

The Paradigm Discourses

“In the Beginning”

Anomalies don't promise understanding; for that we need paradox.

– Amanda Gefter

Reason wiped the whiteboard. With marker in hand, he turned and looked out at the group, “You all know the rules of brainstorming; you may begin.”

“Self-reference”

“Paradox”

“Conjugate logic”

“Contradiction”

“Basis sets”

“Nonlinear”

“Measurement”

This continued for a while. Reason writing as fast as he could, just barely keeping up. The core group was firing off concepts at a satisfying rate. Understanding and Faith remained standing in the back watching the session proceed.

Reason started a second column on the whiteboard.

“Out-of-the box”

“Spacetime”

“Oscillation”

“Phase”

“Interference”

“FTL”

“Entanglement”

“Uncertainty”

“Causality”

Reason shook his hand to uncramp it. “Whoa, slow down.” He grinned, “Nice going team but I’m getting a cramp.”

From the back, “In the beginning was the Word.” It was from Faith.

Reason looked at her, shook his hand one last time, and then somewhat slowly, in now a third column, wrote down the complete sentence.

Paradigm turned around in his seat and looked directly at Faith. It got quiet while Paradigm’s face did a series of odd, unconscious contortions. An observant mime might have gleaned a new trick or two. The team waited patiently, even expectantly while thoughts raced through his head.

Then, “Two competing worldviews, Judea/Christian versus Materialistic Humanism. *Hmmm.* God spoke the world into existence, out of nothing. From chaos He created order, even space and time itself. Everything in it, refers to only other things in it.”

Mathematics, “Sounds like a formal system.”

Proof, “Yes it does. That was Hilbert’s most insightful critique of rational thought; a formal system must define its terms only in terms of other terms within the system. Otherwise, subtle hidden assumptions eventually lead to incorrect theorems.”

Logic, “A formal system is like a universe, perfectly isolated from anything else.”

Curiosity, “Oscillation can be modeled spatially as well as temporally. Is it possible to derive spacetime from a formal system?”

Paradigm rose slowly, actually stretched, and then sedately pivoted to face the back directly addressing Faith. “You are suggesting we start with the imaginary truthvalues, build a formal system of nonlinear logic from first principles, this time incorporating self-reference formally, typographically. Deal with it upfront rather than try to contain it after it rudely intrudes anyway. Leverage it to derive conjugate bases, to derive perhaps even quantum-ness itself. Is that in fact what you are suggesting?”

Before she could reply, Dogma interjected, “Derive the universe from first principles? Isn’t that what the Greeks tried, 2,000 years ago? That philosophy,” looking around, “arguably stalled the genesis of the scientific method by a millennium. They never learned the value of experimenting but subjugated it to pure thought. The program failed because they had no way to falsify speculation. Surely you jest?”

The ensuing argument was intense but dignified. Theory and Experiment garnered the most air time; first they argued for Dogma’s side, Experiment needling Theory with nearly every point. Then, in harmony, they pivoted, and began arguing Faith’s side, Theory needling Experiment with nearly every point. They had way too much fun.

Eventually, the discussion abated; every argument having been made, presented, critiqued, and turned inside out. A pleasant satisfaction settled over the group. They had come to no definitive answers but were convinced they had a good handle on the questions.

In the lull, Faith turned to Paradigm, “Formalize imaginary truthvalues.”

Paradigm shook his head, “You might be right, but it sounds like a lot of work.”

Curiosity approached, taking Paradigm’s arm, “Oh, Paradigm’s not afraid of little hard work, he can lay right down beside it and go to asleep.” Paradigm didn’t know whether to wince at the insult or smile at the wit, but Dogma’s chuckle from the distance made the decision for him.

“You’re on. Boolean logic led to powerful tools and fundamental insights. Building a ‘Non Linear Logic’,” Curiosity interjected, “NLL,” a brief nod of acceptance and Paradigm continued, “is almost certainly going to reveal new insights, lead to more tools, inevitably unmask additional hidden assumptions, and,” he glanced in Dogma’s direction, “irritate Dogma to no end.”

Faith smiled, “In that case my work is done. I look forward to checking in on your progress.” And after saying a polite goodbye to their host, she serenely exited.

Understanding rose, “She may be right, but there is a practical issue to address. Self-collapse is not the only requirement of QTP/QPI, Dogma has long list of objections, and each requires a satisfactory advance. I suggest that NLL be treated as a side project, perhaps Logic and Proof could be persuaded to take the lead on it. Otherwise, we risk distraction and veering off our main quest.”