

## The Paradigm Discourses

### “Barrier Boxes”

*The merely difficult we do right away, the impossible takes a little longer.*

Paradigm had snuck into the sitting room, hopefully out of sight of everyone else. He found a TV tray in the closet and placed the nested boxes gift from Understanding on it. Ignoring the lids, he looked at the seven nested boxes, one inside the other. Idly he took them out one by one visualizing the implied mental gymnastics needed to get out of each new box, trying to imagine how each box would have to demand substantially different thinking.

His inner dialog was briskly skipping along. “How do you know when you have successfully thought out of the box?” “When you can test it.” “You mean falsify it.” “Experiment is going to love you.” “But that means you have to be able to take them out one-at-a-time.” “Can you always do that?”

Paradigm reached into the nested boxes and deftly pinched two together, lifting them out as a set. In the parlance of the metaphor, that looked like a difficulty, thinking out of two boxes at once.

“Whatcha doing?” Paradigm jumped, but he recognized the voice.

He turned to see Curiosity, hardly surprising.

“You have any glue?”

“Good evening to you too,” she said graciously, then turned and over her shoulder said, “I’ll see if Understanding has any,” and out she went.

Paradigm lifted the pair of pinched boxes out of the nested stack a second time, then placed them back in, then lifted them out once again. He couldn’t even track all the thoughts that were racing through his head, he just *knew* this was important – but in which way?

Then Curiosity returned, and with glue in her hand, *yes*, and – and with everybody else too.

Reason closed in first, “This I gotta see firsthand, the unconventional mind at work, the box beater in his native habitat, the reclusive paradigmast; what have you figured out ole boy?” He pretended to take a whiff on an imaginary cigar. Everyone scrunched in, except Understanding and Dogma who stayed at the doorway, Dogma with his arms crossed.

Damn, his irritation at having deep thought interrupted had tripped him up again. Curiosity deserved better. She had responded graciously to his curt request, perhaps he should emulate her patience and kindness. *Sigh*. He looked at her, both pleading and promising.

Taking the offered glue, he addressed the group. “Attend.”

He glued box 3 inside box 4, then placed box 2 inside box 3 and finally placed box 1 inside box 2. “In this metaphor for thinking out of the box, how do you know when you have succeeded?”

A moment of silence then, from Logic, “When you have taken the next box out.”

Paradigm, “Correct.” He stared pointedly at Experiment. “*Ahh*, I get it. Being able to take the next box out represents testability. You know the idea is correct because you can confront the Realm with a quantifiable test, my specialty if I do say so myself. If it isn’t falsifiable, you can’t tell if you’re still stuck in a box.”

Paradigm, “Then come over here and take out the inner most box.” Experiment complied, deftly removing the inner most box, then looking around for a place to put it in the crowded room, handed it to Theory, naturally.

Paradigm, “How about the next box?” Experiment reached in and removed box 2. He tossed it to Theory. “And now the third box.” Experiment reached in again, grabbing box 3, but this time it came out with box 4 as well. Paradigm breathed a quiet sigh of relief; the glue had held.

Experiment stared at the pair of nested boxes, frozen in his motionless hand. Paradigm stared at Experiment. Everyone else kind of paused as well.

Reason was the first to respond, but instead of speaking, he carefully made his way over to the window and stared out of it. When he turned around, all eyes were on him. He looked at Paradigm. “I know I can be a bit of jerk, but damn if you don’t in fact have a knack for thinking out of the box.” Proof intruded, “Not only that, but he has also just done so about the act of thinking-out-of-the-box itself.”

Curiosity grinned, “Paradigm, dear, you could find self-reference in flat featureless plane.”

Reason, “Ok, let’s see if we can quantify the difficulty. Mathematics, assume it takes 10 good brainstorming ideas to get out of a box, one chance in 10. That’s hard, but occasionally it gets done. What are the odds if one has to think out of two boxes at once?”

Mathematics, started to speak, then closed his mouth. Finally, “Obviously, just 10 x 10, 100.” He looked at Reason, “One chance in a hundred...but that’s terrifying. If it takes a decade to break out of a prevailing worldview, then breaking out of two might take a century – and many breakthroughs have taken a lot more than ten years. Furthermore, assuming a brainstorming success rate of 10% is probably optimistic. This isn’t just hard, it might be, in any practical sense, impossible.”

Understanding cleared his throat, garnering the attention of the group. Paradigm noticed that Dogma had exited at some point. “Let’s let this one simmer. The nested boxes are just a metaphor, but if relevant to our quest, then things just got a little more interesting and a lot more challenging.”