

Contextual Premise Framework (CPF):

A Structural Model of Premise Space Underlying Intelligent Judgment

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Abstract

This paper presents the Contextual Premise Framework (CPF), a structural model describing the premise space on which intelligent judgment relies. CPF organizes premises into multiple layers with specific relations and connectivity patterns, providing a unified representation of the structural basis that supports interpretation, evaluation, and decision-making.

1. Introduction

Intelligent judgment depends not only on observable information but also on a diverse set of underlying premises. These premises often remain implicit, making systematic analysis difficult.

This paper introduces the Contextual Premise Framework (CPF), which classifies premises into several layers and describes their relationships and structural arrangement. CPF serves as a conceptual foundation for understanding the structural conditions that support judgment.

2. Basic Concepts of CPF

CPF provides a systematic description of:

- Types of premises
- Relations among premises
- Integration into a unified premise space

The focus is on structural configuration rather than processes that modify premises.

3. Premise Layers

Existential Premise:

Foundational assumptions related to survival or safety.

Implicit Premise:

Background assumptions including norms, ethics, and social conventions.

Causal Premise:

Assumptions that organize causal interpretations of events.

Situational Premise:

Assumptions tied to the current environment or observations.

Role Premise:

Assumptions defining the agent's position, role, or responsibility.

Motivational Premise:

Assumptions guiding intentions or goals.

Action Premise:

Assumptions supporting concrete choices or actions.

4. Structure of the Premise Space

Non-linear Layer Arrangement:

Premise layers do not form a fixed hierarchy. Multiple layers may be referenced depending on the situation. They are treated as parallel and interdependent.

Topological Arrangement:

Premise layers have specific adjacency and connectivity:

- Situational \leftrightarrow Causal premises are strongly linked
- Motivational \leftrightarrow Role premises influence each other
- Action premises connect to multiple layers

Accessibility Structure:

CPF describes which premises can be directly referenced from others:

- Causal \rightarrow Existential
- Role \rightarrow Action
- Implicit premises bridge multiple layers

5. Premise Field

The premise field consists of:

- The set of all premises
- Spatial and relational arrangement
- Connectivity among layers
- Possible reference paths

This field provides the structural basis upon which reasoning operates.

6. Applications

CPF can be applied to:

- AI decision-making architectures
- Cognitive modeling
- Ethical or safety assumption analysis
- Human judgment analysis

CPF describes structure only, not inference or learning.

7. Conclusion

This paper presented the Contextual Premise Framework (CPF) as a structural model of the premise space underlying intelligent judgment. By organizing premises into interconnected layers, CPF provides a foundation for models addressing premise updating and reasoning dynamics presented in Papers 2 and 3.