

## Henri Gastaut (1915–1995)

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Henri Jean Pascal Gastaut (Fig. 1) was one of the most prestigious twentieth century figures in the history of epileptology. Today, he is remembered for a plethora of various major contributions to the field of neurology [1, 2].

Originally from Monaco, Gastaut was born on 5th April 1915 to a family of modest means [2]. Gastaut's life and career experienced many fluctuations prior to his starting medicine. It was a period of time in which he changed jobs several times, from banking to painting, and then to politics. He also completed a degree course in natural sciences before making his final decision to study the art of medicine [2].

Gastaut began his medical education at the University of Marseille, where he earned his Medical Doctorate in 1945 [3]. He specialized in neurology under the tutelage of Professor Henri Roger (1860–1946) and at the same time he became involved in specialized studies of normal and morbid neuroanatomy under the direction of Professor Lucien Cornil (1888–1952). These studies provided Gastaut with a strong background and allowed him to seek clinicopathological and physiopathological correlations in his future works [4, 5]. After his graduation in 1945, Gastaut worked at the laboratory of the British neurophysiologist William Grey Walter (1910–1977) in Bristol and learned the basics of electroencephalography (EEG) [1, 3].

Gastaut was appointed as Professor of Anatomical Pathology in 1952; afterwards, he became the Head of

Neurobiological Laboratories in 1953. Later on, in 1960, he was chosen as Director of the Regional Centre for Epileptic Children. Gastaut was elected as the Dean of the University of Marseille School of Medicine in 1967. Afterwards, in 1973, a Chair of Clinical Neurophysiology was established for him, a position he held until 1984. Gastaut was Secretary General of the International League Against Epilepsy (ILAE) from 1957 to 1968, then became President and served in this capacity from 1969 to 1973 [5, 6]. Of note, after World War II, at the urging of William Gordon Lennox (1884–1960), Gastaut founded the French League Against Epilepsy in 1949 and served as its President until 1973. He founded the Institute of Neurological Research in 1984, an institute that received World Health Organization (WHO) support [5]. He was also a founding member of the International Federation of EEG and Clinical Neurophysiology and served both as its Secretary (from 1949 to 1957) and later as its President (from 1957 to 1961) [3, 5].

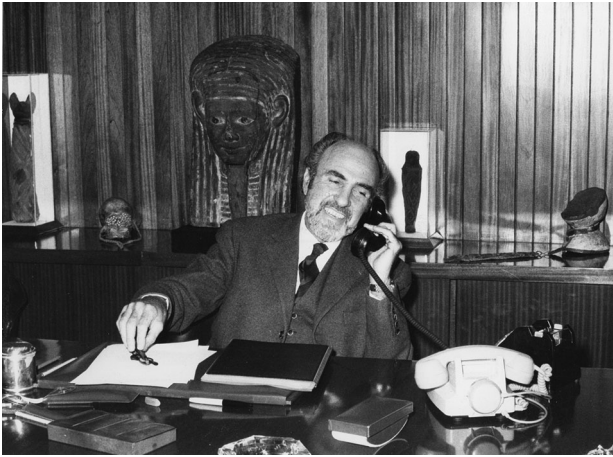
Gastaut played a major role in reorganizing the journal *Epilepsia*, which had ceased publication in 1955. The first volume of the 4th series of this journal appeared in 1959 with Gastaut, Gilbert H. Glaser, and Albert Lorentz de Haas as its co-editors. Gastaut was extremely efficient in re-establishing *Epilepsia* as the main periodical for experimental and clinical publications related to epilepsy [5].

Early in his career, Gastaut sensed the vital need for classifying different types of seizures based on their major characteristics. To achieve this goal, he made efforts for several years and finally provided the first clinical and electroencephalographic classification of epileptic seizures, which was adopted by the ILAE in 1969 and published in 1970. It is worthy to note that the 1989 *ILAE Classification of Epilepsies and Epileptic Syndromes* had its origin in Gastaut's earlier proposals. As another significant work, Gastaut began to prepare a *Dictionary of Epilepsy* in 1964.

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**Fig. 1** Henri Jean Pascal Gastaut (1915–1995) (reproduced with permission from Association des Amis du Patrimoine Médical de Marseille; <http://patrimoinemedical.univmed.fr>)

After many developments, this work was eventually published by the WHO in 1973 [5]. Finally, after a life devoted to the science of neurology, Gastaut died on 15th July 1995 at the age of 80 following a long illness [4, 5].

Gastaut's main areas of interest were the study of EEG, brain function, and epilepsy. With his wife, Yvette, he described five of the main human EEG patterns, the lambda wave, rolandic spike, pi rhythm, mu rhythm, and posterior theta rhythm [2, 3]. He introduced different methods, like photic stimulation and photic pentylentetrazol activation, to induce abnormal EEG discharges. Gastaut used the EEG to examine the relationship of the physiological function of the cortex and different situations of altered consciousness. Studying operant and Pavlovian conditioning was another field of interest for him [2, 5]. Gastaut made significant contributions to the knowledge of clinical manifestations and physiological associations of the parasomnias, including pavor nocturnus, enuresis, and somnambulism [2, 5]. After the first introduction of brain computed tomography (CT), Gastaut immediately recognized the importance of this imaging modality and arranged through WHO to have one of the first scanners for assessing all patients suffering from epilepsy [5].

Gastaut was interested in understanding the complete phenomenology of the various forms of epilepsy. He studied photosensitive epilepsies and provided a careful description of self-induced photosensitive seizures and

television-induced ones [5]. Gastaut defined startle epilepsy and described hemiconvulsion–hemiplegia–epilepsy (HHE) syndrome [2, 3, 7, 8]. He noted the EEG activities which revealed chronic cerebral circulatory insufficiency as well as all transitory ischemic phenomena, mainly syncope [2]. As a fellowship neurologist under the tuition of William G. Lennox, Gastaut recognized essential and common features of one of the most refractory childhood-onset types of epileptic encephalopathy a condition presently known as the Lennox–Gastaut syndrome (also called childhood epileptic encephalopathy) [5, 6]. Gastaut had a key role in providing a modern definition for West's syndrome [2, 5]. His last important clinical discovery was identifying benign partial epilepsy of childhood with occipital spike-waves [5, 9].

Henri Jean Pascal Gastaut attracted many students and eminent co-workers from all over the world for cooperation. He built a scientific work that has international fame and made Marseille a center of progress for neurology throughout the world [5].

**Conflicts of interest** On behalf of all authors, the corresponding author states that there is no conflict of interest.

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