

# "Opening an emotional dimension in me": Changes in emotional reactivity and emotion regulation in a case of executive impairment after left fronto-parietal damage

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Dysexecutive impairment is a common problem after brain injury, particularly after damage to the lateral surface of the frontal lobes. There is a large literature describing the cognitive deficits associated with executive impairment after dorsolateral damage, however, little is known about its impact on emotional functioning. This case study describes changes in a 72-year-old man (Professor F) who became markedly dysexecutive after a left fronto-parietal stroke. Professor F's case is remarkable in that, despite exhibiting typical executive impairments, abstraction and working memory capacities were spared. Such preservation of insight related capacities allowed him to offer a detailed account of his emotional changes. Quantitative and qualitative tools were used to explore changes in several well-known emotional processes. The results suggest that Professor F's two main emotional changes were in the domain of emotional reactivity (increased experience of both positive and negative emotions) and emotion regulation (down-regulation of sadness). Professor F related both changes to difficulties in his thinking process, especially a difficulty generating and manipulating thoughts during moments of negative arousal. These results are discussed in relation to the literature on executive function and emotion regulation. The relevance of these findings for neuropsychological rehabilitation and for the debate on the neural basis of emotional processes is addressed. © 2014 The Menninger Foundation.