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Paradoxical prosopagnosia in semantic dementia

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ABSTRACT

Objective: To study episodic and semantic memory for faces and other non-verbal information in semantic dementia (SD). Background: Semantic memory impaired in the rare diagnosis of SD by definition, including knowledge about well- known persons and their appearance. Episodic memory is held to be better preserved. Methods: Two computerized face recognition tests were administered, one measuring episodic memory (Male Faces) and one semantic memory (Political Faces) in addition to a comprehensive test battery. A computerised test of non-verbal semantic memory for national symbols (Euro Flags) was also administered druring the retention interval of the Male Faces test. Results: The SD participants were severely impaired in the episodic face recognition test. In contrast, their performance was in the normal range in Euro Flags and Political Faces, based on knowledge of national political figures. Conclusion: The results are discussed in terms of preserved dynamic memory and severely impaired memory for static facial information in semantic dementia. Research proposals regarding further studies of this paradoxical prosopagnosia in semantic dementia are presented in order to clarify issues regarding static versus dynamic aspects of face memory.

KEYWORDS

Face Recognition; Semantic Dementia; Prosopagnosia; Temporal Atrophy

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References

[1] Crook, T.H. and Larrabee, G.J. (1992) Changes in facial recognition memory across the adult life span. Journal of Gerontology, 47, 138-141. HHUdoi:10.1093/geronj/47.3.P138U

[2] Measso, G., Romani, L., Martini, E. and Zappala, G. (1990) Preliminary analysis of effects of “normal” aging on different memory processes and abilities. Perceptual & Motor Skills, 71, 395-401.

[3] Snowden, J.S., Goulding, P.J. and Neary, D. (1989) Semantic dementia: A form of circumscribed cerebral atrophy. Behavioural Neurology, 2, 167-182.

[4] Hodges, J.R., Patterson, K., Oxbury, S. and Funnell, E. (1992) Semantic dementia. Progressive fluent aphasia with temporal lobe atrophy. Brain, 115, 1783-1806. HHUdoi:10.1093/brain/115.6.1783U

[5] Snowden, J.S., Thompson, J.C. and Neary, D. (2004) Knowledge of famous faces and names in semantic dementia. Brain, 127, 860-872. HHUdoi:10.1093/brain/awh099U

[6] Simons, J.S., Graham, K.S., Galton, C.J., Patterson, K. and Hodges, J.R. (2001) Semantic knowledge and pisodic memory for faces in semantic dementia. Neuropsychology, 15, 101-114. HHUdoi:10.1037/0894-4105.15.1.101U

[7] Mondini, S. and Semenza, C. (2006) How Berlusconi keeps his face: A neuropsychological study in a case of semantic dementia. Cortex, 42, 332-335. HHUdoi:10.1016/S0010-9452(08)70359-9U

[8] Lewin, C. and Herlitz, A. (2002) Sex differences in face recognition—Women ' s faces make the difference. Brain and Cognition, 50, 121-128. HHUdoi:10.1016/S0278-2626(02)00016-7U

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[9] HHJulin, P., HHHHAlmqvist, O., HHHHBasun, H., HHHHLannfelt, L., HHSvensson, L., Winblad, B. and HHWahlundHH, L.O. (1998) Brain volumes and regional cerebral blood flow in carriers of the Swedish Alzheimer amyloid protein mutation. Alzheimer ' s disease and associated disorders, 12, 49-53. HHUdoi:10.1097/00002093-199803000-00008U

[10] Neary, D., Snowden, J.S., Gustafsson, L., Passant, U., Stuss, D., Black, S., Freedman, M., Kertesz, A., Robert, P.H., Albert, M., Boone, K., Miller, B.L., Cummings, J. and Benson, D.F. (1998) Frontotemporal lobar degeneration: A consensus on clinical diagnostic criteria. Neurology, 51, 1546-1554. HHUdoi:10.1212/WNL.51.6.1546UH

[11] Jackendoff, R. (1996) The architecture of the linguistic- spatial interface. In: Bloom, P., Peterson, M., Nadel, L. and Garrett, M., Eds., Language and Space, MIT Press, Cambridge, 1-30.

[12] Onari, K. and Spatz, H. (1926) Anatomische beitrage zur lehre von der pickschen umschriebenen grosshirnrindenatrophie (" Picksche Krankheit "). (English version: Anatomical contributions to the theory of the circumscribed cortical atrophy of Pick ' s disease.) Zeitschrift für die Gesamte Neurologie und Psychiatrie, 101, 470-511.

[13] James, T. and Gauthier, I. (2003) Auditory and action semantic feature types activate sensory-specific perceptual brain regions. Current Biology, 13, 1792-1796.

[14] Tyler, L.K., Stamatakis, E.A., Dick, E., Bright, P., Fletcher, P. and Moss, H. (2003) Objects and their actions: Evidence for a neurally distributed semantic system. Neuroimage, 18, 542-557. HHUdoi:10.1016/S1053-8119(02)00047-2U

[15] Kable, J.W., Lease-Spellmeyer, J. and Chatterjee, A. (2002) Neural substrates of action event knowledge. Journal of Cognitiuve Neuroscience, 14, 795-805. HUdoi:10.1162/08989290260138681U