

Collated

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**THOMAS A. BAN AND MARCELO CETKOVICH-BAKMAS: CARL  
WERNICKE'S ELEMENTARY SYMPTOMS AND SEJUNCTION  
HYPOTHESIS**

**Collated Document**

**Thomas A. Ban**

This document includes Thomas A. Ban's vignette on *elementary symptoms* and Marcelo Cetkovich-Bakmas' vignette on *sejunction hypothesis/theory*. It also includes Hector Warnes' comment on Cetkovich's vignette and Warnes' essay *Reflections on Wernicke's sejunction thory/*.

The document is now open to all INHN members for final comment.

Thomas A. Ban	September 17, 2015	Elementary symptoms vignette
Marcelo Cetkovich-Bakmas	October 1, 2015	Sejunction hypothesis/theory vignette
Hector Warnes	January 21, 2016	Comment on vignette on sejunction hypothesis/theory
Hector Warnes	August 14, 2016	Reflections on Wernicke's sejunction theory

**Thomas A. Ban: Elementary symptoms**

An "elementary symptom" (Elementarsymptom) is a psychopathological symptom, from which the other symptoms of a mental syndrome are derived (Krahl 2000). The concept was first presented by Carl Wernicke on July 19, 1892, in Breslau, Germany (now Wrocklaw,

Poland), in a discussion at the 59<sup>th</sup> meeting of the East German neurologists (Nervenärzte), published, in 1893, in the *Allgemeine Zeitschrift für Psychiatrie und psychisch-gerichtlich Medizin* (Wernicke 1893). The term, itself, was introduced about a year later, in 1894, at the 61<sup>st</sup> meeting of the same group (Wernicke 1895). The origin of the concept of “elementary symptom” is in conceptualization of clinical observations. The use of “elementary symptoms”, as a “nosological principle” for the identification of mental diseases dates back to Wernicke’s description and separation of Anxiety-Psychosis from other psychoses, in 1894 (Wernicke 1895).

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Wernicke C. Diskussionsbeitrag auf dem 59. Treffen des Vereins ostdeutscher Irrenärzte. Leubus, 19. Juni 1892. *Allgemeine Zeitschrift für Psychiatrie und psychisch-gerichtliche Medizin* 1893: 486-9.

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### **Marcelo Cetkovich-Bakmas: Sejunction hypothesis/theory**

“Sejunction hypothesis” (Franzek 1990; Pichot 1983; Shorter2005), also referred to as “sejunction theory” (Pichot 1983; Shorter 2005), postulates that psychopathological symptoms result from interruption (“sejunction”) of associative connections in the brain. It was put forward by Carl Wernicke, in 1900, in the 12th lecture of his *Textbook of Clinical Lectures in Psychiatry* (Wernicke 1900). The “hypothesis” is conceptually derived. It is built on Wernicke’s adoption of Griesinger’s “psychic reflex” as the basis of mental activity and his notion that the nature of psychopathology is determined by the site of an assumed severance in the path of the “psychic reflex”. (Griesinger 1843; Wernicke 1906).

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### **Hector Warnes' comment on Marcelo Cetkovich-Bakmas' vignette on sejunction hypothesis/theory**

Congratulation to Marcelo Cetkovich for his concise entry of Wernicke's "sejunction thory/hypothesis" into INHN's Dictionary. It might be of interest that Otto Hans Adolf Gross in his paper "Dementia Sejunctiva", published in the early years of the 20th century, just a few years after the "theory" was introduced, referred to "sejunction" as a "closed circuit" of associative ties characterized by a loss of certain associations assumedly caused by an interruption of neuronal pathways. He went even further by suggesting that "sejunction" could explain fragmentation of the thinking process with collapse of several functionally separate series of associations and a break in the continuity of *temporal memory* (Gross 1904).

It might be also of interest that Karl Jaspers understood "sejunction" as the underlying pathophysiology of a variety of "psychic disturbances". In his *General Psychopathology*, he wrote: "The basis of the majority of psychic disturbances lies primarily in the parting of the association-links or sejunction. Where there are false ideas or judgements in an individual or they are in conflict with each other or with reality this is thought to be due to a 'loosening up' in the firm network of associations. By severing the continuity tracks, by an absence of certain associative performances a number of different personalities may simultaneously arise

in the same individual and a ‘break up’ of individuality occur. Sejunction can also explain a large number of hallucinations... if association is interrupted, excitation processes are dammed up and thus a progressively increasing stimulus is established which brings the hallucinations about. Similarly ‘autochthonous ideas’ (the so called ‘made thoughts’) are due to a process of irritation when continuity is interrupted whereas compulsive thinking is explained by a process of irritation while continuity is preserved. Abnormal movements (parakinesis) are also due to these sejunctions. Because hallucinations are due to sejunction, Wernicke finds it quite feasible that they are without any counter-image and therefore there is no criticism of them; also that they so often have contents of an imperative character...”(Jaspers 1963).

### **References:**

Gross OHA. Dementia Sejunctiva. *Neurologisches Zentralblatt* 1904; 23: 1144-6.  
 Jaspers K. *General Psychopathology*- (translated by J. Hoenig and Mariam W. Hamilton). Manchester: Manchester University Press; 1963.

## **Hector Warnes: Reflections on Wernicke’s sejunction theory**

### **Hector Warnes**

My reflections on Wernicke’s “sejunction theory” were triggered by Marcelo Cetkovich’s excellent entry of the term in INHN’s Dictionary.

It might be of interest that Otto Hans Adolf Gross in his paper, “Dementia Sejunctiva”, published in the early years of the 20th century, just a few years after the “theory” was introduced, referred to “sejunction” as a “closed circuit” of associative ties characterized by a loss of certain associations assumedly caused by an interruption of neuronal pathways. He went further by suggesting that “sejunction” could explain fragmentation of thinking process, with collapse of several functionally separate series of associations and a break in the continuity of *temporal memory* (Gross 1904).

It might also be of interest that Karl Jaspers understood “sejunction” as the underlying pathophysiology of a variety of “psychic disturbances”, consisting essentially in a loosening up in the texture of associations based on excitatory or inhibitory processes leading to discontinuity or fragmentation. The consequence is as Jaspers calls it, “a break up of individuality”. In his *General Psychopathology*, he wrote: “The basis of the majority of

psychic disturbances lies primarily in the parting of the association-links or sejunction. Where there are false ideas or judgements in an individual or they are in conflict with each other or with reality this is thought to be due to a 'loosening up' in the firm network of associations. By severing the continuity tracks, by an absence of certain associative performances a number of different personalities may simultaneously arise in the same individual and a 'break up' of individuality occur. Sejunction can also explain a large number of hallucinations... if association is interrupted, excitation processes are dammed up and thus a progressively increasing stimulus is established which brings the hallucinations about. Similarly 'autochthonous ideas' (the so called 'made thoughts') are due to a process of irritation when continuity is interrupted whereas compulsive thinking is explained by a process of irritation while continuity is preserved. Abnormal movements (parakinesis) are also due to these sejunctions. Because hallucinations are due to sejunction, Wernicke finds it quite feasible that they are without any counter-image and therefore there is no criticism of them; also that they so often have contents of an imperative character..." (Jaspers 1963). Karl Jaspers appreciated Wernicke's work to the extent that he states: "No scientist can afford not to study him seriously" (pp 536-537). In this masterful writings of Jaspers resonates ideas of Sigmund Freud, Kurt Schneider and of course Meynert. In my opinion, Freud nurtured himself in associational physiology to break the discontinuities and hindrances through a technique of free-association.

You would notice that Jaspers attempts to soften Griesinger's idea that "mental diseases are brain diseases" which was adopted by Theodor Meynert and Carl Wernicke. Freud's teachers were Meynert (Wernicke was trained under Meynert), Brücke and Fechner. From his position of being a Somatiker, Freud drifted to become a Psychiker, though he later recognized the limitations of Psychoanalysis in his masterpiece: "Analysis terminable and Interminable" (1937, The Standard Edition, vol. XXIII)].

Reading these authors, one cannot help evoking Freud's inspirations, in particular, with regard to free associations and association disturbances and relating them to unconscious mentation. Eugen Bleuler likewise used the term 'loosening of association' as a primary symptom in schizophrenia and the question of Spaltung of the mind is attributed to a psychotic process. I have not come across a comparison between Spaltung and Sejunction. Both seem to refer to a process of loss of continuity and fragmentation of the mind.

As one notices Gross stands midway between Kraepelin with whom he worked and Eugen Bleuler. Gross obviously wanted to bridge the concept of Dementia Praecox of Kraepelin and the later concept of Schizophrenia (from the greek skhizem, to split and phren

mind). Spaltung or splitting was adopted later by Freud instead of dissociation or division. It referred to the more severe mental disorders when the mechanism of repression are at fault and the mind is overflowed by the id-impulses. I was surprised when I read in Campbell's Psychiatric Dictionary: "Wernicke's term for blocking and other forms of dissociation. The concept is seldom used today, because it includes forms of dissociation which are widely removed both psychologically and nosographically" (p. 274).

In his *Tratado de las alucinaciones*, Henry Ey states that both Wernicke with his theory of sejunction and de Clérambault with his theory of 'mental automatism' based the mechanism in the neurophysiology of nerve conduction.

The use of functional magnetic resonance imaging and PET scanning is beginning to localize areas of the brain where mental circuits are dysfunctional in particular types of psychosis

Spaltung, sejunction, splitting and cleavage all mean the same at least in the clinical use of the word (to separate, break apart or divide into two or more parts, referring to the mind). When the psychosis is severe, such as the amentia of Meynert, it is called Bewusstseinszerfall. Eugen Bleuler, in his book *Dementia Praecox or the group of Schizophrenias* was of the opinion that Wernicke's Sejunction was the same as his own concept of Spaltung. However, Bleuler considered that the word sejunction was used only in an anatomico-physiological sense, eg., Sejunction leads to a stasis of the underlying chemistry of brain associations (Ausassoziieren). We know that, at this point, Bleuler was trying to set himself apart from Kraepelin's and from Wernicke's theories. For Bleuler, Splitting, Spaltung, Tearing apart, Disaggregation, ZerreiSSung or Zerspaltung are the basis of the complex phenomenon (from the greek phainesthai, to appear) seen in this illness. It constitute a loosening up of the associative texture that can lead to an irregular fragmentation of the process of thinking and an incapacity to direct and control one's own thoughts. They represent a primary symptom.

Bleuler credits Kraepelin with the introduction of the word interception of the process of thinking which is different from inhibition as seen in Melancholia. In the case of interception of the stream of thoughts, the association of ideas come to a sudden halt and they resume with other unrelated ideas: "The association splitting can also lead to pathological ambivalence in which contradictory feelings or thoughts exist side by side without influencing each other" (pp. 354-355, in *Dementia Praecox or the group of Schizophrenias*). When the illness is severe, the total personality loses its unity or integration to the point that one set of complexes dominates the personality for a time, while other groups of ideas or

drives are 'split off' and the whole discourse seem odd, queer, shiftless and full of incongruities. Bleuler's observations come from the perspective that: "Every psychical activity rests upon the interchange of material derived from sensation and from memory traces to associations" (p. 1) and further, "Perception, thinking, doing, cease as soon as association is impeded" (p. 3).

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