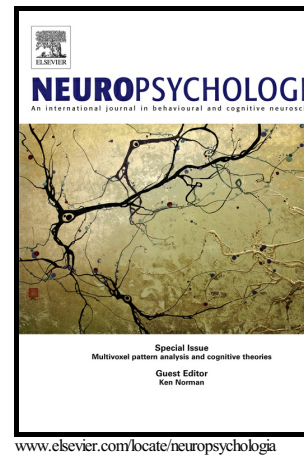


The contribution of neurodegenerative diseases to the modelling of semantic memory: A new proposal and a review of the literature

Gian Daniele Zannino, Carlo Caltagirone, Giovanni A. Carlesimo



PII: S0028-3932(15)30069-5
DOI: <http://dx.doi.org/10.1016/j.neuropsychologia.2015.06.023>
Reference: NSY5637

To appear in: *Neuropsychologia*

Received date: 9 February 2015
Revised date: 15 June 2015
Accepted date: 17 June 2015

Cite this article as: Gian Daniele Zannino, Carlo Caltagirone and Giovanni A Carlesimo, The contribution of neurodegenerative diseases to the modelling of semantic memory: A new proposal and a review of the literature *Neuropsychologia*, <http://dx.doi.org/10.1016/j.neuropsychologia.2015.06.023>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

The contribution of neurodegenerative diseases to the modelling of semantic

memory: a new proposal and a review of the literature

Gian Daniele Zannino¹, Carlo Caltagirone^{1, 2}, Giovanni A. Carlesimo^{1, 2}¹I.R.C.C.S. Fondazione Santa Lucia, Roma, Italy, ²Clinica Neurologica, Università di Roma Tor Vergata, Italy,

Corresponding author: Gian Daniele Zannino; e-mail: g.zannino@hsantalucia.it; telephone: +39 0651501186

Abstract

This paper provides a focused review of the literature on semantic impairment in semantic dementia (SD) and Alzheimer's disease (AD). An attempt is made to interpret the most relevant phenomena in the light of a new model of semantic memory. This model comprises a language-based component (disrupted in SD and AD), which supports our ability to establish reliable token vs. type relationships in the service of propositional thinking, and a phylogenetically older sensorimotor component, which is needed to categorize our environment in a more implicit way. Extant neuropsychological models of semantic memory are also reviewed and compared with the new model in terms of their ability to explain the observed phenomena and to deal with the problem of establishing token vs. type relationships starting from inconsistent cross modal input representations and arbitrary category boundaries.

Keywords: semantic memory, semantic dementia; Alzheimer's disease

Contents

1. Introduction
 - 1.1. The negligible role of language in the Associationist view of semantics
 - 1.2. Scope and plan of the present paper
 - 1.3. The problem of inconsistent cross modal representations
 - 1.3.1. How current semantic memory models address the problem of inconsistent representations
 - 1.4. The problem of arbitrary concept boundaries
 - 1.4.1. The need to rely on word meanings to solve the problem of arbitrary concept boundaries
 - 1.5. The functional architecture of semantic memory in the present approach
 - 1.5.1. The division of labour between language-based and sensorimotor semantics in the present approach

Download English Version:

<https://daneshyari.com/en/article/7319857>

Download Persian Version:

<https://daneshyari.com/article/7319857>

[Daneshyari.com](https://daneshyari.com)