Federico Pianzola, “Systems, literary theory, and the computational modelling of narrative”

Abstract: Narrative can be conceptualized as a complex system, with pragmatic benefits for our description of interpretative and affective processes involved in reading (Pianzola, 2018). Indeed, narrativity—which is the dominant quality of a narrative—is a property emerging from the organisation of a system constituted by interdependent components interacting with the environment over time in non-linear ways. In this paper, I shows how systemic thinking shaped many literary and communication theories—dating back to Aristotle (250 BCE, 2019), Jurij Tynjanov and Roman Jakobson (1928,1980), Niklas Luhmann (1985), and Meir Sternberg (2010)—and I offer some suggestions about the modelling of narrative as a complex system. Considering the text-audience relations as constitutive of narrative (Caracciolo, 2014) requires a way of looking at stories keeping in mind that the audience’s experiential background, its cognitive-affective states, and the situational context all play a crucial role in the emergence of what we call a narrative. Accordingly, when we attempt to computationally model stories, we need to include many more variables than what we usually do when we focus on textual features. Modelling narrative as a complex system requires the definition of some priors, the inclusion of behavioural and contextual variables, and a specification of their possible relations with textual features. I do not have a satisfactory model yet, therefore I would like to discuss possible solutions and methodologies, like agent-based modelling and predictive coding.

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