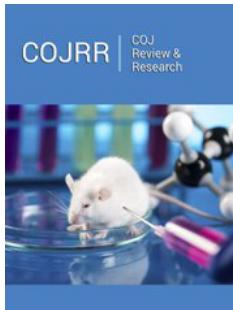


What the Cerebellum-Controlled Cerebro-Cerebellar System Learns from Highly Repetitive News Media and Social Media Accounts of Mass Shootings

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Introduction

Through the highly emotional, excessively repetitive, and everywhere-immediate accounts of mass shootings, notably in the United States, news media and social media precipitate strong, automatic emotional feelings. And, increasingly often in recent times some individuals become intensely obsessed to the point where they themselves commit mass shootings. This short opinion piece offers an explanation of the brain mechanisms leading to automaticity of movement, thought and emotion, and how they thereby can give rise to increases in mass shootings.

How mass shootings become automated in the obsessed individual: The predominant role of the cerebellum in the cerebro-cerebellar system

Van Overwalle et al. [1] convincingly argued that upon the repetition of behavior, thoughts and observations, the cerebellum acts as a “forward controller” of all social interactions including the social self-concept (the autobiographical self). This autobiographical knowledge (one’s knowledge, feelings and judgments about past and future personal events) reliably activates the cerebellum.

This forward control means that upon repetition the cerebellum anticipates and controls automaticity in all movement, mental and social-emotional activities [2,3]. The cerebellum then sends instructions for the immediate execution of that behavior to the cerebral cortex. Over the last three decades, the basics of this cerebellum-driven forward control have been well-established by brain-imaging research on the cerebellum [4-7]. Further, Vandervert [8-10] has argued that the cerebellum is predominant in the cerebro-cerebellar system of the learning and control in the advancement and automaticity of all repetitive thought, emotion and behavior.

Conclusion

It is concluded that excessive repetition of accounts of mass shootings by news media and social media is learned as forward control models in the cerebellum that depict how and why to carry out such shootings. When through excessive repetition such obsession in the individual’s autobiographical self becomes overwhelming, these forward control models are sent to the cerebral cortex, bypass rational control (Ito, 2008), and is automatically expressed in behavior. It is suggested that the reduction of excessively repetitive accounts and discussions of mass shooting by both news media and social media could therefore reduce the continued cerebellum-driven escalation of mass shootings.

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