research material for a large staff of workers.

In conclusion I may say that when I first broached this proposition to the Academy of Motion Picture Arts and Sciences in Hollywood, great interest was shown, and from several sources I heard the question, "Where is your man?" I gained the impression that if the right man had been available at that time, the project would have been undertaken immediately.

SCIENTIFIC EVENTS

RECENT DEATHS

ERNEST CALVIN BRYANT, professor emeritus of physics of Middlebury College, died on September 7 at the age of seventy-five years.

DR. HENRY RAWLE GEYELIN, assistant clinical professor of medicine at Columbia University, died on September 7 at the age of fifty-eight years.

MARTIN LUTHER GRIFFIN, retired chemical engineer, died on August 28 at the age of eighty-three years.

ARTHUR C. TOZZER, civil engineer, vice-president and a director of the Turner Construction Company, New York City, with which he had been associated since 1905, died on September 9 at the age of sixty-three years.

THE death is announced of Dr. John Henry Salter, known for his work in ornithology, entomology and systematic botany, from 1891 to 1908 professor of botany at University College, Aberystwyth, Wales.

THE ACHIEVEMENTS OF MEDICINE IN SIBERIA

ACCORDING to information sent to SCIENCE by the Soviet Embassy, a scientific conference recently took place in one of the medical institutes of Novosibirsk. This conference was devoted to the anniversary of the activity of medical institutions in Siberia during the war. Over three hundred surgeons and scientific workers participated. The work that is being carried on by the Siberians during the war was illustrated by eighty-five reports and communications which aroused great interest. The report continues:

Professor Schneider described his new methods of skin plastics. Professor Kohn and Shereshevsky spoke of the origin of dimness of the vitreous body in the eye and ear and of the new methods of treatment. Professor Menshikov made a report of his experience in treating complications caused by wounds of the thorax.

The experience of local hospitals has made it possible to start anew the elaboration of the following problems of war surgery, namely, the treatment of gunshot fractures, accumulation matter in the pleural cavity, adaptation of roentgen-therapy and of new apparatus for mechano-therapy. Dr. Pogorelsky related his experience in treating irregular concrescence of thigh fractures through bloodless transference into normal position. Members of the conference were highly interested in the apparatus demonstrated by Dr. Freifeld, who had constructed out of wood a universal set for mechano-therapy and medical splint for active movements of fingers and hand. Professor Pavoletzky and Dr. Khalinsky had applied with great success roentgen-therapy for treating war traumas. The communication by Dr. Tugetzky on the development and innervation of blood vessels in a man caused great interest and wide-spread approval.

In the first half of July the session was organized in Novosibirsk by the All-Union Institute of Experimental Medicine. This was quite an event in the medical world of the Siberian capital. Several hundreds of scientific workers and surgeons were present at this session. Professor Grastchenkov gave a report on "character of modern wounds of the skull and brain and their graded treatment"; Professor Menshikov on the significance of vitamins in complex therapy of war traumas; Dr. Levkovich on the etiology and prophylaxis of spotted fever; Professor Davrentiev on the morphology regeneration of the nerve-trunk. It is known that when a part of the nerves is traumatized or annihilated by a bullet or shell fragment, the part of the body supplied by nerve branches loses its sensibility and its motor capacity. New plastic methods of nerve conduction revive the ability to work of thousands of soldiers suffering injuries of the peripheral nerves.

[2] See Univ. Ia. Stud. Psychol. Mus., IV, 1937.