Longitudinal detection of dementia through lexical and syntactic changes in writing: a case study of three British novelists.

Xuan Le, Ian Lancashire, Graeme Hirst, Regina Jokel


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We present a large-scale longitudinal study of lexical and syntactic changes in language in Alzheimer's disease using complete, fully parsed texts and a large number of measures, using as our subjects the British novelists Iris Murdoch (who died with Alzheimer's), Agatha Christie (who was suspected of it), and P.D. James (who has aged healthily). We avoid the limitations and deficiencies of Garrard et al.'s [(2005), The effects of very early Alzheimer's disease on the characteristics of writing by a renowned author. Brain, 128 (2): 250–60] earlier study of Iris Murdoch. Our results support the hypothesis that signs of dementia can be found in diachronic analyses of patients’ writings, and in addition lead to new understanding of the work of the individual authors whom we studied. In particular, we show that it is probable that Agatha Christie indeed suffered from the onset of Alzheimer's while writing her last novels, and that Iris Murdoch exhibited a ‘trough’ of relatively impoverished vocabulary and syntax in her writing in her late 40s and 50s that presaged her later dementia.
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