

WHERE DOES THE TERM "NEUROPSYCHOLOGY" COME FROM?

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ABSTRACT

It is widely believed that the term "neuropsychology" was first used by Sir William Osler in 1913. Evidence will be presented to the effect that the term was already in use among scholars from the mid XIXth century to the early XXth century. Furthermore, its appearance in conjunction with a translation of J.A. Unzer's "Principles of Physiology" suggests that the term may have in fact originated even earlier.

RÉSUMÉ

Il est généralement admis que le terme "neuropsychologie" a été utilisé pour la première fois par Sir William Osler en 1913. Nous présentons un certain nombre d'éléments qui portent à croire que le terme était déjà utilisé par des spécialistes depuis le milieu du XIXième siècle jusqu'au début du XXIème siècle. De plus, sa présence dans une traduction du texte de J.A. Unzer "Principes de Physiologie", porte à croire que le terme a peut-être des origines encore plus antérieures.

In recent years, there has been some discussion as to the origin of the term "neuropsychology". The debate was engaged following Kolb and Wishaw's [6] claim that the term was first used by Donald Hebb [5] in 1949.

Following this initial claim, Bruce [1] presented evidence to the effect that the term had in fact originated much earlier. According to Bruce "The term 'neuropsychology' appears to have been first used formally by Sir William Osler in 1913" (p. 813). Osler used the term in a speech at the opening of the Henry Phipps Psychiatric Clinic of the Johns Hopkins Hospital in Baltimore on April 16, 1913. What may be considered as the first printed version of the term appeared in two separately published, albeit identical, papers [9, 10]. In both instances, the term is hyphenated: "neuro-psychology".

Reviews of Osler's career [3, 7] suggest that he had a substantial interest in a number of topics relating to neuropsychology and the neurosciences in general. However, we wish to report several pieces of evidence to the effect that the term "neuropsychology" appears in print well before Osler supposedly coined it.

Working backward from Osler's speech, one first encounters the use of the term, or of its derivatives, in 1910 in an article on aphasia and apraxia by Adolf Meyer [8]. While talking about apraxia, Meyer states:

What simulated that which in neuropsychological slang is called a loss of memories of movements, proved to be the partial lack of support by the sensory part of the brain, and the inability to use the experience of the other side [8, p. 242].

At the time, Meyer was a professor of psychiatry at Johns Hopkins University and would soon be the founder and director of the Henry Phipps Psychiatric Clinic. He would also become associated with the concept of "psychobiology", a broad and integrative approach to psychiatry that emphasized the taking into account of psychological as well as biological factors in explaining mental disorders [14]. Given the particular context in which Osler used the term (i.e., the official opening of the Henry Phipps Psychiatric Clinic), one gets a better understanding of what he may have been alluding to.

Continuing backward in time, in 1906 Porter [12] used the term "neuro-psychology" in his review of the German to English translation of a book published in 1905 by France [4]. According to Porter, "The author is not quite prepared to say that plants feel pain and have soul, but neither is he satisfied with the position taken by neuro-psychology" (p. 289). The use of the hyphen is unclear, since the word occurs at the end of a line and is broken at that point where the hyphen appears.

The term also appears in the English translation of France's book:

The students of life will never find an objective "Soul", but only nerve and brain activity - and these are always united to nerves, ganglion cells and brain. For the exact student of nature, therefore, there exists no "science of the soul", but only a "science of nerve life".

So much for the ruling school of neuropsychology. Perhaps my readers are satisfied with this view. As for myself, I am not quite satisfied with it [4, p. 132].

The hyphen in "neuropsychology" as seen in this quotation also occurs at the end of a printed line. It seems reasonable to assume that had this not been the case, "neuropsychology" would have been written without a hyphen. We have been unable to determine from the translation of France's book to what the "ruling school of neuropsychology" may have referred. Among the few references cited at the end of the book, only those attributed to Jacques Loeb appear to be of any relevance here (viz., "Studies in General Physiology" and "Comparative Physiology of the Brain and Comparative Psychology"), as all the other references pertain to the study of plants. Unfortunately, the publication dates were omitted, but as nearly as we can determine, they would appear to be 1900 and 1905 respectively. However, this has little if any bearing with respect to the origin of the term "neuropsychology" which, as we will now show, predates Loeb's birth in 1856.

Indeed, from 1905, the printed version of the term "neuropsychology" can be moved back twelve more years to 1893 when it was included in Dunglison's Dictionary of Medical Science [2]. The term appeared in an unhyphenated form and was defined as "Neurology including psychology" [2, p. 751]. Although the dictionary was published in 1895, the Preface is dated September, 1893. The Oxford English Dictionary or OED [11], our initial source for the Dunglison [2] reference, cites 1893, apparently on the basis of the date of the Preface.

The OED also cites the use of the terms "neuro-psychological" and "neuro-psychologist" in Laycock's 1851 English translations of J.A. Unzer's Principles of Physiology and G. Prochaska's dissertation [13]. More specifically, Laycock used both terms in his Introduction to the translations. The OED cites their uses within brief passages that are quoted from Laycock, but we thought it useful here to provide more extensive quotations of the relevant passages by Laycock that contain the terms:

In 1759 he [Unzer] established a weekly medical journal, "The Physician" This journal was translated into Danish, Swedish, and Dutch, and was published during the years 1759-1764; the neuro-psychological essays he inserted in it are frequently referred to in the present work [13, p. ii].

Sylvius, however, followed Descartes, while Willis was influenced in the formation of his theories by the doctrines of Paracelsus. There was, however, yet another neuro-psychologist, whose name is less known in England, but who was a contemporary of Sylvius and Willis, and taught identical or analogous doctrines, with brilliant success, at Jena - this was G.W. Wedel, the teacher of Hoffmann and Stahl - and it is through him that we have to trace the views of Unzer in a direct line from Willis [13, p. vi].

Although neither the term "neuropsychology" nor its derivatives appear in the indexes to the Laycock translations, one cannot exclude the possibility that the terms might have appeared elsewhere in the translations or in the original works themselves. It is also important to emphasize that Laycock's uses of derivatives of "neuropsychology" occurred only in reference to Unzer's work. Skimming through Laycock's translation of Prochaska's dissertation, which Laycock translated almost literally (see below), we were unable to find the term "neuropsychology" or any of its derivatives.

It is important to mention Laycock's approach to the translations in terms of whether Unzer or Prochaska might have used "neuropsychology" or its derivatives as opposed to whether Laycock himself supplied these terms. Laycock explained his approach to the translations on pages xiii and xiv in the Introduction. It should be noted that two page xii's were numbered as such, but no page xiii was so numbered. The second page xii is followed by page xiv, and we use xiii here when referring to the second page xii. In his Introduction, Laycock wrote:

The council of the [Sydenham] Society having required that the two works should be comprised in one volume, a question arose as to the mode in which this condition should be accomplished. It was obvious that one of the two works must be abridged; and the work of Unzer being an octavo of 800 pages while the tract of Prochaska is very short, it was equally obvious that the condition could only be fulfilled by abridging the larger. But an abridgement implies a free translation ... [13, p. xiii. Original work by Unzer published 1771 and by Prochaska published 1784].

Laycock therefore decided "to give a full and literal translation of Prochaska's "Dissertation" omitting only the Appendix" [13, p. xiii]. Laycock then listed the six guiding principles that he attempted to follow in abridging Unzer's book. Perhaps, the most relevant principle, as it pertains to the subject of this presentation, was the sixth: "To remodel and freely translate various words and phrases used by the author in a special sense" [13, p. xiv]. Hence it is difficult to determine whether Unzer had actually used the term or whether Laycock had remodeled or freely translated a different term that Unzer may have used.

Nevertheless, Laycock's use of the terms "neuropsychological" and "neuropsychologist" in the quotations above tends to suggest that these terms were not newly coined by him and that they were in relatively common use amongst specialists of the nervous system in the mid-XIXth century. Whether such terms appear in the works of Descartes, Hoffmann, Paracelsus, Stahl, Sylvius, Wedel, or Willis, amongst others, which could move the origins of the term "neuropsychology" back even further, remains to be determined. However, given the fact that the terms "neurology" and "psychology" are believed to have originated in the XVIIth and XVIth centuries respectively [11], this is a suggestion that certainly warrants further investigation.

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