

Naturalistic Neuroimaging: From Film to Learning Disorders

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Abstract : Cognitive neuroscience explores neural functioning and aberrant brain activity during cognitive and perceptual tasks. Neurocinematics is a subfield of cognitive neuroscience that observes neural responses of individuals watching a film to see similarities and differences between individuals. This method is typically used for commercial use, allowing directors and filmmakers to produce better visuals and increasing their results in the box office. However, neurocinematics is increasingly becoming a common tool for neuroscientists interested in studying similar patterns of brain activity across viewers outside of the film industry. In this review, it argue that neurocinematics provides an easy, naturalistic approach for studying and diagnosing learning disorders. While the neural underpinnings of developmental learning disorders are traditionally assessed with well-established methods like EEG and fMRI that target particular cognitive domains, such as simple visual and attention tasks, there is initial evidence and theoretical background in support of neurocinematics as a biomarker for learning differences. By using ADHD, dyslexia, and autism as case studies, this literature review discusses the potential advantages of neurocinematics as a new tool for learning disorders research.

Keywords : behavioral and social sciences, neuroscience, neurocinematics, biomarkers, neurobehavioral disorders

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