



FILM, NARRATIVE AND COGNITIVE NEUROSCIENCE

Bradley, Ziang, Hamida and Paul.



Overview

- Introduction of topic and author(Bradley)
- Narration and film(Bradley)
- Event segmentation (Ziang)
- Cuts and continuity (Hamida)
- Beyond Cuts- commercials and pausing(Hamida)
- Narrative events (Paul)
- Embodied events representation (Paul)
- Conclusion (Ziang)

The Authors



Jeffrey Zack

*Professor of Psychology
and Brain Sciences*



Joseph Magliano

*Professor of Education &
Human Development*

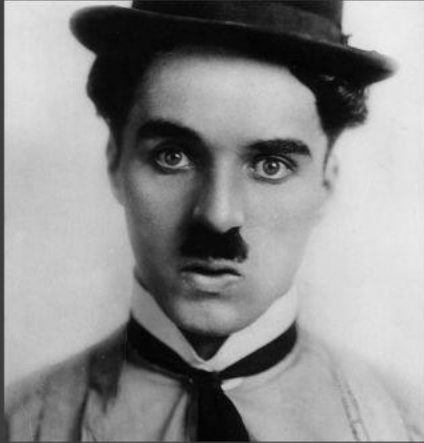
**Film, Narrative, and
Cognitive Neuroscience**

Introduction

- Films evokes emotions like real-life events.
- They employ techniques to achieve this.
- This makes you come up with a representation or a mental view through complex neural cognitive processing.
- The understanding of film comprehension helps with media literacy, emotional impact, or even storytelling and narrative creation.



Narration



- Evolution in Cinema
- Viewers task
- Technical Devices in Filmmaking
- Creation of narratives

Introduction to Event Segmentation

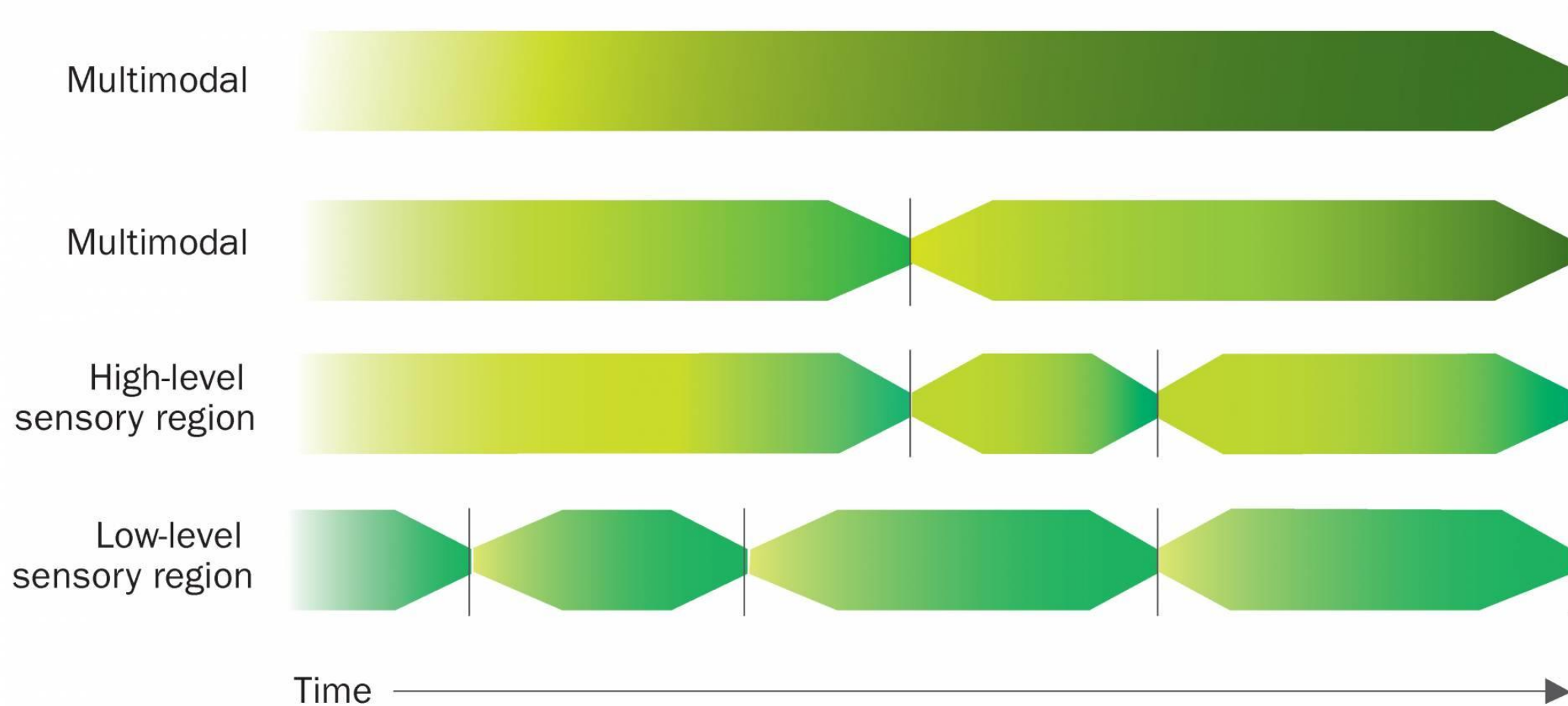
Definition: the brain naturally breaks down successive experiences into meaningful events.

Purpose: helps construct and understand real life experiences and movie narratives.

Key factors that trigger event boundaries:

- Motion, new objects or people.
- Character goal shifts, causal changes.
- Spatial/temporal changes - scene transitions, time jumps.

Event segmentation in the brain



Event Segmentation in Film Editing & Viewer Experience

Filmmakers use event segmentation to create smooth storytelling

- Action - Seamless continuation of action between clips.
- Sound - Audio cuts for smooth transitions.
- Space - Objects and characters are kept in reasonable positions.

Understanding Film Editing and its Impacts

- A cut is a transition between two shots in a film.
- Its purpose is to maintain continuity, change scene or emphasize action.
- Types of cuts: continuity (95% of cuts) and scene breaks

How Cuts Work

- **Continuity edits:** Hidden through blinks, saccades (eye movements), or visual masking (eg fast motion)
- **Scene breaks :** Occur at natural event boundaries, where viewers expect a change.
- **Cognitive Neuroscience Perspective:** Cuts align with how our brains naturally segment events.



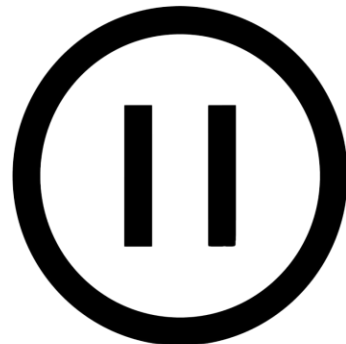
Event Segment and Cuts

- **Event Segmentation**: Our brains naturally break down continuous activity into discrete events
- **Cuts and event boundaries**: cuts that align with event boundaries

For example- a change in action, location or time feel natural

Beyond Cuts- Commercials and Pausing

- **Commercial Breaks**: Placed at event boundaries to maintain viewer engagement.
- **Pauses**: Brief interruptions e.g blank screens can disrupt memory if placed at non-boundaries
- Studies show that commercials at event boundaries improve memory , while pauses at non-boundaries recall.



Practical Implications for Filmmakers.

- **Aligning Cuts with Event Boundaries:** creates smoother, more natural transitions.
- **Using Commercials Wisely:** Placing commercials at event boundaries keeps viewers engaged.
- **Avoid Disruptive Pauses:** Pauses should be used sparingly and at natural breaks.



Conclusion for Cuts and Continuity and Beyond Cuts- Commercials and Pausing

- <https://www.youtube.com/watch?v=1Fg5iWmQjwk>
- The Grand Budapest Hotel
- Cuts are a fundamental part of film editing, and their effectiveness depends on how they align with our cognitive processes.
- Commercials and pauses also rely on event segmentation to maintain viewer engagement.
- Understanding these principles can help filmmakers create more immersive and memorable experiences.

Exploring film, narrative events, and neuroscience connections

- How audiences interpret and connect with narratives



Conceptual Representation Construction

Surface Structure

- Readers construct a representation of the text.

Textbase

- Readers construct an explicit representation of the text content.

Event Model

- An event representation that could be derived from the text or even real life.



Embodied Event Representations

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- **FILM, NARRATIVE, AND COGNITIVE NEUROSCIENCE**



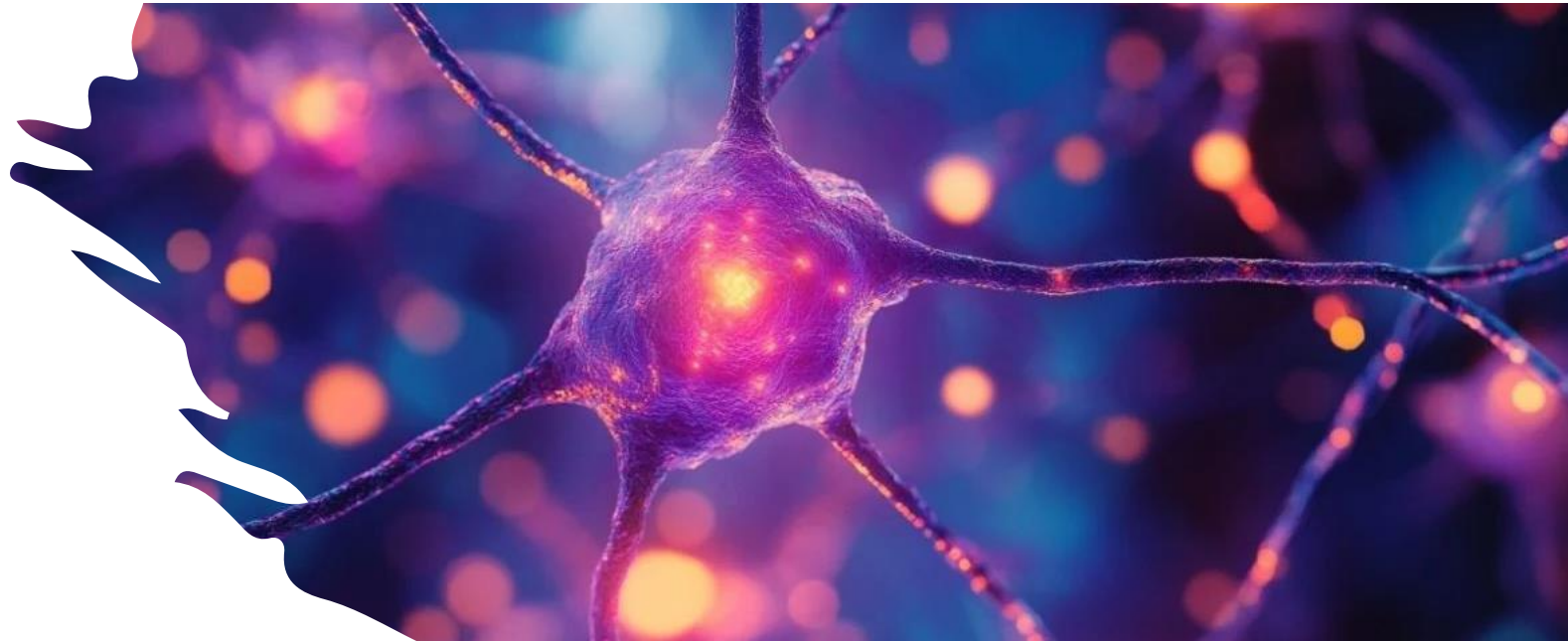
Embodied Cognition View

EVENT REPRESENTATION

- Our brains create mental models to understand narratives.

BRAIN PROCESSING

- Perceptual motoring involves forming a collection of conceptual representations encompassing perceptual and motor aspects.



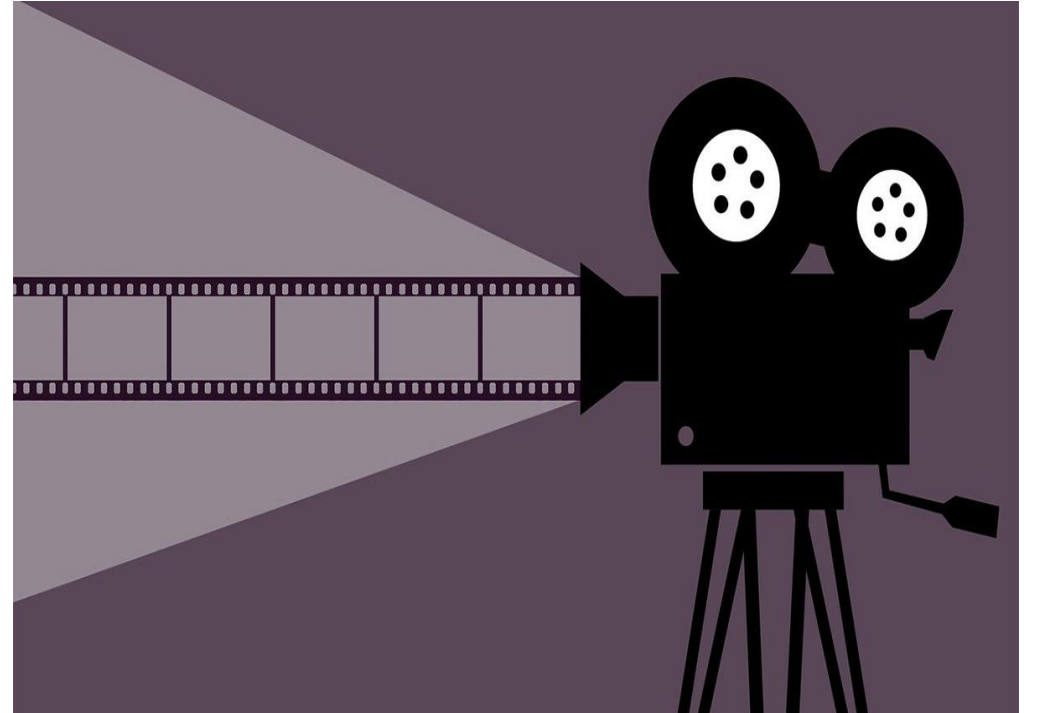
Conclusion

Our brains naturally break stories into events.

Proper editing can make a story flow and be engaging.

Inappropriate editing disrupts flow and memory.

Filmmaking combines art and science



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Elliot GrovePhoto Credit: Bertie Watson Few people know more filmmakers and screenwriters than Elliot Grove. Elliot is the founder of Raindance Film Festival (1993) and the British Independent Film Awards (1998) and Raindance London Film School (2017). He. (2023, January 9). *The 6 stages of editing as a film director*. Raindance. <https://raindance.org/the-6-stages-of-editing-as-a-film-director/>

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Joe Magliano | professor (full) | doctor of philosophy | Georgia State University, GA | GSU | Department of Learning Science | Research profile. (n.d.). <https://www.researchgate.net/profile/Joe-Magliano>