Avatar Schema Theory

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In this paper I introduce Inside and Outside Theories for Avatar Extensions and use them to create a formal model in Propositional Logic of Aspects of Being from of Kent Palmer's (Ph.D) Schema Theory. I also show that this model proves the Gödelian pair of Formal Language vs Semantics.

Definition of an Inside Theory:

> An Inside Theory is a mathematical language which models external objects as unknowns

Definition of an Outside Theory:

> An Outside Theory is a mathematical language with at least one symbol which does not refer to its theory

Inside Theory is covered by the core axiom of Path Semantics[1] using strictest order.

A proposal of Outside Theory cover is to use the core axiom of Path Semantics with weakened order, in combination with Avatar Extensions[2].

Kent Palmer's (Ph.D) diagram Aspects of Being in Schema Theory[3] builds on extensive philosophical work that generalises Gödel's Incompleteness Theorems[4] for Systems Engineering[5].

I use the terminology "Gödelian pair" to refer to two properties of mathematical languages that are exclusive, but neither is necessary. This relation is modelled using `⊼` (logical NAND).

Axioms in Propositional Logic[6]:

> consistency ⊼ completeness
> verification ⊼ validation
> clarity ⊼ coherence
> inside ⊼ outside
>
> consistency ∨ completeness ∨ clarity => inside
> verification ∨ validation => outside
> coherence => inside ∨ outside

Definiton of Formal (Language) and Semantics:

> formal := consistency ∨ completeness ∨ clarity
> semantics := verification ∨ validation

This is sufficient to prove the following (checked using Pocket-Prover[7]):

> formal ⊼ semantics

References:

[1]   "Path Semantics"
        Sven Nilsen, 2016-2019
        https://github.com/advancedresearch/path_semantics/blob/master/papers-wip/path-semantics.pdf

[2]   "Avatar Extensions"
        AdvancedResearch – Summary page on Avatar Extensions
        https://advancedresearch.github.io/avatar-extensions/summary.html

[3]   "Schema Theory"
        Kent Palmer – Schemas Theory Research Initiative
        http://schematheory.net/

[4]   "Gödel's incompleteness theorems"
        Wikipedia
        https://en.wikipedia.org/wiki/G%C3%B6del%27s_incompleteness_theorems

[5]   "Systems engineering"
        Wikipedia
        https://en.wikipedia.org/wiki/Systems_engineering

[6]   "Propositional calculus"
        Wikipedia
        https://en.wikipedia.org/wiki/Propositional_calculus

[7]   "Pocket-Prover"
        AdvancedResearch
        https://github.com/advancedresearch/pocket_prover