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**Autistic language abnormality: Is it a second-order context learning defect? – The view from Latent Semantic Analysis.**

Laudauer and Dumais in Psychological Review (1997) proposed a computer simulation of word meaning acquisition called Latent Semantic Analysis (LSA). This showed that the learning of word meanings by children depended upon second-order (indirect) context associations rather than first-order (direct) ones. However, if normal language depends upon second-order context associations then neurological-based mental handicaps should exist in which they are impaired. Such afflicted individuals should show first-order dependent -- and so profoundly abnormal -- notions of word meanings. Such a deficit only appears to be found in one condition: autism. Kanner (1946) noted that autistic children in language learning relied upon direct associations. For example, a child that had heard the phrase, 'Peter eater' when a saucepan dropped ever afterwards made a direct link between the two so that 'Peter eater' meant 'saucepans'. Frith and Happe (1994, p. 98) likewise note autistic people "use single words in a simple, associative way, so that 'Apple' always means 'Give me apple'. According to Happe there is "an autistic impairment in extracting meaning in context" (Happe, 1997). I review autistic language abnormality as what happens when a child attempts to learn word meanings without the aid of second-order context. This conjecture is testable since LSA is a computational simulation model and so can be 'lesioned'. Interestingly, underneath LSA is a general account of second-order context information processing that might be potentially used in many cognitive and other domains. This raises the possibility that autism might have links to a general deficit in second-order context information processing.

References


