

Can AI Learn to Annotate the Heart of Inference Correctly?

This study investigates whether loci (Aristotle's topoi-loci taken from Rigotti & Greco, 2019) of Swales' moves are annotated correctly by ChatGPT-4. Swales (1990) proposed the CaRS model, which identifies a series of moves representing semantic and functional units of texts with specific communicative purposes of the genre, thereby defining the rhetorical move of research article (RA) introductions (Biber, 2007, pp. 24–25). These moves are argumentatively relevant to the sub-issues of the introduction. Each move corresponds to a generic standpoint (Filimon, 2011a, 2011b) that must be defended to persuade the reader of the potential value (importance and novelty) of the research being introduced. By reconstructing the argument structures (van Eemeren, 2018) of the moves, considering the moves' generic standpoints, some stereotypical loci appear in each move.

The corpus comprises the introduction sections of eight RAs, reconstructed argumentation on OVA to visualize the moves, their correlation with argument structures, and the locus of each. Using a three-tier analytical approach, the study first applies Swales' CaRS model to identify the rhetorical moves and steps within the introductions, exploring their communicative functions within academic discourse. This is because Swales' model delineates the moves authors use to frame the importance and novelty of their research, which is crucial for persuading readers.

Secondly, the study examines the argument structures present within each move, revealing authors' individual rhetorical goals. Thirdly, these argument structures are then linked to loci (argument schemes, cf. Frans Van Eemeren), with each move corresponding to a generic standpoint that authors must defend. For instance, when reviewing the literature (Move 1, Step 3), authors often rely on the locus of authority to persuade readers of the relevance and credibility of prior research. For Move 2, a specific locus of argument from ignorance—or argument from silence—frequently emerges. For Move 3, the stereotypical locus is the argument from final cause.

These loci are not only stereotypically present but also rhetorically rational, making them prototypical as well. The prototypical and stereotypical loci of moves, owing to their generic standpoints, offer a new interpretation of Swales' model. However, the question arises: to what extent can these prototypical loci be accurately annotated by ChatGPT-4 when provided with a brief description of locus types from the AMT Model as part of one-shot prompt engineering?

To explore this, the researcher trains ChatGPT-4 to evaluate how effectively it can annotate the loci of each CaRS move. The argument structures of each move have been reconstructed, considering their generic standpoints, and are provided to ChatGPT-4 for annotation. Additionally, the study examines the extent to which the arguments supporting the annotation of a specific locus are logically sound.

The results could provide valuable insights into the capability of AI to reconstruct the inferences underlying scholarly dialogue. In other words, by analyzing philosophical loci, this study enhances our understanding of how effectively ChatGPT-4 can annotate the core of academic inference.

Keywords: Chat-GPT, Topoi-loci, Pragma-dialectics, OVA, AMT, Swales' CaRS Model

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