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Investigation on the Causes of Semantic Category-specific Deficits:The Role of Object Manipulability

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Abstract

Objective To investigate the role of object manipulability in semantic category-specific deficits.

Methods A brain-injured patient was tested in several tasks(Object decision, picture naming, word-picture verification, naming to definition, attribute judgment, word-word association matching) to assess the living-nonliving dissociation. Logistic regression analysis was conducted to study the role of object manipulability in categorical dissociation.

Results In picture naming, word-picture verification, naming to definition and attribute judgment, the patient performed better at nonliving items than at living items($P<0.01$). Logistic regression revealed that the predictive role of semantic category for naming accuracy was replaced by object manipulability after the latter was included in the equation($P<0.01$).

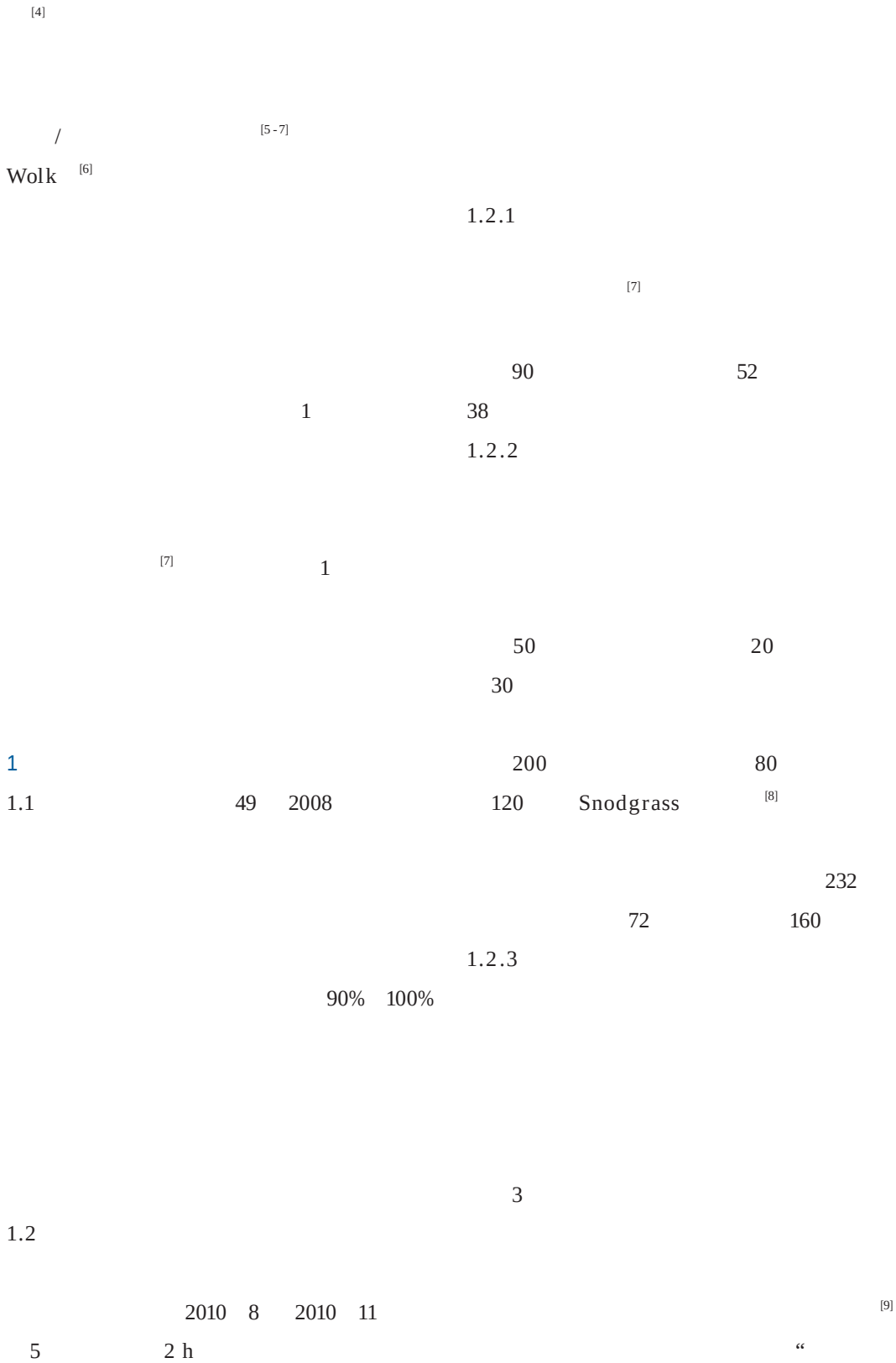
Conclusion The better performance at nonliving items at living items of the patient could be due to his preservation of manipulation knowledge about nonliving things.

Key Words Brain injuries; Neuropsychology; Semantics; Logistic models

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1 Tulving, E. Episodic and semantic memory[M]// TULVING, E. & DONALDSON W. Organization of memory. Academic:New York, 1972:381-403.

2 Mahon BZ, Caramazza A. Concepts and categories:a cognitive neuropsychological perspective[J]. Annu Rev Psychol, 2009, 60:27-51

3 Magnie M, Besson M, Poncet M, et al. The Snodgrass and Vanderwart set revisited:norms for object manipulability and for pictorial ambiguity of objects, chimeric objects, and nonobjects[J]. J Clin Exp Neuropsych, 2003, 25:521-560.

4 Culham JC, Valyear KF. Human parietal cortex in action[J]. Curr Opin Neurobiol, 2006, 16:205-212.

5 Magnie M, Ferreira C, Giusiano B, et al. Category specificity in object agnosia:Preservation of sensorimotor experiences related to objects[J]. Neuropsychologia, 1999, 37:67-74.

6 Wolk DA, Coslett HB, Glosser G. The role of sensory-motor information in object recognition:evidence

from category-specific visual agnosia[J]. Brain Lang, 2005, 94, 131-146.

7 Lin N, Guo QH, Han ZZ, et al. Motor knowledge is one dimension for concept organization:Further evidence from a Chinese semantic dementia case [J]. Brain Lang, 2010, in press.

8 , , . 235 [J]. , 1989, 22:55-62.

9 Arévalo A, Perani D, Cappa SE, et al. Action and object processing in aphasia:From nouns and verbs to the effect of manipulability[J]. Brain Lang, 2007, 100:79-94.

10 , , , . " [C]// . : , 1997:459-466.

11 Mahon BZ, Caramazza A. Concepts and categories:a cognitive neuropsychological perspective[J]. Annu Rev Psychol, 2009, 60:27-51.

12 Cree GS, McRae K. Analyzing the factors underlying the structure and computation of the meaning of chipmunk, cherry, chisel, cheese, and cello(and many other such concrete nouns)[J]. J Exp Psychol Gen, 2003, 132:163-201.

13 Mahon BZ, Milleville S, Negri GAL, et al. Action-related properties of objects shape object representations in the ventral stream[J]. Neuron, 2007, 55:507-520.

14 Goodale MA and Milner AD. Separate visual pathways for perception and action[J]. Trends Neurosci, 1992, 15:20-25.

15 Goodale MA, Milner AD, Jakobson LS, et al. A neurological dissociation between perceiving objects and grasping them[J]. Nature, 1991, 349:154-156.

16 Ungerleider LG. Functional brain imaging studies of cortical mechanisms for memory[J]. Science, 1995, 270:769-775.

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