The Role of Underlying Structure in Text Generation

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Introduction:

- Coherent organization is crucial for multi sentential paragraphs.
- Organization conveys primary vs. secondary knowledge and explicit relationships.

George System Overview:

- George organizes text before generation.
- Extension of MACH-HI intelligent tutoring system.
- Uses a functional hierarchy knowledge base for text structure.

Functional Hierarchy:

- Paradigm based on procedural abstraction principles.
- Defines system actions rather than conditions.
- Advantages: easier understanding, writing, maintenance.
- Used successfully in MACH-HI for troubleshooting.

Explanations from Functional Hierarchy:

- Troubleshooting knowledge organized in a tree structure.
- Evaluation of student actions based on moves in the tree.
- Messages generated dynamically based on evaluations.

George's RST Integration:

- George utilizes Rhetorical Structure Theory (RST) for text organization.
- Different RST structures represent variations in text emphasis and relationships.
- Allows flexibility in text generation over template-based systems.

Challenges and Open Issues:

- Selection of specific RST for a message.
- Handling multiparagraph text for comprehensive communication.
- Exploration of how RST affects surface structure and decision-making

Conclusion:

- George integrates functional hierarchy and RST for better text organization.
- Flexible text generation with improved flow.
- Ongoing research to address challenges and enhance capabilities.