

On the English (1931) and Spanish (1932) translations of von Economo's classic monograph on encephalitis lethargica

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ABSTRACT

The 'second' seminal monograph by Constantin von Economo on encephalitis lethargica appeared in print in German in 1929, following his initial report of the disease (eponymously associated with his name) before the Viennese Society of Psychiatry and Neurology and the publication of his 'first' monograph on the subject in 1917. The 1929 book was translated into English and Spanish and published by Humphrey Milford in Oxford and Espasa-Calpe in Madrid in 1931 and 1932, respectively. The present paper gives some details of those translations and the neuropsychiatrists who produced them. Moreover, four previously unpublished letters by von Economo are presented, relating to the English edition of 'Die Encephalitis lethargica'. These letters are interesting for insights into von Economo's personality and view of the translation.

KEYWORDS

Epidemic encephalitis; Constantin von Economo (1876–1931); Keith Odo Newman (1887–1948); Juan José López Ibor (1906–1991); neurological classics

Introduction

The discovery of encephalitis lethargica (or von Economo disease) was formally announced on 17 April 1917 before the Viennese Society of Psychiatry and Neurology by *Privatdozent* Constantin von Economo (1876–1931), who at the time was an assistant to Julius Wagner-Jauregg (1857–1940) in the Second University Neuropsychiatric Clinic (Schnaberth and Koblizek 2010). This landmark presentation, which appeared in print the following month (Economo 1917a), has been translated into English (Wilkins and Brody 1968; Economo 1979) and French (Vetter and Théodoridès 1969). The first monograph by von Economo, including clinical and autopsy findings, was published in the *Festschrift* for the 70th birthday of Heinrich Obersteiner (1847–1922) (Economo 1917b), and as a separatum (Economo 1918), and was also produced by von Economo in Italian (Economo 1920a).

Twelve years later, von Economo (Fig. 1) expanded his work by describing the sequelae of the new disease and its neuropathology; his second book on encephalitis lethargica, now a neurological classic, was published in German (Economo 1929a). The book was promptly translated into English (Economo 1931) and the editors of *Brain* commented that it was ‘indeed by far the most accurate and complete description of the morbid anatomy [of encephalitis lethargica] that has appeared in the English tongue’ (Notices of Recent Publications 1931). One year after the English edition, a Spanish translation (Economo 1932) was published (Fig. 2).

Insert Figs 1 and 2 about here

Encephalitis lethargica (Economo 1929a, 1931, 1932) is structured in four chapters, comprising 25 subsections: Chapter I is a general introduction, including historical, epidemiological, infectious and aetiopathogenetic aspects; Chapter II covers the acute forms of encephalitis lethargica as a new entity, its nosology, forms (somnolent-ophthalmoplegic, hyperkinetic and amyostatic-akinetic), symptoms, prognosis, therapy, prophylaxis, neuropathology, differential diagnosis and a discussion of the influenza epidemic; Chapter III deals with the sequelae of encephalitis lethargica, residual states, and chronic forms, including post-encephalitic Parkinsonism and mental disorders in children and adolescents, as well as the differential diagnosis, neuropathology, aetiology and therapy of the chronic forms; and Chapter IV is a retrospective account of the lessons of encephalitis lethargica, with new vistas on autonomic functions, sleep regulation, extrapyramidal motility and tonicity, mental disturbances and the consciousness of personality.

By being in agreement with more modern views of viral infections of the central nervous system (CNS), the idea that neurons were primarily affected and the inflammatory response by hematogenous elements was merely a secondary concomitant effect provided ‘evidence of the acuteness of von Economo’s intellect’ (Notices of Recent Publications 1931). Concerning the therapeutic measures, von Economo had conceded, according to Fry (1932), that ‘though occasionally helpful, [they] must not, in the nature of things, be looked upon as more than temporary expedients until we succeed in obtaining

specific sera against the encephalitic virus'. The general review of the clinical implications of encephalitis lethargica has taught lessons that undoubtedly gave a new orientation to neurology and psychiatry (McCowan 1932).

The translation of seminal works in science makes them available to a much larger readership than the release in the original language. It so happens that the persons who initiate and complete such translations often remain unheeded, with their names only appearing on the cover or the title page of a book without much further details. Accordingly, the aim of the present paper is to highlight the persons who carried out the translations of von Economo's book in two major languages, English and Spanish, by providing historical information and presenting some newly discovered archival correspondence.

Keith Odo Newman and the English Edition

The English translation of *Die Encephalitis lethargica* was produced by Keith Odo Newman (1887–1948). Born in Vienna on 23 March 1887, Albert Francis Eduard Karl Neumann obtained his M.D. degree from the University of Vienna (Royal College of Physicians of Edinburgh 2020). It was during Newman's student years that von Economo joined, in October 1906, the University Neuropsychiatric Clinic of Julius Wagner-Jauregg as an assistant; following his *Dozentur*, von Economo was appointed lecturer in 1913 and professor 1921. Thus, it is very likely that Newman attended von Economo's lectures as a medical student.

In 1922, Newman worked as a research student at New College, Oxford, and then as a pathologist and psychiatrist at Oxford County and City Mental Hospital, Littlemore. He anglicized his name to Keith Odo Newman by a deed dated 7 October 1938 and enrolled in the Central Office of the Supreme Court of Judicature on 6 January 1939 (Newman 1939).

Newman had a limited scientific publication record, and he does not appear to have undertaken other translations. Having worked on the pathogenesis of general paralysis and its physiological and pathological effects on cerebrospinal fluid, Newman devised and reported a serological test – of dubious value – that was based on a process of sensitization, whereby a gold-sol gave distinct and easily distinguishable color reactions in normal and parietic sera (Newman 1930). During World War II, he published two non-technical booklets: *Mind, sex, and war* (Newman 1941) and *250 Times I saw a play* (Newman 1944).

In *Mind, sex, and war* (Newman 1941), a small handbook of psychology written in a popular vein, Newman analyzed with discrimination the reaction of different temperaments to the war situation. With regard to *250 Times I saw a play* (Newman 1944), there is a backstory involving the British dramatist Sir Terence Mervyn Rattigan (1911–1977) (Darlow and Hodson 1979; Wansell 2009). The public rejection of his play *After the dance* had plunged Rattigan into writer's block. To help allay this he sought, in 1938, treatment from Newman (Law 2011; Pattie 2012), who urged his patient to seek active service with the Royal Air Force as a remedy. Rattigan joined the Royal Air

Force No. 1 Signals School; in May 1941 he qualified as an air gunner at the Flying College at Manby, Lincolnshire, and the writer's block disappeared (Law 2011, 187). Rattigan drew on his wartime experiences in the Royal Air Force in *Flare path* (1942) to depict the tensions felt by aircrew and the women they loved on the night of a bombing raid against Germany. Newman attended 250 consecutive performances (Bluett 2020) and described that experience in *250 Times I saw a play* (Newman 1944). The idea was to see what psychological or other insights he could gain by watching every performance with the original leads (Law 2011).

In 1945, Newman suffered a mental breakdown. Two years later, he was admitted into a lunatic asylum in Scotland (Bluett 2020). Keith Odo Newman died on 5 November 1948 in Edinburgh. He was interred in Morningside Cemetery.

One may wonder, why was Newman selected, presumably by the Publisher, to undertake the translation. German was his native language, but he is not reported to have had any special connection with encephalitis lethargica.

Below, I provide English translations of four typed letters addressed by von Economo to Newman, relating to the English edition of *Die Encephalitis lethargica* (Economo 1929a) for the Oxford Medical Publications series (Economo 1931), from the Collection of Keith O. Newman (Royal College of Physicians of Edinburgh 2020) that is housed in the Royal College of Physicians of Edinburgh (Fig. 3 and 4). These letters are of historical interest, as they provide insight into von Economo's personality and view of the translation.

Insert Figs 3 and 4 about here

Vienna, 9 May 1929

Rathausstrasse 13, Vienna I

Dear colleague!

Having just returned from Italy after a journey of several weeks, I find here in front of me your letter with the part of your translation and the correspondence from 'Clarendon Press', along with the card and note with the corrections. I am writing to you today to simply thank you for the swiftness and speed that you have brought into the matter. As today is a holiday [*Christi Himmelfahrt* or Ascension Day], I shall contact the publishing house of Urban & Schwarzenberg and immediately inform you of the outcome afterwards. Naturally, as before, I very much agree that you will be the one who implements the translation, in the case that 'Clarendon Press' agrees, which rather seems to be a fact. I shall transmit all the subsequent parts to you after consulting with the publisher.

Cordial regards (*Yours*)

Professor C. Economo

Vienna, 11 May 1929

Rathausstrasse 13, Vienna I

Dear Dr. Newman!

I already got in touch with the Urban & Schwarzenberg publishing house and they immediately agreed to grant permission for the translation of my book on 'Encephalitis lethargica' into English for a very low amount (*approval price*), to be agreed with Clarendon Press. Clarendon Press should now contact directly Urban & Schwarzenberg, Mahlerstrasse 4, Vienna I, about this, so that arrangements could be also made regarding the sending of the galley proofs and other details. Please proceed accordingly.

Concerning the royalty due me, which Clarendon Press would disperse to me, I shall waive it in your favor provided that you, Herr Dr. Newman, will have finished the translation, ready for publication, within a period of 6 months; that will hopefully compensate for your translation effort. This waiver of mine, of course, only applies to the first edition; in the event of a second edition, a new agreement would have to be made.

I am delighted to be able to bring this positive news to you, and I am asking you to readily further the negotiations between the two publishers as soon as possible. In a few days, I shall be sending you the part of the translation after having gone over it.

With cordial regards (*Happy to collaborate, Yours friendly*)

Professor C. Economo

Vienna, 25 June 1929

Rathausstrasse 13, Vienna I

Dear colleague!

The Urban & Schwarzenberg publishing house just informed me that they wrote to the English publisher, with whom you have been in contact, regarding the terms for the release of the translation of my book on 'Encephalitis lethargica'. Urban & Schwarzenberg demanded 300 marks (three hundred) as a lump sum. If this is too much for the English publisher, I am willing to reimburse part of this amount to the English publisher. It would be very unfortunate if negotiations on the translation failed over that sum.

Regarding the discussion of the post-encephalitic psychoses, which according to the opinion of the English publisher is too short, I am willing to slightly expand that paragraph for the English edition, which of course would have to be included in the final draft, and which discussion I am certain the English audience will greatly appreciate.

Hoping to hear from you soon, I am sending you my best regards (*Yours*)

Professor C. Economo

(Could you let me know what is the address for correspondence for the British Medical Journal! Searching in the journal one cannot find the address!)

Vienna, 19 June 1931

Department of Brain Research

Director Prof. C. v. Economo

(Prof. Pötzl's Psychiatric Clinic)

Lazarettgasse 14, Vienna IX

Dear colleague!

Today I received the final English translation of Encephalitis lethargica and I hasten to let you know that I find its implementation outstanding; once again, I thank you very much for your effort and work, and I most heartily congratulate you for the beautiful English editing and commendable layout of the book by you. Moreover, I hope that this translation will enhance your medical future in England as well, which you amply deserve because of the effort you have made. Could you also express my satisfaction to the English publisher for their work; by the way, I shall also write a few lines to them myself. Could you please let me know to which English and American physicians copies of the work will be sent, so that I could have additional copies sent to some other [physicians] at my own expense? In any case, I would be delighted if, in addition to [Sir Arthur Salusbury] MacNalty and the other gentlemen you have named, the following each receives a copy, as I said, at my own expense, if there were no other way: Professor [Sir James] Purves-Stewart and Professor [Samuel Alexander Kinnier] Wilson in London, as well as Professor [Bernard] Sachs, 116 West 59th Street, New York, Professor H. A. [Henry Alsop] Riley, 117 East 72nd Street, New York, and Professor [Simon] Flexner, Rockefeller (*Institute*), New York.

I would be thankful if you informed me on this as soon as possible.

With many cordial regards (*Yours*)

Professor C. Economo

Both the English and the Spanish editions were personally checked and endorsed by von Economo (1931, 1932). The translators were responsible for notes and references to later works on the subject, especially from the English literature.

The Scottish psychiatrist Peter Knight McCowan (1890–1979), physician superintendent of Cardiff City Mental Hospital and lecturer in the Welsh National School of Medicine, remarked (McCowan 1932): ‘Dr. Newman is to be congratulated on his very excellent translation of von Economo’s monograph, written in 1929. He has succeeded in producing an eminently readable book, which should prove invaluable to all those interested in the subject of encephalitis’.

A critique in *Brain* concluded that ‘the translator has been successful in his difficult task...and the result is both intelligible and readable... [His] knowledge of neuropathology has been valuable, as without such knowledge translations of technicalities are apt to be incomprehensible, an error which was not altogether avoided in the English translation of the same author’s book on the cerebral cortex’ (Notices of Recent Publications 1931). [The latter comment refers to psychoanalyst Sam Parker (1901–1990), who produced an English translation of von Economo’s lectures on *The cytoarchitectonics of the human cerebral cortex* (Economo 1927, 1929b)].

In the USA, Frank R. Fry (1853–1937), who was the first Professor of Diseases of the Nervous System in Washington University, St. Louis, wrote (Fry 1932): ‘This book presents every evidence of having been carefully prepared and the index to subjects as well as to the names of authors is full and

well arranged making it a convenient volume for reference. The names of American authors are rather conspicuously absent. The translator in his preface undertakes an explanation of this fact which might even be construed into an apology’.

Actually, Newman explained in the preface (Economo 1931):

The translator’s lot is not a happy one. He is faced with the ungrateful, difficult, and wearisome task of sailing his craft, the book, across the wide gulf which separates two languages. He must steer a straight course between the Scylla of Literal Translation and the Charybdis of Free Translation. And he makes his own the frailties of the ship—be it Galleon or Barge—frailties unavoidable in any work of a human hand. After the port has been made, he is dismissed ship with a polite smile and may perhaps be told a few home truths by one or another unruly passenger.

It was the wish of Professor von Economo that I should bring the quotations of English and American authors in the text into line with German and Austrian writers, who naturally received a somewhat preferential treatment. The remarks of the author under the heading ‘References’ hold good with regard to the added quotations; the volume of the literature is such that it would be practically impossible and, worse still, useless, to aim at anything like completeness. Omissions should therefore not be regarded as indicating lack of merit.

Complying with a suggestion made by the publisher, Professor Economo has added a short section on ‘Conditions of the nature of psychoses’. This necessitated a minor rearrangement of the context on his part. He has further made one or two additions from the literature.

[...]

K. O. Newman

New College, Oxford

April 1931

Constantin von Economo provided the following note especially for the English edition (Economo 1931):

I hope that the attempt undertaken in this book to present a survey of the complex features of encephalitis lethargica from the clinician’s point of view, following the course of the disease up to its sources, will meet with a friendly reception from English readers. It was in England that very early and fundamental researches into the nature of this ‘new’ disease took place—by [Sir Edward Farquhar] Buzzard, [Francis Graham] Crookshank, [Joseph Godwin] Greenfield, [Sir Arthur John] Hall, [James] McIntosh, [Sir Arthur Salusbury] MacNalty, [Allan C.] Parsons, and many others—so that we owe a great deal of our knowledge of the disease to English and American work.

C. v. E.

Juan José López Ibor and the Spanish Edition

The Spanish translation of *Die Encephalitis lethargica* appeared in print the year after von Economo

died (Economo 1932). It was translated and edited by the 26-year-old Juan José López Ibor (1906–1991), who eventually became one of Spain’s most renowned psychiatrists. In 1932, López Ibor also joined the faculty at the University of Santiago de Compostela Medical School as *Catedrático* of Legal Medicine.

The son of a local schoolteacher and a mother who came from a family of farmers, López Ibor was born on 22 April 1906 in Sollana, Valencia. He pursued a career in medicine, like his two elder brothers. During his time as a medical student, he read the works of Sigmund Freud (1856–1939), a key event that led him to develop a major interest in psychiatry. He obtained his M.D. degree from the University of Madrid in 1930. In 1934 he was appointed Chairman of Legal Medicine at the University of Valencia Medical School. Between 1934 and 1938, he trained at the Universities of Zürich, Berlin, Munich, Paris and Tübingen under Oswald Bumke (1877–1950), Georges Guillain (1876–1961) and Théophile Alajouanine (1890–1980), among others. His thought was further influenced by the work of Kurt Goldstein (1878–1965), Kurt Schneider (1887–1967) and Karl Jaspers (1883–1969). In 1940 López Ibor moved to the Cajal Institute of Medicine of the Advanced Council for Scientific Research as a Professor of Psychiatry. In 1943 he was appointed head of the Neuropsychiatric Department of the General Hospital of Madrid. In 1950 he was admitted to the Royal Academy of Medicine and in 1960 he was appointed Professor and Chairman of Psychiatry in the Medical School of Complutense University of Madrid (Ruiz 1999).

During his academic career, López Ibor published more than 300 scientific papers and 25 books. He became an ardent critic of Freudian psychoanalysis. He took a different stance and conceptualized anxiety by distinguishing it from anguish (currently understood as panic attacks), explaining it primarily in biological, not psychical, terms. He further advanced novel concepts in the field of psychosomatic medicine. In 1966, López Ibor was elected president of the World Psychiatric Association and organized the Fourth World Congress of Psychiatry in Madrid. He was one of the founders, together with Juan Antonio Vallejo Nágera (1926–1990), of the Spanish Society of Psychiatry. López Ibor died on 22 April 1991 in Madrid, having been afflicted with Alzheimer disease.

In the preface (Economo 1932), López Ibor wrote (my translation into English):

A couple of words from the translator—The Spanish version of the work of Professor C. von Economo has been based on the latest German edition, published in 1929. The author, looking forward to the day that this Spanish edition would be completed, was kind enough to add numerous notes, expressly written for it, summarising the key publications that have since appeared in the press. The chapter on the nosological situation of encephalitis lethargica is completely new. Likewise, and as the author instructed me, I added several paragraphs (corresponding to the chapter on the psychotic forms of the sequelae of encephalitis), which had appeared for the first time in the English translation of this book, published after the German edition.

Professor von Economo did not live to see this Spanish edition printed, for which he had

demonstrated so much interest: a sudden illness snatched his life on 21 October 1931, prematurely depriving Medicine of one of its most illustrious cultivators.

A disciple and collaborator of Wagner-Jauregg, he declined to succeed him in the Chair of the Clinic of Psychiatry and Neurology of the University of Vienna in order to better pursue scientific research. In recognition of his great merits, the Institute of Brain Research was created for him in Vienna, solemnly inaugurated last semester. For such a short time would he direct it!

His scientific work was substantial. Two are his crown works: his research on encephalitis lethargica, perfectly exposed in this book, and the one he realized on the cellular architecture of the cerebral cortex, which was given birth in a monumental book: *Die Cytoarchitektonik der Hirnrinde des erwachsenen Menschen*, the pride of modern Histology.

Professor von Economo is one of the physicians whose name must justly endure in History. Rest in peace!

As appealing as it might be to know the reasons why the young psychiatrist undertook von Economo's translation, the information is scanty. In 1932, López Ibor was granted a fellowship by the *Junta de Ampliación de Estudios en el Extranjero* to study in Germany (González Cajal 1989). Two years earlier, in 1930, von Economo had just established the Department of Brain Research in the University of Vienna, and became its first Director. In the new facility, he was surrounded by young scientists studying under his aegis (Schönburg-Hartenstein von Economo and Wagner-Jauregg 1937). Among them, José Maria Aldama Truchuelo (1902–1970) had trained under Pío del Río Hortega (1882–1945) in histology and under José Sanchis Banús (1893–1932) in neurology. Under the supervision of von Economo, Aldama completed his doctoral dissertation on the cytoarchitectonics of the cerebral cortex of children (Aldama 1930; Economo 1930), supported by a scholarship from the *Junta de Ampliación de Estudios* (González Cajal 1989). Upon his return to Spain, Aldama was appointed Director of the Psychiatric Hospital of Cádiz and Chief of Neuropsychiatric and Neurosurgical Service at the 'House of Health' (Casa de Salud) of Valdecilla, Santander.

Furthermore, during the First International Neurological Congress in Berne, in the organization of which von Economo had been instrumental, Gonzalo Rodríguez Lafora (1886–1971) chaired the Spanish 'permanent committee of organization' (Brouwer et al. 1932). Lafora was professionally associated with both Aldama and López Ibor (Rodríguez Arias 1972). Thus, there is a theoretical possibility that the 'Spanish connection' which evolved between von Economo and the alumni of Cajal's neurohistological school in Madrid (Villasante et al. 2008) played a role in López Ibor's undertaking the translation of *Die Encephalitis lethargica*.

Discussion

The enduring interest in encephalitis lethargica is evidenced by the modern publication of books such as the eloquent narrative of Crosby (2010) and the scholarly compilation of Vilensky (2011), both highly praised by the late Oliver Sacks (1933–2015). In what is considered 'a colossal monument to

encephalitis lethargica' (Zandi 2019), Paul Foley (2018) has exhausted the primary bibliographic sources and provided an epitome of the disease. Encephalitis lethargica played a major role in medical discussions during the Interwar Period. Patients presented with a puzzling combination of motor and mental symptoms that previously had been associated with schizophrenia and hysteric conversion reaction in adults, as well as behavioral changes and attention deficits in children. Such manifestations underscored the crucial role played by subcortical structures in higher mental functions. Overall, encephalitis lethargica had a greater impact on clinical and theoretical neuroscientific thought in the first half of the 20th century than any other single disorder (Foley 2018).

The focus of von Economo had shifted from encephalitis lethargica to the anatomy of the human cerebral cortex several years before the 1929 monograph. In February 1923, he had reported, in collaboration with Georg N. Koskinas (1885–1975), the initial results of their work on the cytoarchitectonics of sensory cortical areas before the Society for Psychiatry and Neurology of Vienna (Economo and Koskinas 1923). Thereafter, von Economo mostly occupied himself with the cellular structure of the cerebral cortex, and only occasionally lectured on encephalitis lethargica in medical courses and conferences (Brouwer et al. 1932; Triarhou 2006).

Foley (2018) suggests that the 1929 publication by von Economo of *Die Encephalitis lethargica* (Economo 1929a) was his response to the attempt in 1928 of Jean-René Cruchet (1875–1959) of Bordeaux to establish priority in the discovery of the disease (Cruchet 1928). It could also have been prompted by the publication in 1928 of the second edition of the more comprehensive and up-to-date monograph on the disease by the neurologist Felix Stern (1884–1941) of Kassel (Stern 1928), which was considered more authoritative among German speakers, despite the Jewish origins of its author. Economo (1923, 1928) had reviewed both editions of Stern's book for the medical press. The translations of von Economo's monograph into English and Spanish (but not French!) could be interpreted in this context, particularly as encephalitis lethargica was not as topical in 1931–1932 as it had been in 1928.

A protracted controversy between Cruchet (1920a, 1920b) and von Economo (1920b, 1920c) over the priority of the discovery of the disease had begun years earlier (Gubser 1972; Théodoridès and Vetter 1972; Walusinski et al. 2016). Cruchet, with the assistance of François Moutier (1881–1961) and Albert Calmette (1863–1933), had published the 40 cases of 'subacute encephalomyelitis', a new epidemic neurological disease, on 27 April 1917 in Paris (Cruchet et al. 1917). The original article by von Economo on 'encephalitis lethargica' was published on 17 April 1917 in Vienna (Economo 1917a). The lack of neuropathological means limited Cruchet to a clinical description, whereas von Economo accompanied his cases by exceptional, and probably more relevant, autopsy documentation (Economo 1917b; Walusinski et al. 2016).

In the aftermath of Cruchet's monograph in 1928, a string of publications by von Economo appeared in German (Economo 1929c, 1929d, 1929e), French (1929f, 1929g), English (1929h, 1929i), and Italian (1929j), besides the book (1929a), where once again he tried to establish priority over the

discovery of encephalitis lethargica. He scrutinized the cases published by Cruchet, and raised doubts on whether all of them represented true encephalitis lethargica, when some might actually be wartime psychoses, epilepsies, hemiplegias or cases of myelitis or neuritis.

The English edition of *Encephalitis lethargica* is shorter in total number of pages than the German original, 200 as opposed to 250. This can be explained to a certain extent by the different type-setting. The sections and subheadings were followed precisely in the English translation, although some segments, like the Introduction, were shortened and condensed. The two added paragraphs on the ‘Conditions of the nature of psychosis’ (Economo 1931, 131–2) cite additional works from the English literature, e.g. by MacCowan, Abrahamson, and Kwint, and expand on the manifestation of hallucinations, anxiety, psychomotor and personality disturbances that were at the time summarised under the heading of ‘pseudo-schizophrenias’, perpetuating a debate between psychiatrists and neuropathologists as to whether schizophrenic symptomatology can be ‘purely psychological’ or associated with anatomical lesions of the basal ganglia, such as those observed in postencephalitic cases.

The ‘lessons taught by encephalitis lethargica’ with which von Economo closed his work (Economo 1931, 157–7) are summarised as follows: Our knowledge of normal and pathological nervous mechanisms gained immensely from studying this new disease, including cerebral localization and its revolutionizing effect on neuropsychophysiological thought. So-called ‘functional disorders’ – a term popular among psychologists around the fin de siècle – could be now described on an organic basis and attributed to cellular changes in grey matter nuclei. Arguing against the psychoanalytical school, which ‘considered mental experiences as almost exclusively of a sexual nature’ (Economo 1931, 158), the new neuropathological evidence provided explanations in terms of alterations of the brain on a structural–functional neuroanatomical basis.

Such ‘lessons’ pertained to autonomic nervous activity and the central role of the hypothalamus in regulating hormonal action and vegetative functions; sleep and its disturbances, such as hypersomnia and agrypnia, and the localization of sleep regulating centers in the diencephalon; movement, tonicity and related disorders, particularly extrapyramidal; mental disturbances, including those of the will, humor, and personality, and the relationship to certain neuroses and psychoses, which could now all be attributed to specific neuroanatomical lesions.

In conclusion, encephalitis lethargica not only placed neurological knowledge on new foundations, but it also influenced in a fundamental way our appreciation of behavior:

...The dialectic combinations and psychological constructions of many ideologists will collapse like houses of cards if they do not in the future take into account these new basic facts. Every psychiatrist who wishes to probe into the phenomena of character changes, the psychological mechanism of the neuroses, et cetera, must be thoroughly acquainted with the experience gathered from encephalitis lethargica. Every psychologist who in the future attempts to deal with mental phenomena such as will, temperament, self-

consciousness, the ego, et cetera, and is not well acquainted with the appropriate observations on encephalitic patients [...] will build on sand. Many an elaborate construction of the purely speculative psychologists will be dashed to the ground in the face of these everyday facts of the physician [...]

One thing is certain: whoever has observed without bias the many forms of encephalitis lethargica – and this probably includes the majority of medical people of our generation – must of necessity have quite considerably altered one's outlook on nervous and mental phenomena during this last decade. Encephalitis lethargica can scarcely again be forgotten (Economo 1931, 167).

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Figure captions

Figure 1. Professor Constantin von Economo (1876–1931). Credit: Medical University of Vienna (Schnaberth and Koblizek 2010).

Figure 2. Title pages of the English (Economo 1931) and Spanish (Economo 1932) translations of von Economo's neurological classic. The two editions were priced at 18 shillings in the UK (6 dollars in the USA) and 10 pesetas in Spain, respectively. (Author's private collection).

Figure 3. Two signed letters addressed by von Economo to Keith Newman, dated May 1929. Credit: Deposited Collections, Royal College of Physicians of Edinburgh (2020). English translations in the main text.

Figure 4. Two additional letters sent by von Economo to Newman, dated June 1929 and June 1931. Credit: Deposited Collections, Royal College of Physicians of Edinburgh (2020). English translations in the main text.