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Germán E. Berríos
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What is Neuropsychiatry?*

Germán E. Berríos¹

Abstract

Introduction: Neuropsychiatry is based on social and scientific narratives developed since the XIX century in order to understand and deal with “mental symptoms” found in the context of neurological diseases. *Objective:* This is an effort to answer this question: Are mental symptoms in neurology the same ones as those found in general psychiatry? *Method:* Analysis of the diverse symptoms found in some diseases so that the neuropsychiatrist can develop a current and refined descriptive psychopathology without trying to “naturalize” these symptoms in a simplistic way, reducing them to putative biological markers. *Conclusions:* Frequently, neurological symptoms are not psychiatric, for instance, hallucinations in severe melancholia are only superficially similar to “organic” hallucinations in Parkinson’s disease. In this sense, the possibility that some symptoms are not only functional copies of other symptoms (behavioral phenocopies) should be seriously considered, since such differences could have important therapeutic implications.

Keywords: Neurology, psychiatry, psychopathology, nervous system diseases.

Título: ¿Qué es la neuropsiquiatría?

Resumen

Introducción: la neuropsiquiatría está basada en narrativas sociales y científicas que se desarrollaron desde el siglo XIX para entender y manejar los “síntomas mentales” encontrados en el contexto de la enfermedad neurológica. *Objetivo:* intentar responder a la pregunta ¿los síntomas mentales de la neurología son los “mismos” que aquellos encontrados en la psiquiatría general? *Método:* análisis de algunos de los diversos síntomas evidenciados en algunas enfermedades para que el neuropsiquiatra desarrolle una psicopatología descriptiva refinada y actualizada sobre éstas y no trate de “naturalizar” de manera simplista los síntomas, reduciéndolos a marcadores biológicos putativos. *Conclusión:* se sugiere que con frecuencia los síntomas neurológicos no son psiquiátricos, por ejemplo, las alucinaciones de la melancolía grave son sólo superficialmente similares a las alucinaciones “orgánicas” de la enfermedad de Parkinson. En este sentido, la posibilidad de que algunos síntomas sean únicamente copias funcionales de otros síntomas (fenocopias conductuales) debe ser considerada seriamente, pues tales diferencias pueden tener importantes implicaciones terapéuticas.

Palabras clave: neurología, psiquiatría, psicopatología, enfermedades del sistema nervioso.

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¹ M. D. and philosopher of Universidad de San Marcos, Perú. Psychiatrist of Oxford University. Teacher of Epistemology of Psychiatry in University of Cambridge and director of Neuropsychiatry, Addenbrooke’s Hospital, University of Cambridge, Cambridge, United Kingdom.

The Word and its Referents

Names help or hinder in all walks of life, particularly when they behave as drifting signifiers. For example, since it first appeared in fin de siècle France as a double-barrelled word ('neuro-psychiatrie'), the meaning of 'neuropsychiatry' has repeatedly changed. By the interbellum period, and now converted in 'neuropsychiatrie', it referred to the clinical doings of medics trained both in neurology and psychiatry. By 1918, the word appeared in the Anglo-Saxon to name a form of: "Psychiatry which relates mental or emotional disturbance to disordered brain function". My own definition is narrower: "discipline that deals with the psychiatric complications of neurological disease". On the other hand, American usage is broader and tantamount to "biological psychiatry".

Currently, and first and foremost "neuropsychiatry" refers to overlapping clinical disciplines sharing the belief that mental symptoms are produced at disordered brain sites. It is also used to make a professional claim vis-à-vis rival views of mental disorder such as psychoanalysis. Lastly, it creates a social and economic space wherein like-minded researchers safely congregate to usufruct their fashionable ideas.

The Context

Whether there is 'neuropsychiatry' in a particular country, and whether it has a broad or narrow meaning will depend, to a large extent, upon the structure of its health services and on the quality of the relationship between neurology and psychiatry.

This is interesting and ironical as both specialisms are new. Alienism (the original name for psychiatry) and neurology developed by the 1830s and 1860s respectively as the direct result of the fragmentation of the old grand Cullean category of 'Neurosis', and of the broadening of the notion of 'lesion' which by the end of the century indistinctly referred to failures and solutions of continuity in putative 'structural', 'physiological' or 'psychological' domains.

In Germany and France, the formation of alienists included neurological training and this facilitated the use of the term 'neuropsychiatrist'. In Great Britain, on the other hand, and due to important socio-economic reasons (which there is no space to discuss), neurology and psychiatry had fully diverged by the 1880s. This means that for more than 90 years there was little communication between the two and that during the 1970s 'neuropsychiatry' had to be reinvented. It is not altogether surprising that those

of us who were involved in such re-creation had both neurological and psychiatric training. This also explains why to this day we do not have in the UK a unified definition of neuropsychiatry.

The American definition has become popular and this has encouraged psychiatrists holding a biological orientation au outrance to call themselves 'neuropsychiatrists'. Others (like myself) continue defining neuropsychiatry in a narrow way. The former can be found in all venues of psychiatric care, the latter work in general hospitals and do a great deal of 'neuro-liaison' work (I introduced this term in a lecture given in Wellington, New Zealand some years ago).

Neuropsychiatry in Cambridge, UK

In keeping with the above, my own 'neuropsychiatric' clinical service is organized on the narrow view that neuropsychiatry is a branch of psychiatry that deals with the mental complications of neurological disease. I do not believe that such practice should in any way be interpreted as a statement about the nature of mental disorders in general. Even within the confines of my narrow definition, it seems clear that neurological patients who develop delusions, hallucinations, obsessions, sadness, anxiety, etc.,

etc. do so on account of a variety of mechanisms. On the one hand, there are the causal aetiologies.

As my work on musical hallucinations and irritability states in Huntington's disease patients showed years ago, a direct link can be demonstrated between symptom and brain site or CAG repeat, respectively. On the other hand, neurological patients have reasons for their symptoms, that is, neurological diseases happen to real people and hence have semantic contexts. This adds an entire new layer of meaning, hermeneutics and therapeutic response. Patients may show behavioural copies of mental symptoms and these do not have the same brain representation as the conventional symptoms.

Neuropsychiatric clinical work generates clinical templates which can be translated into research paradigms. There is nothing new in this and each university will use a different rhetoric to sell what they do. Some sell themselves as top-to-bottom research institutions (i.e. grand ideas governing action), others, are bottom-up ones (piece-meal, low level research converging upwards). This is the case of the Cambridge University Neuroscience Campus (the largest in the UK) which includes research institutes and a neuroimaging suite with inter alia 12 MRI magnets. My Neuropsychiatry Service (6 clinics) is linked with

most of the research centres in the campus. For example, the PD Clinic provides patients for the large projects on receptor expression, fMRI, pharmacology, and neurosurgery.

The HD Clinic is held in the 'Brain Repair Centre' where about 12 patients who have already received fetal cell implants in their caudate nuclei are followed up at 3 months intervals. The Traumatic Brain Damage clinic takes place in the 'Oliver Zangwill Centre', the leading cognitive neuropsychological rehabilitation clinic in Europe. The Sleep Disorders Clinic works closely with the 'Respiratory Unit' at Papworth hospital which includes the more advanced polysomnographic set up in the UK. The Memory Complaints Clinic services the large complex of memory research at the 'Cognitive and Brain sciences Unit', a 'Medical Research Council' facility where concepts such as executive functions and working memory were first developed; and my General Neuropsychiatry Clinic is linked up with the 'Epilepsy Neurosurgical Unit', the 'Tinnitus Clinic', etc. All these clinical- basic-sciences associations create ideal opportunities for translational research which has traditionally been the British way of developing new ideas.

The Findings

Whatever the clinical context, neurological disorders are often accompa-

nied by psychiatric appurtenances. The psychiatric component of some, like Parkinson's disease, Multiple Sclerosis, Huntington's disease, Wilson's disease, Binswanger's disease, etc. has been known for a long time, and in some cases the severity and management of that component is more important for social re-entry than any motor or sensory disorder. In other cases, however, such as the taupathies, mitochondriopathies, CADASIL, X-Linked Adrenoleukodystrophy, etc. etc., not enough research has yet been carried out to identify the psychiatric component. In all situations, an intelligent practice provides the neuropsychiatrist with conundra whose resolution has direct relevance to psychiatry in general; two of such will be briefly discussed below.

The Implications

Diagnostic Conundrum

The neuropsychiatrist often finds that there is a lack of fit between the clinical phenomena met with in neuro-liaison work and the conventional psychiatric categories of ICD-10 and DSM IV. Neurological patients exhibit a variety of mental symptoms but these are often isolated and/or fleeting and rarely achieve critical mass to qualify for a 'psychiatric diagnosis'. This raises theoretical and practical issues.

The former have to do with their nature and formation mechanisms, the latter with their management / therapy. In the UK psychiatric therapies are currently tightly governed by guidelines which themselves are based on meta-analytic exercises and health economy evaluations. Likewise, psychiatric drugs are licensed for specific disorders and share with the guidelines the same sets of random clinical trials.

Before the time guidelines started to be issued, psychiatric treatments were based on a combination of psychopharmacological knowledge, therapeutic imagination and specific negotiations between doctor and patient. This no longer obtains and unless a patient qualifies for a clear diagnosis he will not be offered medication as this might expose the clinician to legal action. In neuropsychiatry, this is particularly acute as neurological patients have mostly mental symptoms and only rarely mental disorders. Furthermore, the expression of such symptoms may be distorted by the presence of cognitive, expressional or emotional deficits directly related to the neuropathological lesions.

Behavioural Copies and the Problem of Symptom-Formation

In view of the above, the neuropsychiatrist often wonders whether the mental symptoms (and occasio-

nal mental disorders) that he/she comes across in the context of his specialized practice are, in fact, the same clinical phenomena as those seen in general psychiatry. For example, are the visual hallucinations of Parkinson's disease or Lewy body dementia the same phenomena as those seen by a melancholic elderly with Cotard's syndrome? Is the affective disorder associated with frontal lobe strokes the same as the common garden depressive illness? Is the mania triggered by steroid treatment the same as the mania of a bipolar disorder?

These comparisons go directly to the core of psychopathology and call into question the epistemic capacity of the language of psychiatry, that is, its discriminating value. Over the years, these questions have been responded in different ways. There was a time when the answer was that so-called organic hallucinations were different phenomena from psychiatric hallucinations. Currently, the predictable view is that they are, that they must be the same phenomena. Biological psychiatry is ruthless in its reductionism and efforts to impose its causal mechanism. Many neuropsychiatrists with long clinical experience in their trade, however, are no longer that cocksure. They often wonder about multiple aetiologies and about the existence of mechanisms that generate behavioural copies of the organic symptoms; or they

postulate the hypothesis that the expressional systems in the human may have a narrow repertoire and act as final common pathways to a variety of triggers, some organic, some semantic.

Such psychopathological hypotheses generate fresh approaches to the analysis of mental symptoms which can only be undertaken by trained

psychiatrists. They offer a natural and privileged space for psychiatric research. Unfortunately, it is one space that it is being abandoned by psychiatrists who want to become mini-neurologists -radiologists or -geneticists. Descriptive psychopathology remains the fons et origo of all others ancillary disciplines in psychiatry, and hence such diaspora must be deeply regretted.

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Correspondencia
Germán E. Berríos
Addenbrooke's Hospital
Cambridge University Hospitals NHS Foundation Trust,
Hills Rd, Cambridge CB2 0QQ, United Kingdom
geb11@cam.ac.uk