# Narrative Weak-Links: Causality in Complex Networks of Narrative Events

Catalina Iricinschi

Independent Researcher (Germany), PhD Cornell Univ. (USA)

For narrative to serve efficiently as explanatory discourse, causality has been consistently invoked as the basic principle for connecting narrative events (Adams 1989). This paper proposes that narrative causality is a strong-to-weak continuum and not a all-or-none function. Causality depends on the structural complexity of event networks: When temporal orders are disrupted at the level of discourse, the network of narrative events display weak causality. Temporally linear narratives result in strong(er) causality, with the granularity of causality being determined by degrees of departure from linear and logically sequential narration (flashbacks, flash forwards), or by spatial distance between cause-effect events (Rinck & Bower 2000). Structurally complex narratives, referred to as puzzle plots (Kiss 2017; Buckland 2009), challenge the cause-effect reconstruction of the story-line (Willemsen & Kiss 2020) that the human mind applies automatically to contiguous events (Kvacs 2011). When presented with causally weak narrative networks, the story reader (or viewer) must actively inhibit the automatic inferencing of cause-effect logical connections of contiguous events, and employ heuristics that afford coherent narrative representations. Understanding discourse forms presupposes an internal representation, a " working model" for the information one processes (Johnson-Laird, 1983). Models - mental, situational, representational – prevail as explanatory frameworks for narrative comprehension (Bailey & Zacks 2011): an internal model for the situation depicted at a given moment, revised when new 'bits' of incoming information signal a situational change. These bits information "change[s] the state" of the event network (Chatman, 1980) and thus elicit an update in the narrative model by " moving characters from place to place, introducing new objects into the model or deleting old ones, and perhaps shifting attention to a new location or situation entirely" (Bower & Rinck 2001). High-level cognitive processes of discourse (i.e., comprehension of the discourse as a unified whole, beyond the event's internal structure) require a representational architecture that features all connections among events, including (or especially) non-contiguous, long-distance dependency ones that characterize complex narrative networks: long-distance dependency positions (e.g., the final plot twist of the film The Sixth Sense mandates a long-distance update of the entire narrative model), " puzzle plot" intricate structures (Inception, Christopher Nolan 2010), etc. (Kiss, 2024). In Julio CortÆzar's Rayuela (Hopscotch in English translation, 1966) the chapters can be read in random order (as the writer states), without cancelling the causality the ' glues' story events (Iricinschi, 2024). Narrative Weak-Links: Causality in Complex Networks of Narrative Events. To extract stories from event networks with causally weak links, one must engage attention and memory mechanisms to complete discontinuous long-distance patterns. How do story consumers perform event segmentation and subsequently parse complex deep network structures to create complex narrative models that are impenetrable to internal logical contradictions? How do story consumers turn discontinuous/puzzle plots into comprehensible and memorable stories? This paper's argument alters Velleman's (2003) premises - " the nature of the narrative itself" affords narrative comprehension, and, events add up to a story only if they " initiate and resolve the emotional cadence in the audience" - by proposing attention as the cognitive mechanism responsible for constructing complex narrative models, with emotion underlying narrative memory encoding.

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